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THE PACIFIC RURAL PRESS

SAN FRANCISCO JULY 1920 LOS ANGELES

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ALTHOUGH CATTLE-RAISING has been an outstanding industry of this State from the days of its earliest settlement, it was at first carried on in a very primitive manner, with nothing more worthy in the way of production than inferior beef, hides and tallow. Little effort at betterment of these conditions took place under the Spanish regime. During the past few decades, however, agriculture and other industries advanced by leaps and bounds; and with the general forward movement milk production has at length come into its own. Long famed as a "land of sunshine and flowers," California is now adding further laurels to her fame by possessing some of the best stock in the world. From an era when any old cow that would yield a few swallows of milk satisfied the requirements of its owner as well as another, California, by dint of a restless desire for better things, has arrived at the time when she may truthfully claim to have within her borders some of the most noted Holstein-Friesians in the world. No less than four of the ten known 30,000-pound cows of this great breed are owned here, and what is even more remarkable, two of these four are in one dairy herd—that of the Toyon Farm Association of Los Altos. This farm now has Lady Aaggie Echo Hengerveld, the splendid animal shown at her home in the picture above, a three-year-old beauty that has recently broken the world's record for milk and butter produced in one year. Complete data of her wonderful performance are given elsewhere in this issue of the Rural Press.

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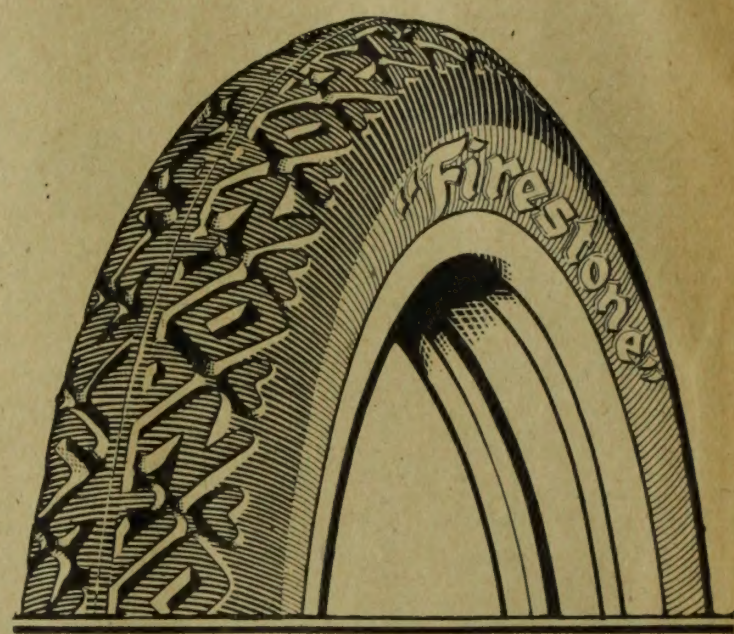

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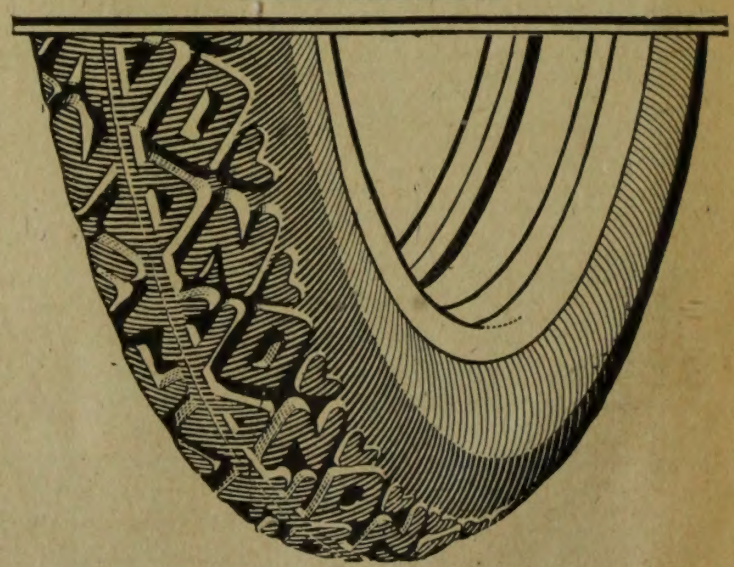

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General Agricultural and Horticultural Review

AGRICULTURAL NOTES

The Pacific Northwest predicts a bumper wheat crop this year.

Grain harvesting in the east side belt of Tulare county is now in full blast.

Three hundred acres of grain were burned south of Chico this week, entailing a loss of $15,000.

California's Japanese population is estimated at 96,000, according to statistics compiled by the State Board of Health.

J. F. Bennett of Imperial cultivated an eighth of an acre in table onions. He sold a total of 6,000 bunches from the crop.

R. E. Riley, manager of the Pacific Rice Growers' Association, believes the best local rice crop this year will come from Glenn county.

Wine grape growers in Sutter county are contracting at $50 a ton for their green grapes, which is double the price paid last year by the jobbers.

A huge new irrigation system is contemplated for Yolo county. Engineers will make complete survey of county lands available for the project.

Two fires in grain fields in the Sacramento Valley last week caused many thousands of dollars' loss. One fire was near Marysville and the other south of Chico.

Grain fields throughout the Sacramento Valley will be patrolled this summer by the State fire rangers, who will later extend the patrol to include the forests.

Ditches in most of the irrigation districts of the San Joaquin Valley are still running practically full. It is expected that most of them will be dry before August.

Willows is in line for a rice experimental station. If established, it will be under the direction of the University of California. The estimated cost of such a station is $50,000.

Santa Maria Valley Warehouse Company, operating in Santa Maria, Santa Barbara county, has been authorized by the Railroad Commission today to increase its rates for storage.

The population of continental United States is estimated at 105,000,000 by J. A. Hill, chief statistician of the Census Bureau. The increase over 1910 is placed at about 13,000,000.

A meeting of committees from various irrigation districts involved in the Pine Flat project is called by Secretary W. P. Boone of the Pine Flat Association, to be held in Fresno, July 9.

Glenn county thinks she will try the fleecy staple. A number of the farmers have planted a limited acreage this season. It is reported they have a good stand and the outlook is promising.

The farmers of Glenn county have commenced harvesting barley, and it is found to be much better, both in yield and quality than was expected. The yield will be from eight to twenty sacks per acre.

Grain in Stanislaus and Merced county districts is turning out better than expected. In the districts around Snelling and Montpelier, barley is averaging from twelve to twenty-eight sacks per acre.

The State colony at Delhi still exhibits a boundless faith in the transformation of the future. Settlers are fortunate in being able to justify their vision by pointing to other now prosperous communities nearby which formerly looked as barren as Delhi.

At a special meeting of the Santa Clara county unit of the Federation of American Farmers last Saturday, J. J. McDonald resigned as county chairman and J. K. Durst of Sunnyvale was elected to fill the vacancy. The price for picking prunes was set at $6 per ton, the same as last year.

Authority to haul milk from Dixon, near Sacramento, to Alameda, by motor truck, is sought in a recent application to the State Railroad Commission.

The Farm Bureau is again urging farmers to be cautious in handling all kinds of tractors and automobile machinery in the fields on account of the danger from fire.

Reports from southwest Sutter county state that the barley fields in that district are literally covered with grasshoppers, but that slight damage is being done to the crops, as the grain is all headed out.

What is said to be the highest price ever paid for wheat since the Civil War was paid at Porterville last week by Maurice J. Goodheart to A. R. Pearch. The wheat sold for $88 per ton, or $4.40 per sack

California contaloupe shipments are now on the down grade. Shipments for the season were 4,049, against 4,833 cars in 1919. While the quality was below that of last season, prices have ruled much higher.

At a largely attended apple-growers' meeting, held at Watsonville last week, it was agreed to assess each packed box of apples one cent to raise the necessary funds for inspection required under the State law.

Many farmers in Western Canada, to make up for lost time, kept their teams going in wheat-seeding until midnight during May, working by lines of lanterns stuck up in the fields or by the light of the moon and stars.

Onions have become a drug on the market for the first time in years, the Department of Agriculture reports in its last weekly market review. California onion growers are plowing under their crops in some places, the review says.

A just completed "farm and crop" map of Sutter county shows the location of each farm center, the location of the principal crops and orchards the soils of each different section of the county, and the estimated value of land in each district.

Three-fifths of the original timber of the United States has been used and this country is now using timber four times as rapidly as it is being grown. There are only two billion two hundred million feet of lumber left standing in the entire country.

Increase in farm land values during the war period reached the peak in Iowa, where the rise in market value between 1914 and 1920 was $121 an acre. What has happened in Iowa has happened in only a slightly modified degree in every other State.

State-controlled central markets, to receive farm products and distribute them to such of the retail stores as qualify as branch State markets, are provided in the bill for which the Producers' and Consumers' League is circulating an initiative petition.

Nine hundred acres of sugar beets have been planted by the Spreckels Company near Cotati, Sonoma county. The company is also erecting a large beet dump at Wilfred. The new crop is reported to be in a very favorable condition, with a prospective yield of 25 to 30 tons to the acre. Growers in that district are receiving for their new crop bids ranging from $10 to $30 per ton.

Maurice McAuliffe, president of the Kansas Division of the Farmers' Union, was one of the committee in San Francisco this week, asking that farmers' demands be incorporated in the Democratic National platform. Mr. McAuliffe reports the Kansas wheat crop a fair one, but less than last year and predicts a smaller acreage for 1921, owing to labor conditions. He also stated that feeders of stock lost heavily in the central west last year, and as a consequence there are very few cattle being carried at this time.

HORTICULTURAL JOTTINGS.

It is estimated that within five years the cling peach crop of Sutter county will be 60,000 tons annually.

The Stanislaus Growers' Association has set the price for picking fruit this season at 50 cents per hour without board.

According to the June government crop report the commercial apple crop of 1920 promises to exceed that of last season.

Half the old Kennedy vineyard, said to be one of the finest grape properties in Fresno county, has been sold for $105,000 for eighty acres.

The Fruit Growers of California, Inc., established a minimum opening price on apricots this week of $110 per ton on a basis of 16 to the pound.

Hayward cannery managers say that some growers are demanding $125 to $140 a ton for apricots. Some contracts have been made at $75 to $90 a ton.

The prune crop for 1920 in the vicinity of Chico will be 80 per cent normal. The recent heat wave resulted in damaging approximately 2 per cent of the crop.

The plant of the California Wine Association at Winehaven is being transformed into a cold storage plant. The company will specialize on the manufacture of grape juice.

The Tulare County Canning Peach Growers' Association has adopted a wage scale for labor with a minimum of $5 for a day of nine hours' work during the peach season.

Baskets of fruit and bouquets of typical flowers of the State were delivered to the San Francisco hotels of all Democratic Convention delegates, alternates and newspaper correspondents.

The late warm spell has again brought out the grasshoppers in northern California in large numbers. It was thought the cold rain, which preceded the warm weather had destroyed them.

S. V. Christensen of the fruit standardization service of the State Department of Agriculture, says that the variety of apple known as White Astrachans is grown in no other part of the State than Sutter county.

The board of directors of the Butte Farm Bureau favor the stringent enforcement of the law that sprayers first obtain a license from the County Horticultural Commissioner before being allowed to operate in a county.

The Miller Fruit Company intend erecting a $200,000 dehydrating plant in Lodi. This is to be used in drying and preserving fruits, nuts and vegetables. Steel and equipment for the erection of the plant are now on the ground.

A. P. Rossia and associates of Seattle have purchased the equity held by the Humboldt National Bank here in the Cottage Gardens Nurseries founded by Charles Willis Ward, Eureka bulb king, who died last week in Eureka.

The temperature at Visalia during the late hot spell reached 110 degrees on each of the last three days, and did severe damage to Muscat and Emperor grape crops. Thompsons and Sultana grapes fared better, the crop being further advanced.

Frank T. Swett, president of the California Pear Growers' Association, states that the Sacramento valley will be the only district in the State where the pear crop will not be less than 25 per cent less than last year, when the crop was 100,000 tons.

The International Brokerage Company of Chicago intend to erect two Chapman driers in California which will be equipped to dry 4,000 tons of grapes a day, if the necessary tonnage is secured. The driers are to be erected at Ukiah and Geyserville.

Reports from Fresno indicate that the recent hot spell there will reduce the reisin crop about 10 per cent. This loss will be about made up in the added tonnage from new vineyards, so the crop this year is now estimated to be about the same as last year's total.

The minimum sugar content basis on which all grapes, with the exception of the heavy color, will be sold this year, is twenty per cent. There will be a reduction if the grapes contain less than 20 per cent at the rate of $1 per ton per degree of sugar deficiency.

The Sutter Basin Company the coming year will build its own cannery with an additional investment of $25,000. The company will grow fresh vegetables in large quantity the coming season and will be ready to can green peas, spinach, asparagus, and tomatoes.

The largest Black Mission figs ever produced in Fresno, according to nurserymen, were grown this season by H. H. Welsh of Del Rey. The largest fig was 9 inches in circumference and weighed 5½ ounces. The figs were of perfect texture and flavor, and the tree from which they were picked had a normal crop.

H. P. Stabler, Sutter County Horticultural Commissioner, states that 2607 acres of new orchards and vineyards were planted and are being planted this year in Sutter county, and that the majority of the new acreage was already out—2407 is the new acreage to fruit and 200 acres to vineyards.

In a suit filed in Los Angeles by the Setchel Fruit Company of Fresno against John Barton Payne, director-general of the United States railroad administration, profits are alleged amounting to more than 100 per cent for taking green grapes from the vineyards and placing them upon freight cars.

The recent drive inaugurated by the California Peach Growers, Inc., to obtain the majority per cent of the figs in the San Joaquin Valley, has resulted in more than 50 per cent of the acreage being subscribed. At the same time the California Peach Growers are endeavoring to obtain four-year renewal contracts for the peach acreage.

Sixty fig growers from the Forkner fig district of Fresno county have joined the California Peach and Fig Growers' Association, thereby adding 1500 acres of fig orchard to that already controlled by the association. The Peach and Fig Growers now have an acreage of 50,000 acres of orchards, as well as its own packing plants, worth $1,000,000.

The Sebastopol Apple Growers' Union of Sebastopol will operate nine packing-houses during the coming season. They are also making additions and improvements in other buildings to be used in packing and storing. The crop is reported as normal, consisting mostly of Gravensteins. Picking and packing will begin about July 10.

The car shortage in California has resulted in a firmer feeling on the part of the packers as to futures, but it has not led to increased local buying. Now that the cherries and apricots promise to be short because of the shortage of cars, that size is firmer. The current demand for canned fruit is not heavy, but sellers are pushing the market for all it is worth.

The grape crop of California was considerably damaged by the recent hot spell is the report of E. E. Kaufman, field agent of the Bureau of Crop Estimates of the Department of Agriculture, on his return from a trip through the interior valleys. The average damage is 25 per cent, he thinks, principally to Malagas, Emperors and Tokays. Thompson seedless were not hurt much.

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EDITORIAL

FLYING ERAS.

WE ARE living in a period of winged eras. As we traverse the sunshine of the present, eras swarm about us like gnats, and the swallows of fate swoop down upon them, seizing what they choose for the nourishment of the fledglings of coming civilizations. As we enter the cave of the future, eras flit past us like bats—"a moment seen, then gone forever." It has apparently always been that way in the progress of mankind, and, to bring the metaphor down to earth, we may say that the movement of eras has always constituted the gait or stride of the human race. We have had eras that hiked along, like plodding pedestrians, eras that trotted, eras that galloped, and eras which simply broke and ran. And there seems to be an actual sequence in the gaits we have indicated. The eras of wooden clubs, of stone, of copper, of iron, of steel have followed the exit of mankind from Eden, in the order of their naming. The pervading character of the movement has been accelerated, and this constantly increasing speed has now brought us to the present rate of getting ahead and compels us to rise from the earth and resume our initial metaphor, for we are now living in an age of eras which fly. And there has come about this startling change in the experience of the individual man. The man of old had his life-span cast in an era of which it was only an infinitesimal part and, seeing neither the beginning nor the end of such an era, he could not really know that he was in it. The man of today lives in a succession of such fleeting eras that he cannot tell which of them will endure long enough to enable him to discern in which of them his life-span must be categoried. To flop the metaphor again: the man of old sat with his head pilloried and his smile frozen until the daguerreotypist could impress his image on a hard copper plate; the man of today sits not at all, and yet the movie-camera catches him on its film and throws his image on the screen, winking and smirking for the entertainment of the populace! Such is the relation of the life-span of a man to the eras of human development; eras are pushed into his life-span as the various components of a sausage are pushed into the casing thereof. The man is no longer in the era; the eras are in him!

THE ERAS OF A DECADE.

To present this great and startling truth more concretely, let us cite the eras of less than ten years immediately preceding our point of time. We are not sure to catch sight of all of them, but these appear on our mental retina, viz.: the era of professorial statesmanship; the era of military statesmanship; the era of labor statesmanship; the era of profiteering statesmanship. To which of them do our lives belong? To none of them can we surely attach ourselves, for all are passing in and out of us as though we had picked up the end of a broken power-wire. Fortunately, the voltage has been low and none of the shocks have been fatal; in fact, it is possible that the infusions of the "subtle juice" which the body politic has received may be curative of the rheumatic affections which previous decades of high living may have engendered. We may briefly indicate the characters of the eras we have named in this way:

The professorial era, ushered in by the choice of a college professor to the presidency, and the looting of college faculties to furnish regulation for finance, production and trade.

The military era, grand in its achievement, but loth to restore peace, except on the promise to take part in all the world's fighting and loth to return to the people the right to manage their own affairs by continuing in peace time the regulatory policies which the pursuit of the war required.

The labor-domination era, patriotic in its aspirations, but unfair in its practices because of its avowed conception that men who work for others are more holy than those who work for the success of their own enterprises.

The profiteering era, greedy, inhuman and abominable in all its policies and practices.

We do not undertake either to praise or blame these humors which have distressed the country during the last decade, nor to describe their various breakings-out upon the body politic, which have made the furious furuncles of Job seem like slight epidermal elevations, because they are quickly passing away and the places which have known them will soon know them no more forever. We hasten rather to consideration of a new era which the current year is ushering in.

THE EDITORIAL ERA.

The professors may now leave the practical affairs of the country to those who live by them; the military regulator may return to the people the right to govern themselves; the labor agitator may allow the laborer to dispose of his indispensable commodity as he sees fit; the profiteer can go to some useful work, for the general freedom of the people will render his operations impossible. And all these blessings become attainable because the editorial era is dawning. Obviously the way to insure such a dawn is to select all candidates to the effulgency of the presidency from sons of the republic who have arisen from the dark shadows of the composing and press rooms to the lofty peak of the editorial tripod to catch upon their brows the first gilding of the political sunrise. And this seems to be what is doing this year. If all the candidates are graduates of the press, no other clan can get a look-in. And it is an interesting fact that lawyers, the class which has almost always ruled the country, is being thus most hopelessly excluded. It is their misfortune; we say not that it is merited. So far as the Republicans are concerned, the die has been cast. If they elect their candidate, Senator Harding of Ohio, a graduate of a country newspaper office will sit in the White House. As we go to press the Democrats are choosing their candidate at their convention in this city. Our printers, who are the most heartless autocrats we have to deal with, will not allow us to delay this writing, and therefore we cannot tell the reader whether the Democrats have really named an editor for their candidate. However, as most political writing is "guff," readers will not hold us responsible if we impose upon their political credulity. As far as we can see through the lofty barricade, which excludes placard-bearing and sandwich-reformers from the entrances to the convention hall, it seems to us that the Democratic nominee will also be an editor. Of the dozen or more who are named for the choice, there are two who are not of the ruling dynasty nor the disgracefully wet nor the hopelessly dry categories, and are men of great doings and of broad American views. We shall not be surprised if the choice falls upon one or even upon both of them, to be run tandem for the goal. We refer to Governor Cox of Ohio and Secretary of Agriculture Meredith of Iowa. Governor James M. Cox, born in 1870, reared on a farm, educated in a country printing office, graduated into reportorial and finally in editorial work on several leading city dailies of his native State, is now serving his third term as governor of Ohio. Edwin T. Meredith was born in 1876 and did two heroic things at 20 years of age. He married and started a farmers' journal. For nearly 25 years, therefore, he has edited and published agricultural journals and engaged in successful farming—enjoying the latter so much that he named his latest journal after it, and his career has justified the name, both in the estimation of his neighbors and in public esteem, for President Wilson a few months ago called him to his cabinet as Secretary of Agriculture.

THE EDITORIAL ERA AND FARMING INTERESTS.

We will have to confess that we have been a long time rambling around to reach the above fact, and that it is really the main purpose of this week's writing. We count it of exceeding great importance that there should be in high places in the legislation and administration of this country men who know farming and men who have lived in farming. We are weary of officials who are so deep in politics or so full of points of view of other callings and industries that they cannot see the farmers' conditions and problems, nor appreciate his need of fair play among the industries of the country. In the several eras of statesmanship which have recently passed, he has had neither adequate recognition nor fair treatment. It is perhaps too soon for a man who is only a practical farmer to get recognition from his fellow-citizens as a man who adds to his agricultural point of view all the other elements of breadth of understanding and of conviction and nation-wide acquaintance which would constitute him a national figure, competent to administer all the affairs of such a great and diversified country as this. It seems to us possible that the farming interests may advance toward such a recognition through the public services of a man who is a farmer plus the enlargement of knowledge and of view which is acquired by ample experience in edtiorship and publication for the advantage of the farming interest. Therefore we are disposed to emphasize the opportunity for higher and broader participation in public affairs by the farming interest, which may lie through the opening of the greatest avenue to public services to men who have been trained for it in the school of journalism. Journalism has never made any claim to be recognized as a learned profession. It is a vocation which calls into play all the learning a man can acquire, but it is eminently true that abstract learning is a minor qualification, and conceit of learning is a serious handicap. Successful editors must be broad, tolerant, quick of perception, sound in conception, firm and fearless for the truth, gentle and sympathetic in condemnation, resolute and able in their pursuit of fairness in the adjustment of the rights of individuals and classes of mankind. Those are the qualifications which agriculture requires in the public service of this country. We believe that it will be surer of such treatment in legislation and administration from editors who have achieved prominence and leadership than from any other group which the people have delighted to honor. Therefore, we view with complacence and satisfaction the entrance of the editorial era and the accession of editors to wider political recognition.

A GREETING TO SECRETARY MEREDITH.

Last Saturday we enjoyed, by invitation, a share in the greeting extended to Secretary of Agriculture Meredith at a complimentary luncheon in this city. The initiative for this proper reception to the Secretary is to be credited to the California Tractor and Implement Association, and other organizations participating were the San Francisco Chamber of Commerce, the California Development Board, and the Commercial Club. The affair was a great success from all points of view: thronged in attendance, outspoken and cordial in spirit and delightfully set forth. Robert Newton Lynch, president of the State Development Board, presided. Dean Walter Mulford (head of the University College of Agriculture during the well-earned leave of absence granted to Dean Hunt) presented the guest of the occasion with a forceful statement of the importance of his official task and a graceful tribute to his personal qualifications to successfully discharge it. Secretary Meredith delivered an interesting address on the immense services rendered by the

United States Department of Agriculture, the sacrifices which its thousands of experts are making in serving the public for a fraction of the compensation which private employers offer them, the misfortune of crippling and reducing the work of the Department by decimating appropriations when they should be increased—not forgetting to lambaste a Republican Congress for this shameful treatment, as, of course, a true Democrat should. It was a good address for a non-agricultural audience and gave hundreds of people a new conception of the needs of agriculture and of the pervading relation of agricultural promotion and success to the general welfare. To the farmers present who already knew these things it would have been interesting to hear Secretary Meredith's views of the needs of agriculture in national legislation and appropriation, but it would probably not have been wise to bare his heart for the daws of the approaching convention to pick at and ruin his chances of getting into a place where he really could do something for farming beyond the possibilities of his present academic job. However, we know from other utterances that Secretary Meredith's heart is in the right place, and therefore we commend him for being wise as a serpent and harmless as a dove on current topics which are not safe for political democracy.

WHAT OFFICIAL FARMERS DEMAND.

The Republicans made their platform at Chicago; the Democrats are hammering planks into theirs as we are going to press. Both conventions have had these demands duly presented to them by representatives of the National Board of Farm Organizations, viz.:

1. Recognize agriculture as the fundamental industry, and give it practical and adequate representation in the Cabinet and in the appointment of government officials and of commissions.
2. Pledge full, free and unquestioned right of co-operative marketing of farm products and purchase of supplies and protection against discrimination.
3. Effective national control of all great interstate combinations of capital engaged in the manufacturing, transportation, and distribution of farm products and farm supplies.
4. Legislation that will check and reduce farm tenancy; perpetuation and strengthening of the Federal Farm Loan System; facilities for loans on farm commodities, and a system for co-operative personal credit to secure short-time credit on more favorable terms.
5. Comprehensive studies of farm production costs, at home and abroad, and the uncensored publication of facts found in such studies.
6. Accord agriculture the same consideration in tariff legislation as to other interests.

These are the six commandments which the official representatives of the joint agricultural organization of the country has issued to the politicians of the two great national parties. We shall see later what are their respective attitudes towards them.

QUERIES AND REPLIES

By the Editor.

Inquirers Must Give Full Name and Address.
Answered questions also on other pages.

Slow Trouble on Cantaloups.

To the Editor: The leaves on my muskmelon vines are dying slowly but very surely. They die usually one at a time in the center of the plant. Probably part of the leaf will stay green and three-fourths of it die and fall off: There aren't any aphis on them or any other bugs that I can see. What does red spider look like?—B. G., Tulare.

When we have seen such leaves and could see no insects to blame for it, nor could see no patches of mildew nor spots of rust or blight, and only parts of leaves were killed, we have charged it up to "leaf-burn"—which is not the work of a pest but the effect of some defect in growing conditions, which shut off the sap from the parts affected or otherwise made the leaf subject to sunburn. If you find any white or brown spots or patches or "shot-holes," send some leaves and we will try to find the cause of them. As for red spider it does not look like much of anything unless you have mighty good eyes or a magnifying glass—and then you might think it looked like a red chicken mite—except that it has a greater range of color, being more apt to be yellowish, greenish, or brownish, and not so much like a ruby. Red spider is hard to see. It is generally detected by its work, which causes a roughening of the leaf surface and a general yellowing of all leaves, and not a partial collapse of certain leaves, such as you describe. A good sulphuring is the dose for red spider, and if you have reason to think you have it do not delay.

Pollinating Plums.

To the Editor: Last winter I planted black walnuts on a ten-acre tract fifty feet apart with Tragedy plum trees interset in the rows, making the Tragedies also fifty feet apart. I am advised by some that Tragedies will not pollinate well unless planted together with Clymans. Please advise if the latest information confirms this theory, and if so, would budding one limb on each tree to Clyman produce the desired pollination, and would July be early enough for budding? Would also appreciate your opinion as to the two best walnuts for this part of the State.—M. F. A., Lodi.

So far as the relations of Clyman and Tragedy as cross-pollinators go, there is no change, but the Clyman has been dropped by the Bud Selection Association as undesirable to plant. The experiments at the University Farm thus far seem to indicate that other domestic plums like Washington, Jefferson, Yellow Egg, etc., will serve the Tragedy just as well as Clyman, and you may like to bud in something that may sell better than Clyman. You can do it by budding in, but you will have to chase all over the orchard picking from a part of a tree all the time—which you will find some bother. You can put in the buds as soon as you can get sticks of good buds, and you can keep at it all the rest of the summer—as long as the bark will slip. The walnuts most popular in your district, as far as our information goes, are Franquette, Paynes, Eureka and Concord.

Peppermint and Spearmint

To the Editor: I send a leaf of peppermint or spearmint, of which a quarter of an acre is growing wild and three or four feet high, in a canyon near here. No one has thought to enquire as to what use could be made of it, but I read lately that an immense acreage has been planted to mint and spearmint. To whom and to what purpose can it be used or sold.—E. P. R., Cordelia.

What you send is spearmint, of which the only practical use is to plant a small patch in your garden, to have it handy to make sauce for roast lamb (if you can ever afford to have any). Spearmint is a source of an oil of which a less quantity is needed commercially than of peppermint, and it sells for a less price. You cannot get into the mint oil business without equipping a still and incurring the inquisitiveness of revenue officers to prove that you are not moonshining. Besides, there is one county in Michigan and one in New York which can make all of these oils the world's trade needs, and they often make too much for their own profits. During the last half-century quite a little money has been lost on this coast in trying to break into the mint oil business, which is always on the edge of overproduction. The easterners can make all that can be sold—even if they succeed in putting a kick in it.

Root Trouble of Almonds.

To the Editor: Of twenty-four almond trees along the border of an irrigation ditch, two show diseased condition. They have a fairly heavy crop, but the leaves are small, compared with other healthy trees, and have a yellowish tinge. Digging around both of them I found jelly-like masses of different colors. Some come off in knots containing a yellow-brown substance; others resemble blackberry jelly, which, when dried, is flaky, somewhat like honey comb.—S. W. P., Fresno.

As nearly as we can see from a distance of 250 miles, the trouble is caused by root injury, which interferes with normal circulation. We would apprehend that more trees would be affected and then we would attribute it to seepage from the ditch, causing the trees to stand in mud—which the almond trees abhor above all other fruit trees, perhaps. The good health of the others seems to be due to the openness of the soil, which carries away seepage. The disease of these two may be due to an underlaying of hardpan in that spot—possibility with the additional agency of alkali in the hard pan. We should dig down three or four feet and prospect for mud and hardpan, and if you find the latter, put in a few shots of dynamite a few feet away from the trees.

WANT WORK AT GOOD PAY.

We are going to add more men to our circulation force. They need not have experience or capital, but must be red-blooded, dead-in-earnest fellows, who enjoy interviewing people and are not afraid of hard work.

If you have an automobile, are free to travel, believe in the Rural Press, and would like to present it to others, perhaps you can qualify for the position. It pays a straight salary and is permanent.

If you think you are the man we are looking for, tell us why. Convince us that you should have the position and we will make you an attractive offer.

Silk Worms Not Grown on Trees.

To the Editor: We have too good mulberry trees with a heavy satiny foliage, and would like to get some silk worms to put on the trees to experiment on. Who has the silk worms, and do they sell them? What care do they need?—A. J. W., Geyerville.

Silk worms are not grown on trees for the production of silk. It would be impracticable to gather the cocoons from trees so the worms are hatched from the eggs and fed, in a room of the house or outbuilding, with the leaves gathered from the trees and forced to spin their cocoons on brush, which is furnished them for the purpose. The business requires much time, care and understanding—all of which seem to be usable more profitably in other ways in California, as shown by the experience of the last seventy years during which efforts have been made to establish the silk industry in this State without success. It is probably too late to start this year, for all the eggs would have hatched out unless some one has kept them in cold storage.

Grapefruit on Salt Marsh!

To the Editor: Several years ago you printed the statement that in Sumatra or Borneo the growers of grapefruit planted their trees on salt marsh land—a very peculiar method you remarked. I have never seen any comment or discussion since. Can you locate the item or give any explanation?—H. S. T., Pomona.

We do not recall the statement, nor do we find record of it at this moment. It is perhaps credible enough, for the islands named are strictly tropical and citrus regions are best probably near the moderation which the ocean may secure for plants which are only semi-tropical in their requirements. But if this is the fact in tropical situations, it is not applicable to semi-tropical places, where the immediate coast is too cool for best development. As for their possible liking for salt, that is very limited, because they do not enjoy our alkali soils, of which one ingredient usually is sea salt. If the fruit goes near the sea in the tropics we doubt if it is to get the salt.

Irrigating Prunes.

To the Editor: How late in the season, prior to fruit ripening, is it advisable or profitable to irrigate French prune trees that show grave evidence of die-back? How long through the summer should one continue to water young French prunes, Imperials and Robe de Sargent trees? Is it a good practice to irrigate bearing trees in the fall after the fruit has been harvested?—H. M. P., Calistoga.

If your soil is fairly deep and retentive a good irrigation four weeks before ripening ought to bring the crop through in good shape. If the soil is light or shallow a little water even two or three weeks before ripening may help the fruit, but care should be taken in using water as near to maturity on prunes, though peaches may stand it better. Young trees will take water well in September, or even later (if rains do not come) to prevent too great drying of the soil. It is a good idea to irrigate after gathering fruit—for the same reason. Too great fall drying may reduce the following crop.

CALIFORNIA WEATHER RECORD

The following rainfall and temperature record is furnished the Pacific Rural Press by the United States Department of Agriculture Weather Bureau in San Francisco for the week ending June 28, 1920.

Stations—	Rainfall Past Week	Rainfall Seasons To Date	Rainfall Normal To Date	Temperature Highest	Temperature Lowest
Eureka	.00	23.93	46.03	58	44
Red Bluff	.00	11.26	25.03	94	60
Sacramento	.00	8.88	20.09	94	54
San Francisco	.00	10.46	22.27	74	51
San Jose	.00	8.83	16.79	92	48
Fresno	T	8.23	9.68	98	60
San Luis Obispo	.00	14.86	20.51	76	48
Los Angeles	.00	12.52	15.64	76	57
San Diego	.00	9.91	10.01	70	58
Winnemucca	.03	6.14	8.38	88	38
Reno	.04	6.13	10.43	84	40
Tonopah	.08	3.39	10.13	88	50

Big Markets, Big Prices, Big Rice Crops

Written for Pacific Rural Press by R. E. Hodges.

The writer helped to build a drawbridge over the Fourche River in Arkansas one winter. We continually had to dodge the saw logs which floated down the river; but we were hardly prepared for the attack which they made from the downstream side one morning! The current was reversed and the logs came tumbling back upstream! The river into which the Fourche emptied had risen during the night and consequently backed the water far beyond our bridge in the Fourche.

The current of rice shipments across the Pacific has been as strangely reversed!

Ever since the dawn of civilization probably, Southern Asia has been raising rice as the principal food for her peoples. A few years ago Columbus discovered America; and still more recently, the U. S. Department of Agriculture and others discovered that rice could be grown in California. There has been a heavy flow of rice from the Orient to America ever since shipping became possible.

U. S. Sending Rice to Orient.

Passing strange it is that the white race should be sending white rice from the United States to Asia for the yellow and brown races which lived on rice thousands of years before Columbus discovered America! Yet we sent nearly 30,000,000 pounds of rice to India, Japan, and the Dutch East Indies during the first four months of 1920. Of course that amount would hardly load a chopstick, as compared with the millions of tons normally raised in southern Asia and tributary islands. But the current of Oriental rice, which normally sweeps eastward across the Pacific, seems to be outmatched temporarily by the current of American rice sweeping westward to the Orient.

Our Rice All Over the World.

That tells only part of the story of American rice, however. During the five years, 1910 to 1914, we exported an average of eighteen and a half million pounds per year to all parts of the world. In January, 1920, we shipped over three times that much rice out of the United States. We repeated it in February; and in March we beat the February figures by about six million pounds. In April our exports fell down to 40,132,989 pounds. In the first third of this year we exported to all parts of the world 217,628,204 pounds, almost two-thirds as much as we exported during the entire year of 1919, and nearly twelve times the pre-war average per year.

American Rice Production.

Our exports are, however, not great as compared with our crop, which in 1919 was 1,847,655,000 pounds. Of the total American production, California last year produced 354,645,000 pounds, or nearly one-fifth. American rice is produced in small quantities in seven southeastern States, whose total is only about four per cent that of California, and in Louisiana, Texas, and Arkansas, whose total was over four times as great as that of California in 1919.

San Francisco Leads in Rice Trade.

Notwithstanding the leadership of the New Orleans district in American production and the leadership of New York in American exports, the San Francisco district has assumed first rank above those cities in the foreign rice trade, as recently announced by Secretary R. C. Mason of the Rice Association of California, an organization of rice millers, brokers, importers and exporters.

This does not mean that the greatest amount of rice is actually loaded or unloaded within the district. That is the part played by importers and exporters who set afloat over 50,000,000 pounds of American rice and two or three million pounds of foreign rice during the first third of 1920. The basis for Mr. Mason's statement is largely the business transacted by brokers in San Francisco. A large part of the rice they buy and sell never comes within a thousand miles of this city. Much of it is normally shipped from the Orient direct to South America or to Cuba and Europe via the Panama Canal, and to Canada via the northern ports.

Export Markets Affect Our Prices.

The business of the brokers, importers, exporters, and millers is of interest to our readers only as it affects the markets for California crops. It certainly does that.

While it is true that certain populations like to eat certain types of rice and therefore would not eat ours anyhow, they would surely takes ours if the other types were not available. In any event, their consumption of one type makes a vacuum which must be filled from somewhere. For instance, Cuba and Canada each have taken millions of pounds of rice from the San Francisco district alone in the first four months of 1920. If the brokers had been able to supply their full wants from the Orient, it may be doubtful whether we would have sold so much to them. The same is true of Chile, which has recently been a heavy importer from San Francisco as well as other Central and South American countries. Not all of San Francisco's exports are of California rice; but it is safe to assume that practically all of them are. Certainly the writer has seen in many of the California mills a big proportion of rice being coated for export. Not all of the U. S. exports are of American rice, but most of them are. And any exports from the United States or imports into the country affect our prices and sales.

Japan, the Dutch East Indies, the Philippines, Africa, and Europe normally import great quantities from China, India, Siam, etc. This year British India bought 8,000,000 pounds from the United States in January. The Dutch East Indies bought 21,272,700 pounds from us in the first four months of 1920. Japan's importations from the United States were nominal. Siam, usually a heavy exporter, had a crop failure this year and has embargoed exports. So much for the Orient.

U. S. Exports to North America.

Let us look at North America, a greater consumer of rice than most people believe. Canada in the five years—1910 to 1914—took an average of 802,883 pounds annually from the United States. In 1919 she took 17,176,973 pounds. In the first four months of 1920 she took 15,612,582 pounds, nearly as much as in the previous twelve months. The reason we get in so strongly on Canada is clear. She is more conveniently situated to Japanese exporters than is San Francisco, and has previously been supplied from Asia. The Asiatic supply failed, so Canada buys from the United States.

Look at Cuba. Her importations from the United States in 1919 were about 15 times as much as the prewar average; and at the rate of the first four months of 1920, when she took 54,260,566 pounds, she will take from us in 1920 twice as much as she did last year. Even Mexico took twice as much American rice early in 1920 as her annual average previous to the war. Mexico and Cuba are handy to Hong Kong via the Panama Canal, and have been mostly supplied from China heretofore.

Central America is supposed to be a great rice producer. The importations of American rice to those countries range around 1,737,239 pounds with but little variation.

South America Big New Rice Buyer.

South America, also convenient to the Orient and mostly supplied from Asia normally, averaged 1,610,683 pounds annually from America before the war. In 1919 South American rice imports from the United States had multiplied 13 times. At the early rate of 1920, this year's rice business between the United States and South America will be 38 times the pre-war average.

World Markets Justify More Acreage.

Reference to the table of American rice exports would show similar tremendous increases to Europe and even to Africa. All this augurs well for American markets during the coming year or two until the Orient shall come back. Meanwhile, if our business men shall have bound these new markets to us, there will be less influence of cheap foreign rice on our prices, and less danger of losing our advantage.

This will justify going the limit on rice planting in California, always keeping an eye on the Oriental crop and the disposition of our marketing men to hang onto our new markets.

California Enthusiasm Quite Right.

Enthusiasm for rice is nowhere in America so great or so well justified as in California. It is true that in this worst of all seasons, some of the ill-advised plantings are suffering. But better rainfall and better provision for storage will justify continued increase in the future. The almost abnormal lustiness of this infant among California agricultural products is shown by the figures of acreage during recent years. When the industry was less than a decade from its birth, about 83,000 acres were harvested in California in 1917, about 112,000 in 1918, about 142,000 in 1919; and 160,000 to 170,000 acres were planted last spring in spite of all forecasts of drouth.

Prices Have Proved Good.

We have before us a clipping from a Sacramento Valley paper of a very few years ago in which occurs this paragraph: "The market conditions are very promising, the Pacific Rice Growers' Association having disposed of several lots at $2 per hundred pounds."

We have a note from Sacramento dated February 14, 1920, saying that the Pacific Rice Growers' Association had just sold 500,000 bags of paddy, the remainder of the 1919 crop in the Sacramento Valley for a total of $3,500,000, seven cents per pound, and the crop cleaned up nine months before the new crop comes on!

The San Francisco market for milled rice June 24, 1920, reads about as follows: California fancy Japanese type, $10@$10.25; Saigon (Southern Asia) long rice, $6.50@6.75; Saigon round rice, $6.50. It will be seen that our rices are held much higher than the foreign rice in San Francisco. May the big prices and the big markets and the big California production long containe to help fill the big need of the world!

Glenn-Colusa Production Multiplied

(Written for Pacific Rural Press.)

Increase from about $4,000,000 in 1917 to nearly $14,000,000 in 1920 in the value of crops and livestock marketed annually from 103,000 acres, as figured and estimated by Jas. T. McPherson, is some boost for the Glenn-Colusa Irrigation District, which has recently been put on a sound financial and irrigation basis, and will soon vote on the proposition of buying the water system that supplies it chiefly by pumping from the Sacramento river.

The most notable increase is in rice values from $1,061,850.60 to $8,525,000, as estimated for 1920. The yield as figured will be 30 sacks in 1920 against 25 sacks in 1917. This, as explained by Secretary Chas. F. Lambert of the district is due to the fact that in 1917 rice was planted on the poorest types of soil; and most of it was second-year land, due to the Railroad Commission rulings that water could not be changed from one tract to another without losing the right to use the water. However, formation of the district brings about a new condition in 1920. Most of the old land is being rested, better soil has been planted, and a majority of the area is first-year land. Forty-five thousand acres are being irrigated from the project pumps and about 3,000 additional are getting water from private pumps, etc. This acreage on the 30-sack yield and $6.82 price expected will add $613,800 to the rice figures. The price in 1917 averaged $2.75 per cental.

Alfalfa also shows an increase in yield from four tons per acre in 1917 to six tons in 1920. This, according to Mr. Lambert, is due to the fact that the 1917 fields were old; while those of 1920 average not over three years of age. The price in 1917 averaged $15 per ton, but in 1920, a $40 average is expected on the basis of $25 and $30 for the foxy first cutting and the fact that farmers hold their later alfalfa hay until the rice harvest season, when demand and prices are highest.

Orchard returns, as estimated for 1920, are multiplied over those for 1917, due to the fact that some 1400 acres of tress, mostly citrus, have come into bearing since the former date. Prices also are higher. Cash receipts are expected to total $182,000, as against about $7,000 four years ago.

The livestock figures show a bigger lamb crop by about 250 per cent in 1920, from about nine per cent more old sheep; and the valuation has gone up 50 per cent to $10.50 per head. About 400 per cent more hogs will be marketed at 66 per cent higher price per head, estimated in 1920 as 14,400, averaging 200 pounds, and bringing $15.75. There are 68 per cent more cattle to turn off in spite of the closer settlement of this district. Cattle to be marketed in 1920 are estimated at 4200 head, averaging 1100 pounds and bringing 10 cents per pound, a total of $462,000.

The turkey turn-off is estimated at 54,000, bringing $270,000, over half as much as either cattle or hogs. They are estimated at 50c per pounds, as against 32½ cents in 1917.

Egg production has increased by 69,700 dozen, and the higher average price expected would bring over twice the total returns of 1917. Twice as much poultry will be sold, at higher prices.

These figures do not tell the whole story. Thousands of acres of this land were long deemed worthless, except for grazing; and they got poorer at that. These $15 grazing lands have been made productive by irrigation so they are now selling for more than ten times their former valuation. This of itself justifies the Glenn-Colusa project, which long labored under financial and other difficulties. Those troubles are past and new ones have come; but with the people owning the district as they expect to do after the election, their troubles will smooth out and this formerly poor section of the Sacramento valley will become one of the richest.

The Ames-Harris-Neville Company report that the shortage of grain bags will probably not develop. Bags are arriving in fairly substantial lots and at frequent intervals with the result that prices have eased off, and the supply appears to be adequate to the demand.

Stockton has broken ground at Agricultural Park in anticipation of many improvements which are going to be made for the 1920 county fair.

Why California's Cured Fruits are Unrivalled

Written for the Pacific Rural Press by W. S. Killingsworth.

Fruit drying is the most ancient and primitive process known of preserving the texture and flavor of fruits. Not until California became a potent factor in the production of fruits and began the process of drying, did the industry assume a commercial bearing in the United States. Climatic conditions have made it possible that practically all varieties of fruits may be sucessfully dried in all sections of the State, which adds much to the value of both land and product, for should the fruit on a certain property be classed as a shipping variety and by some unavoidable "hitch" the fruit failed to function in its fresh state, a financial loss is prevented by the product being sent to the dry yard. However, in many sections of the State a very large percentage of the fruit grown is dried. This applies more to grapes, peaches and prunes, the prune being exclusively a dried product. The grape of certain varieties is also placed in the exclusive column. The peach may be said to be in a class by itself, as there is not a peach grown, if necessity demands it, that cannot be shipped in its fresh state; there are but few varieties that the canners would turn down and with the exception of the few early varieties the entire peach family have decorated the dry yards of the State.

Dried vs. Fresh Fruits.

While dried fruits are universally used they will never meet with favor equalling that while in their fresh state; however, it is a splendid substitute, even though the flavor is not the same. During the world war dried fruits played an important part; they were easily transported as well as immune from loss in decay under ordinary climatic and housing conditions. The food value of a pound of dried fruit is, of course, greater than the same weight of fresh. There is practically but one change in the process of drying any fruit, and that is during the evaporating process, when it loses its water. The change in flavor, which is at once detected, is due partly to a proportionate increase of sugar from loss of water. The supposition is that dried fruits first made their appearance in warm climates; however, they have been known to have been processed in northern latitudes.

The old-timers of today tell us that the old-timers when they were children told them that it was the custom to lay in a supply of dried fruits for the winter, though the method of drying was crude and the dried product was poor and irregular in quality.

Primitive Methods of Drying.

We have a faint recollection of the primitive method used in the Southern States — a twelve-inch board eight feet long was pressed into service and the cut fruit was placed thereon; then the board was placed on the "lean to" of the barn, the roof being flat and easy of access. The noon-day sun blackened, hardened and toughened it while the midnight dew softened and moulded it, but in the due course of time the sun got the best of it and this charred and toughened mass was placed in a sack and suspended from a rafter in the smoke-house, where it was the target for every pest and insect on the plantation; there being no sulphur used in the drying process permitted of their invasion.

California dried fruits would be in a similar predicament today, had the Pure Food Act placed a ban on the drying of fruits without the use of sulphur, as was advocated by the head of the department. It is yet fresh in the mind of every dried fruit man in California—the fight that was made to prevent the carrying out of that particular provision of the act wherein it was claimed that the sulphur used was injurious to health. The proponent of that measure never lived in the Southern States when a boy; if he had, he would have known more about the use sulphur was put to, not only as an exterminator of insects from dried fruit—for which purpose it is used in California—but from the system of the human race as well. During the spring of the year we were suffocated, gorged and deluged with molasses and sulphur. More than half a century is in the discard and we live to tell the tale.

Sunshine and Sulphur.

Not until within comparatively recent years have California fruits been dried in any manner other than by the natural heat from the rays of the sun. This method has been the practice since the beginning of fruit growing in the State, and will continue to function as long as the industry exists, as fruit properly sulphured and subsequently properly handled takes on a color that is not easily duplicated; especially so in the case of the Bartlett pear, which is in a class by itself while passing through the drying stage.

Drying the Bartlett Pear.

When the pear is of sufficient ripeness it should be cut and cored, placed on trays with the concave side up, then placed in the sulphur house and there allowed free access to the sulphur fumes for 24 hours, or until the cups are filled with juice, which is drawn out by the sulphur. The trays are then moved to the dry yard and the fruit is allowed to remain until it has had 36 hours of sunshine, or until a thick scum has formed on the juice in the cup. Then the trays should be stacked, one upon the other, allowing a free circulation of air to pass between them. The fruit should remain in this way until it is thoroughly dried and then carefully placed in lug boxes—never in sacks or even in fruit bins that are used for storing of other dried fruits, such as prunes, peaches, etc. In taking the dried pears from the trays care should be used in selecting the fruit that is fully dried, as half dried pears will "run" into a mass of sticky, worthless rubbish, unfit for any purpose whatever. When the pear is thus handled there is no dried fruit that excels it in looks. Should the pear be handled by allowing it to remain but a few hours in the sulphur house, as in the case with the peach, then placed on the dry yard and allowed to remain exposed to the rays of the sun until it is thoroughly dried, the fruit has very much the appearance of a piece of sole leather, the edges several shades darker than the base, which places it commercial value at a low ebb. Lake county sustains the reputation of producing the most perfect dried pear in the State. The pear growers of that section have made a study of the art of drying. Primarily they have a pear filled with sugar, one of the requirements in successful drying. Next they have a climate that assists in giving the dried fruit a color. Last and most important, they have learned from years of experience the amount of sulphur to be used, the length of time the fruit should remain in the sulphur-house, the length of time it should remain exposed to the rays of the sun, and how long the fruit should remain on the trays before being placed in lug boxes.

Curing Other Fruits.

Such fruits as peaches, prunes, apricots and raisins do not require the careful handling as that of the pear. Peaches and apricots are put through the sulphuring process, and then placed on the dry yard and there allowed to remain until thoroughly dried but not allowed to remain until the fruit has lost all of its moisture; in that case the fruit is not only injured commercially, but loses in weight. The prune is dipped in hot water containing concentrated lye, which cracks the skin and allows it to dry—that was the primitive style. Now improved machinery dips and pricks the skin of the prune, which allows it to dry without "bloating." Possibly the raisin is dried with the least care and difficulty, as the trays are taken into the vineyards and the grapes picked and placed thereon. After they have remained there for a time, a tray of the same dimension is placed on top of the grapes and the trays are inverted, thus allowing the grapes on the under side of the original tray to be exposed to the sun. The fig remains on the tree until it is practically dried; then it drops to the ground, is picked up, and placed in lug boxes, but care should be used in not mixing the dried with those that are partially so. Figs in that condition should be placed on trays and allowed to remain until thoroughly dried.

Grading fruit on the dry yard.

The Dehydrating Process.

Thirty-odd years ago the artificial process of drying fruits was attempted, but for some reason it failed to function. There is at the present time the remains of some of the old plants in Solano county. However, in the past few years decided improvements have been made in drying or dehydrating machinery, and results derived from the use of many of these plants have proven eminently satisfactory. In the past few months the writer has attended several meetings where Professors Cruess, Christie and Tufts, of the University of California, discussed at length the mechanical phases as well as the scientific principles of fruit drying, proving conclusively that the dehydrating process is in line to give great impetus to the dried fruit industry of California.

Quoting Professor Cruess: "I should like to say that our knowledge of the constuction of evaporators is making very rapid advances, but evaporation is also a field in which an enormous amount of work yet remains to be done. Our advice now is that the prospective purchaser of an evaporator proceed with caution. Study the available types closely by personal inspection, see them in operation, work with them, determine their weak and strong points, and above all, take time to learn all he can about the subject. Sun-drying is an art and a science in itself, but is not a circumstance in this respect compared to evaporation."

California's Ideal Climatic Conditions.

The normal climatic conditions in California, during the fruit-drying season, as a rule, are perfect, and where the orchardist is well equipped for sun-drying the additional cost of installing a dehydrating plant does not readily appeal to him, until after he has sustained heavy losses from rain damage and continued cloudy, damp weather. The loss sustained by the Santa Clara prune growers in September, 1919, was sufficient to construct enough dehydrating plants to handle all the prunes in that county for the next generation. It is claimed by the manufacturers, and those who have successfully tested many of these plants, that the cost of fuel and equipment is more than offset by the economy of time and labor, and we will add that where the grower is not equipped with trays and sulphur houses for sun-drying, there will be a great saving in the purchase of trays alone as it does not require more than one-fourth the number of trays when the dehydrating system is used, and in the end the greatest saving is in a dry yard. The sun-drying of three to five hundred tons of prunes will require from five to eight acres of land as a dry yard, and if the weather conditions are cloudy and murky ten acres of land will be required. Consider what that means. Should that ten acres contain full-bearing trees, at the present prices being paid for prune orchards, it would be worth $1,500 to $2,000 per acre. As a rule, all the revenue derived from such dry grounds is a poor crop of volunteer hay, made up principally of Russian thistle and fox-tail.

The Goal in Fruit Curing.

We hold no brief for the manufacturers of dehydrating machinery, but it is our candid opinion that a reliable, well-equipped plant is one of the best insurance policies that can be held by an orchardist whose dried product is of sufficient tonnage to require an unusual amount of labor, drying trays and dry-yard space. The use of the dehydrating plants is not confined entirely to prunes, as all varieties of fruits are handled with equal success. The production of dried fruits increases annually. With the shortage of orchard labor and high price of same, the shortage of material and poor quality of same, we are confronted with a question of potential economic importance. However, the industry should not be jeopardized, but encouraged in a manner that its profits will offset all of these difficulties. After all that has been said for and against the various methods used in the transition of our fruits from their fresh to a "mummified" state, from the point of view of those who finally eat it, the main thing is to have it dried in such a way that it shall retain as much of the natural flavor and food ingredients as possible, together with soft texture, attractive appearance, good keeping qualities, and freedom from insects or dirt or harmful substance of any kind.

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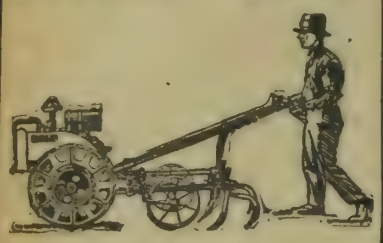

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High School Should Embrace Agriculture

(Written for Pacific Rural Press by W. S. Killingsworth.)

It is a lamentable fact, deserving of discouragement, that the public schools of this nation are so lax in their teachings of many matters essential to future development and welfare of two of our greatest industries—agriculture and horticulture. That, however, to some extent is due to a lack of proper facilities and sufficient appropriations with which to conduct a system that would fit students for duties they would naturally be called upon to execute while in the performance of their duties as principal or subordinate teachers in the grammar and high schools of the nation. During the past few years the development of facilities for teaching the fundamental principles of these great industries have greatly advanced. There are at the present time more than 2,500 public high schools in the United States teaching agriculture and horticulture; twenty years ago there was not one. Some of the State and private colleges have added a department of agriculture and horticulture to their curriculum.

As a means of establishing these systems in the public schools it would be necessary that the teachers in charge of those departments be graduates of an agricultural-horticultural college, as it would be a farce to allow the work to be carried on by those who have had but little if any actual training in those departments. It would be much preferred should those in charge have had practical experience in farming and fruit growing in addition to that received at an agricultural-horticultural college, and they should not be required to devote any of their time and attention to work not connected with their departments. Where horticulture is made a feature of the instruction in agriculture in the public schools, there should be a small greenhouse and hot-beds, there should also be provisions made for exercises in budding and grafting fruit trees, and if convenient there should be small nurseries of citrus and deciduous seedlings grown by the students for practice purposes. The greenhouse work should include not only grafting and budding, but seeding and judging of fruit.

Will Exert Wholesome Influence.

Agriculture-horticulture, if well taught in the high schools, dignifies an ancient occupation and will exalt the homes and homely duties. They will develop in the boys a thoughtful and studious attitude towards a great business which is likely soon to occupy many of them in the serious affairs of making a home and living for themselves. High schools in which these "twin sister" industries are something more than a new textbook subject, in which it reaches out to the surrounding homes, farms and orchards for its problems and illustrative material, soon acquire a hold and exert an influence upon the community such as other schools have never been able to get. The parents themselves come to know the schools better and are more loyal in their support. They cherish a feeling that it is theirs, that it is worth while, and they are more liberal in their moral and financial support. They fully recognize and at the same time appreciate the fact that their boys are being educated—not for some allurement in the distant future, but for life in the world of today, in the home neighborhood, in another State, or wherever they may choose to go. Moreover, they will feel that the school is a school for everybody—of educational, social, and pecuniary benefits to all.

Hot Spell Favors Red Spider

(Written for Pacific Rural Press.)

As a result of the recent hot wave, red spider will more than likely put in its appearance, and as tree and vine fruits have had all the set-back they can very well stand from this heat, it will be necessary to protect the foliage against invasion from the spider, for should their work be as destructive as is often the case, trees becoming defoliated, the growth of the fruit will be checked, and as a natural consequence the quality will be so deteriorated that it will be of little commercial value. Not only is the present crop of fruit made to feel the evil effect, but the fruit buds, the forerunner of the next season's crop, may suffer to the extent that they will not mature. Apparently all may be well—no intimation of the red spiders' designs on a promising vineyard, almond or prune orchard, until the attack has been made; then, in many instances it is too late to put up a winning fight against them. It would be decidedly best that every orchardist look into the matter carefully and not wait until they have pitched camp. Following treatments have been successfully used. Spray with atomic sulphur—10 pounds to 100 gallons of water—when red spider first appears on tree or vines in any great number. One thorough application each year will be sufficient, as it will kill all mites present at the time spray was applied. In the case of spraying grape vines great care must be used that the spray will reach every portion of the under side of the leaves, as the spiders congregate there as a protection.

Some growers prefer the dry powdered sulphur applied with a dust machine. In the early days of red spider invasion we have seen the powdered sulphur applied with the ordinary seed sower, such as is used in sowing grain, and it had the desired effect. This work should be attended to at once where there is the least suspicion of an invasion.

POMEGRANATES ON ALKALI.

To the Editor: In your issue of June 19th, under "Queries and Replies," and headed, "Far More Alkali than Figs," you answered the question of J. C. S., Merced, as to what varieties of fruits will do better on alkali than figs, and in your reply there is no mention made of the "wonderful" pomegranate. I would suggest that the pomegranate be planted in place of the figs at distances of 8x12, and thus four acres will soon produce returns worth while. The pomegranate, from the writer's own knowledge, will sustain a very considerable amount of alkali and commence producing at the age of two years, and at the age of five or better will produce from six to nine tons per acre, and the average price obtained through consignment of fruit of this nature for the last five years is better than $100 per ton.—E. F. L., Fresno.

The old crop of apples are now a thing of the past, as the cold storage stock have made their last appearance on the San Francisco market. New apples, however, are coming

Order Your Trees Now

Make sure next season's planting.
Many varieties will be scarce.

ORDERS BOOKED NOW WILL BE GIVEN PREFERENCE

ROEDING TRUE TREES FRESNO, CAL.

We are always pleased to answer questions regarding best varieties to grow, soil, irrigation, pruning, etc.

Fancher Creek Nurseries

FRESNO, CALIFORNIA

HERE AND THERE IN THE FRUIT BUSINESS

Don't Neglect Tree Wounds.

How often is it the case during the plowing and cultivating season that the teamster will inadvertently allow a projecting point of his disc, harrow or cultivator to collide with the body of a tree and rip off a slab of bark as large as a saddle skirt, and continue his journey without even giving "first aid" to the injured part? Such diabolical carelessness has laid waste many a tree, whose value as a producer is hard to replace. Had the "accident" been reported to the owner of the orchard, or the foreman, a remedy might have been applied, resulting in saving the tree with no depreciable value other than marked with a scar. A valuable treatment would have been in the use of equal parts of lime and bluestone. Slake the lime in one vessel. Place bluestone in a cloth sack, suspend in a wooden or earthen vessel in warm water. Keep lime and bluestone separate until used; then mix only as much as will be used at one time. It should be as thick as paint and applied with a brush.

An Optimistic Outlook.

Wilmer Sieg, sales manager of the California Fruit Distributors, takes an optimistic view of present conditions and future outlook of the fruit industry. In answer to an inquiry as to his views on the subject, he states: "The movement of fruit has been very liberal so far with plenty of cars in sight and excellent markets in the East and a good liberal demand from the trade in the Middle West on this side of the Missouri River with just as good prospects for the future as we have for the present. Crop conditions have not been decided. There is always something to hurt California a little bit, but always enough fruit to go around and bring back a pretty fair revenue to the producer."

Early Pears Disappointing.

New pears are among the daily arrivals, such as the Madaline, a pear in name only, as it is practically destitute of either flavor or keeping qualities. Something new in pears, termed the spring sickle, has made its appearance on the market. There will be nothing that may be classed as a pear until the Wilder and Lawson put in their appearance. As express shipments of Bartletts have gone forward to Eastern markets, initial shipments may be expected on the San Francisco market at any time.

Satisfactory Berry Output.

Berry picking is now under full headway in the Sebastopol district. Two to five cars are being shipped daily to the eastern markets in addition to heavy tonnage going to the canneries. Although the berries need fog to make them size up; the crop is good. The total production for the district will amount to something like 5,000 tons. The fruit is in good demand, ranging in price from $160 per ton for blackberries to $275 per ton for loganberries for cannery purposes.

Big Berry Ranch.

M. J. Moniz, one of the largest berry growers in Sonoma county, has finished planting and caring for his new berry holdings, which amount to 75 acres. It is one of the largest berry fields in the county, and Mr. Moniz states that when it reaches full bearing it will produce 200 tons of berries annually. The following leading varieties were planted: Loganberries, Mammoth and Lawton blackberries.

Good and Bad Effects of Hot Wave.

County Horticultural Commissioner A. L. Rutherford of Stanislaus county reports damage from the recent hot wave, harmful only in few localities, while on the other hand it was beneficial in the way of destroying aphis, thrips and leaf hopper, that are a menace to vineyards.

Sonoma's Prunes in Demand.

Sonoma county prunes are in demand, 15 cents base being offered. Grapes are also in demand, $60 per ton being freely offered.

Copyright 1920, by The Goodyear Tire & Rubber Co.

"Even slight jars bruise peaches—pneumatics protect them. My trucks on Goodyear Cord Tires help all my farming, which is largely motorized. These trucks go through the sandy loam of the fields to feed the machines and to haul from them—solid-tired trucks cannot do this."—W. W. Lowe, Farmer, Fruit Grower and Stock Raiser, Byron, Georgia

BETWEEN the lines of statements like this, one reads the narrative of a significant advance in farming methods effected with power machinery and trucks on Goodyear Cord Tires.

The labor shortage is being met on many farms by these pneumatic-tired trucks working with motorized pumping, shelling, grinding, cutting and threshing machines.

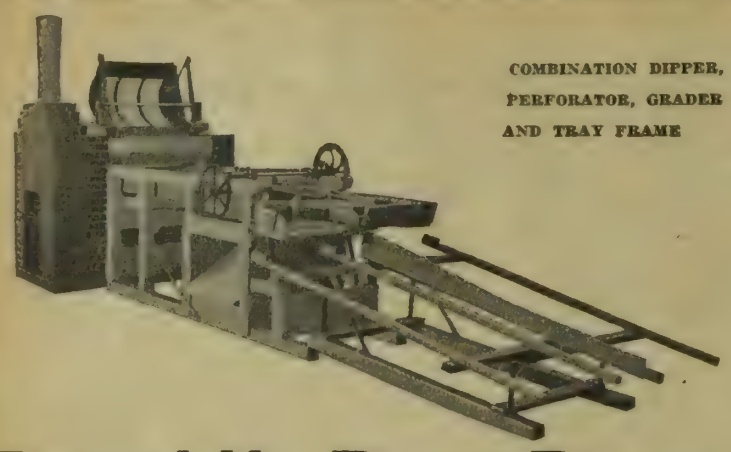
Since it usually is not practical to follow the field activities by moving such outfits along, their operation, to be fully efficient, must depend on quick cartage over soft ground.

The solid tire is not fitted for this hauling, because it stalls in loose soil, whereas the big Goodyear Cord Tires supply the traction necessary in off-the-road hauling.

Their immense strength proceeds from that manufacturing care which, in protecting our good name, has developed the sinewy toughness of their Goodyear Cord construction.

Farmers' reports, showing how pneumatics on trucks help increase farm incomes, can be obtained by writing to The Goodyear Tire & Rubber Company, Akron, Ohio.

GOODYEAR CORD TIRES



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Dependable Prune Dippers

FIRST YEARS AGO—FIRST TO-DAY

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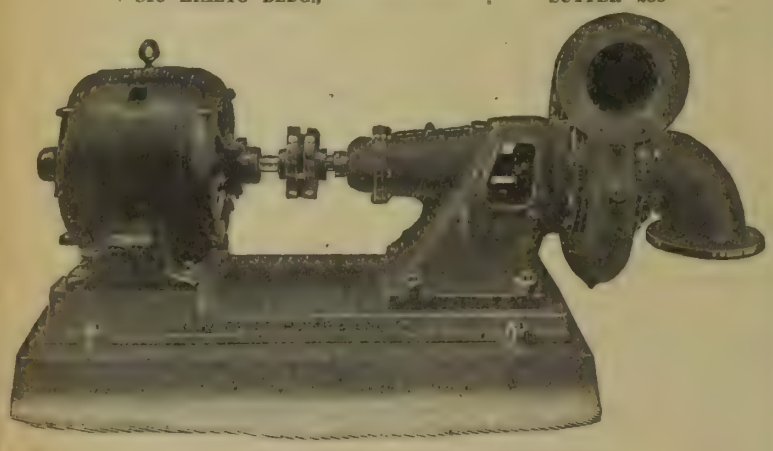

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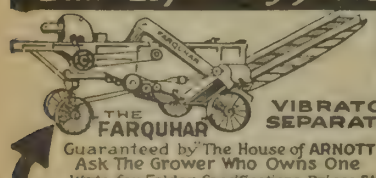

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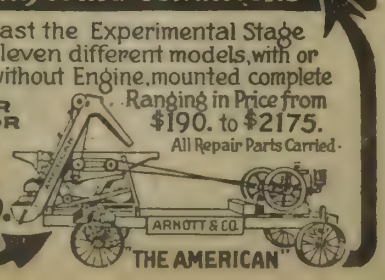


"THE AMERICAN"

Eradication of Morning-Glory Pest

To the Editor: In my corn patch I have cultivated and hoed till I am done up trying to keep down wild morning-glory. It is only in places. Would ask if any remedy is possible to kill the weed.—John W. Anderson, Santa Rosa.

(Answered by Geo. W. Hendry, Ass't Professor of Agronomy, Univ. of California.)

In response to your inquiry of recent date regarding the extermination of morning-glory, we would advise that it is too late this season to do anything practical in the way of extermination of this pest except, possibly, cutting the vines to prevent them from forming seed.

We would suggest, however, that it is possible for you to completely eradicate this pest in one season by continuous cultivation throughout the growing months next year. We would advise you to plow the land early in the spring, during March, to a depth of about ten inches, and that you repeat this plowing at intervals of about ten days until the first frosts occur in the fall. If you carry out this program faithfully and never allow the vines to show green above the surface of the ground, you will have no morning-glory on your land the following season. This is an expensive operation, to be sure, but it is the only effective way for the absolute eradication of the pest. You will have to keep continuously at it, however, for if you allow the vines to show green above the surface of the ground the value of the work will be lost.

The particular involved here is that the roots of morning-glory extend to a depth of ten feet or more in a porous soil. These roots constitute a reserve food supply for the plant, and the leaves constitute small chemical laboratories in which reserve food in the form of starch is manufactured and returned to the roots for a new food supply. By cutting off the plants to a depth of ten inches, the plant must draw on this reserve food in order to send up new shoots to the surface, and by continually cutting off these shoots as fast as they develop the reserve food supply in the roots will be gradually exhausted. If, however, you allow the leaves to form during the growing season, they will immediately start to manufacture more starch, sending it down into the roots, and the value of the work will quickly be lost. If, however, you keep the ground clean throughout the summer, the roots will be so weakened that no new shoots will be formed the following summer. It would be advisable, however, in following out this suggestion to plant a cultivated crop the following year so that if a few straggling vines do appear, you may keep them cut off and finish the starvation process.

THE MENACE OF THE MEALY BUG.

(Written for Pacific Rural Press.)

Not until recent years has the mealy bug become a menace in the principal grape districts of the State. For years it has been a damaging factor in the citrus orchards of the southern portion of the State, and it is now equally as bad a pest in the grape districts, particularly in the San Joaquin Valley. The Malaga grape seems to be the variety most sought after. It deposits a honeydew on the grapes that gives them the appearance of having been roughly handled. A great deal of attention is being paid to formulas that may be the means of entirely wiping it out. In the treatment of citrus orchards fumigation is resorted to, by the use of hydrocyanic-acid gas or spray with oil emulsion, crude carbolic acid emulsion, or water under high pressure. It would be out of the question to attempt to fumigate grape vines, so instead they are sprayed with the following formula: Distillate emulsion, 4 gallons; liquid soap, ¾ of a gallon—or hard soap, 5 pounds—water 200 gallons.

The utmost care must be used in the application of spray, to see to it that every portion of the vine and clusters be touched, as the matter of spraying simply because it is the fashion is an idiotic as well as costly pastime. The grower must not become imbued with the idea that because it is here this season, the chances are that it will not "play a return engagement" the following season. He wants to get any such idea out of his system, for when the mealy bug once appears on the scene it makes it hard as well as very expensive to get rid of it.

THE DREADED PEAR BLIGHT.

The State Department of Agriculture reports the appearance of pear blight in many sections of the State. This dreaded and disastrous exterminator of prosperous, prolific pear trees has caused more trouble, worry and expense to the California pear growers than any one disease or pest heretofore appearing on the scene. There is but one way to check its deadly drive, and that is to keep on its trail seven days in the week and thirty days in the month. When it was putting in its hardest licks in the pear orchards along the Sacramento river, many of the growers employed the most reliable help to be had, who made a tree to tree canvass, daily, in a search of pear blight--root, body and twig. Some trees were treated at an expense of $15 to $20 each, requiring the services of one man three to four days to excavate and follow the trouble to the end of many of the roots, continually sterilizing the tools used in cutting away the diseased parts. By this "eternal vigilance," the pear blight, which at one time was a disastrous menace, was practically wiped out. It is a tedious and expensive remedy, but should not be considered so when by such treatment pear trees worth $25 to $75 each are saved.

TO PROTECT RASPBERRY PLANTS.

Each season raspberry plants suffer attacks from anthracnose, that work on both foliage and roots. The grubs live upon the roots in the soil. The adults feed largely by night and hide during the day. The adults are leaf-eaters, preferring usually the tender shoots. They also attack the foliage of many cultivated ornamental and fruit trees, such as apples, apricots, plums, prunes, etc. This invasion can be prevented by spraying and general clean-up methods. First, remove diseased canes. Second, spray with concentrated lime sulphur wash—the dry substitutes will not give results. The first spray is made before growth starts, diluting the concentrate at the rate of 2½ gallons to 50 gallons of water. The second application is made when the new growth is six or seven inches long and the third application just before the plants bloom. For these two applications dilute the concentrated lime sulphur one quart to ten gallons of water. It is imperative that every portion of the plant be covered from the ground up.

SALE OF $3,000,000 HIGHWAY BONDS.

A sale of $3,000,000 worth of State Highway bonds at $195,000 below par has recently been approved by the Governor, the State Controller, and the State Treasurer. The $195,000 is to be paid to the State out of California's share of Federal money in order to comply with the bond issue law requiring the State to get par value for its bonds. The courts are to determine whether this financial juggling may legally be done.

Nearly 2,000 trees have been planted along the highways of Sacramento county by the County Forestry Board, according to a report just made by William Vortriede, a member.

Agricultural and Mechanical Service

Alfalfa Seed Future Strong.

What do you think about prices and demand for alfalfa seed this fall?—G. M. W., Modoc county.

Judging by the consistent increase in the price of alfalfa hay all over the United States for the past five years and the well-known shortness of acreage during the present season, there is sure to be a strong demand for seed next season. The scarcity of seed last spring led to importation of millions of pounds from foreign countries—an unusual situation. Much of this will condemn itself and probably the demand for real home-grown seed next season will be stronger than last year. The public is gradually being educated to permit higher prices for dairy products, and this will eventually encourage the dairy industry, make safe the alfalfa industry, and make a market for your seed. On the other hand, so much alfalfa will suffer from drouth this summer that more than the usual acreage may be left for seed in California. This will not affect eastern seed crops. It looks to us like alfalfa seed will go higher than last year.

Atmospheric Nitrogen for Legumes.

Can alfalfa or any other legume take up any atmospheric nitrogen whatever if the inoculating bacteria are not present?—R. E., Fresno county.

They cannot. No plant can take up nitrogen from the air without the aid of bacteria to convert it into the nitrate or ammoniate forms, which are the only forms in which plants can use nitrogen. Nitrates and ammoniates are obtained from various sources commercially, without the use of bacteria. Nitrate of soda comes chiefly from great natural deposits in Chile. Sulphate of ammonia, which is almost as readily available for plants as the nitrates, is a by-product of various manufacturing operations. Nitrates have been manufactured from nitrogen of the air by use of electricity in various parts of the world, including our Government plant in Alabama.

Objects to Eucalyptus on Line.

Can my neighbor set eucalyptus trees on the line between him and me? He set the first row on the line and the second within three feet.—A. J. A., Stanislaus county.

The line is less than a tenth of an inch wide. If your neighbor sets the trees on his side of the line, your only right is to trim off any limbs which overhang your soil. If he sets them partly on your side of the line, you may chop them down. However, the court might hold you responsible for cutting that part of the trunks on the other side of the line.

Killing Weevils in Granary.

How can I get rid of weevils in a concrete granary before putting the new crop in.—O. F. W., Yolo county.

Close all cracks and fumigate with carbon bisulphide not less than 10 pounds per 1000 cubic feet space. Place it in shallow pans as high up as possible and keep the granary tightly closed twenty-four hours.

Marlout Not for Wet Locations.

Is Marriout barley good for growth and production on moist delta lands as compared with our common barley?—L. R. M., Sacramento county.

Common barley is better for those conditions.

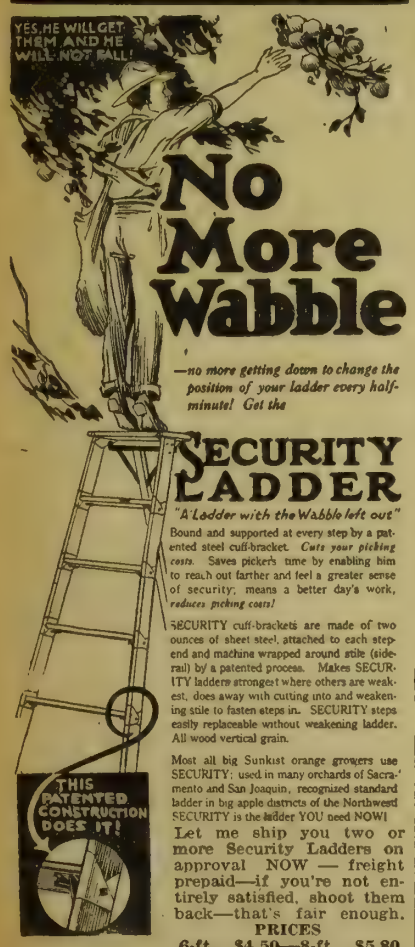
COTTON FIELDS FOR NEW TIRE FACTORY.

Recent purchase of 7,800 acres of cotton land at Marinette, Arizona, by the Goodyear Tire and Rubber Company increases the total land owned by that company for raising long-staple cotton to be used in fabric for automobile tires to 36,000 acres. More than 20,000 acres additional have been leased for future needs. About 30,000 acres are already under cultivation.

The $20,000,000 Los Angeles factory of this company was recently started with 2,000 employees, 700 of whom are in the offices and 1300 in the factory. Half of the latter are experienced tire builders sent out from the home factory at Akron, Ohio, to train the 7,000 men ultimately to be employed. Full capacity of the plant will be 5,000 tires per day

LITTLE TRACTOR PULLS BIG TREES.

A little tractor pulled big cherry trees for J. W. Cunningham of Napa county. Some of the trees were 18 inches in diameter the thin way through, yet the 12-20 tractor pulled them over. The tops were cut off as high as an ax would work in order to chop where limbs were not too big. Then a 20-foot chain was hooked around a tree about five or six feet up, the tractor gave it a pull from several directions to loosen roots all around, and it came over.



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6-ft., $4.50—8-ft., $5.80
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Ask your Dealer about Security Ladders—handled by Dealer in 114 Coast towns. For name of your dealer, see Rural Press of May 29th, Page 851

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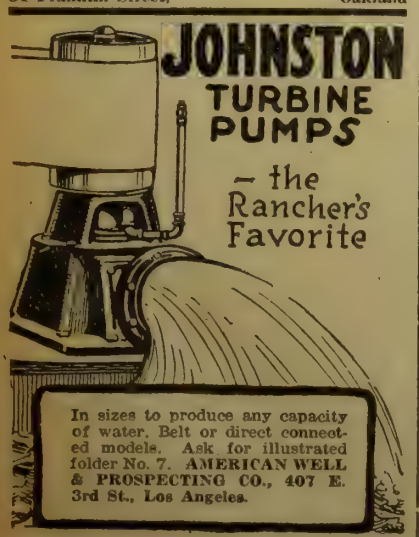

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PLANT NOW—July is one of the best months to plant. Growers who planted last July and August have already harvested over 15 tons per acre, netting $1000 eleven months from planting. For further information, write J. B. Wagner, Rhubarb Specialist, 1550 East Villa St., Pasadena, Cal.

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Automatic Lift Beet Plow

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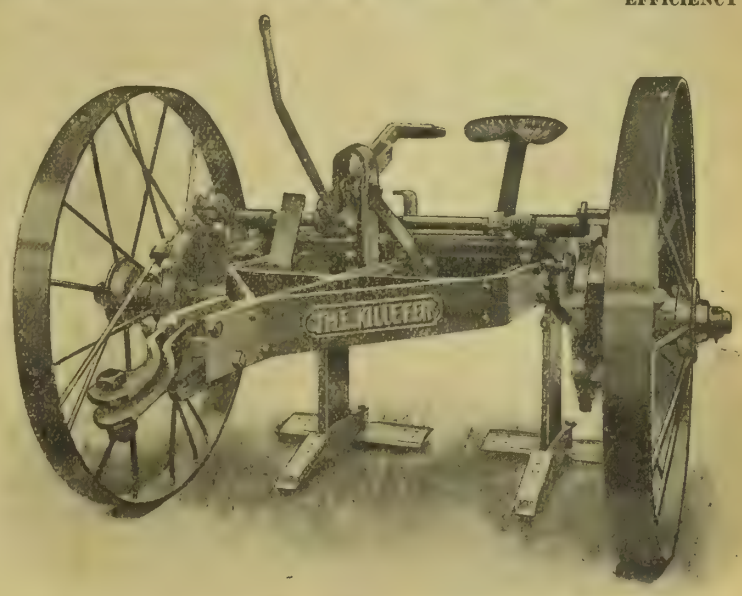

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The value of a good implement of this kind is not only in its ability to perform a perfect job of beet lifting, but in the condition it leaves the ground for next season's crop. Subsoiling has proven very beneficial on the Pacific Coast soils, and a good job of beet plowing is nothing more or less than subsoiling.

Our beet plow is equipped with either the straight wings, as shown in the cut, or with angle wings, whichever is preferable.

Place your order early, for owing to the shortage of steel, there will be a limited number of these beet plows available.

PRICE. F. O. B. LOS ANGELES, $575.00

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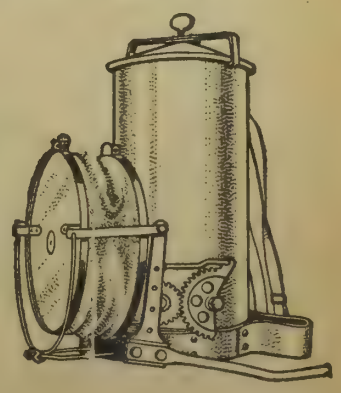

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The mica in the de Luxe Tractor Plug is wound around the center spindle, *then reinforced* with mica washers, compressed into a granite-like whole. This plug stands the brutal punishment of tractor operation.

The great International Harvester Company, after exhaustive tests, has adopted Bethlehem Spark Plugs as standard equipment. Bethlehem Automobile and Truck Plugs are equally dependable. Studebaker, Marmon and 48 other manufacturers equip with Bethlehem Plugs.

Write for free copy of "Hit or Miss?", which tells what you want to know about spark plugs.

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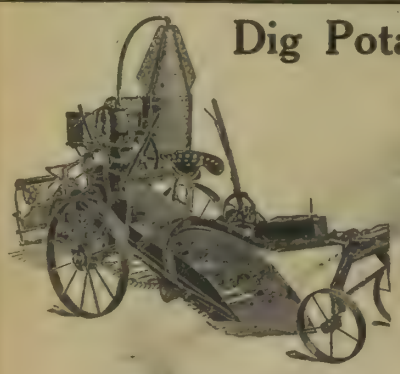

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Write for information now.

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To the Tractor or Truck Owner--

Does the dirt get into your engines and cut things to pieces? Why let it, when an

OIL-AIR-FILTER

will keep all the dirt out? Can build them to fit any engine.

FOR PARTICULARS WRITE
DAILEY BROS.
A/109, Reedley, California

Significant Agricultural Pointers

Lime-Sulphur for Wheat Smut.

Smutty wheat still comes to the mills from California ranches in spite of careful treatment with formaldehyde and bluestone, according to A. J. Morgan of the Vallejo laboratory of the Sperry Flour Co. The soils become so thoroughly infected with smut spores that some treatment is required to protect the seed and young plants. Old methods have partially failed. After a study of all methods in use, the Sperry people set aside a field at Vallejo for experiments, concentrating largely on lime-sulphur treatment. Three plantings of each treated sample were made two weeks apart. Each planting consisted of 100 treated seeds in a row one rod long beside 100 untreated seeds from the same lot of wheat. Smut spores were sown in the field with each planting. By an ingenious planting device, the conditions of planting were identical except for seed treatment. None of the rows proved entirely free from smut. Average smut infection was 20 per cent lower on plants from lime-sulphured seed than from untreated seed. A 25-per cent solution sprinkled over seed, adding 2 to 4 per cent moisture gave best results. The earliest planting, done December 20, produced the most smut-free wheat and hardiest stalks. The best-prepared plots produced less smut than the others. Hardiness of the plant seems to give it greater resistance. Wheat stalks bearing infected heads were only two-thirds the height of healthy stalks. Usually every grain in an infected head is destroyed, but this is not always true.

Child-Labor Tax Law.

A prohibitory Federal tax is levied on all employers of children under fourteen years of age in fruit and vegetable canneries and other mill, factory or work shops. Permits issued under California State law for children over twelve and under sixteen years old to work during vacations should be obtained from authorities of the school last attended. These include statements of age which are very likely to be accepted by Federal Inspectors, but the Federal child labor tax law is not affected by the fact that schools are closed or by issuance of such permits. No child under fourteen is permitted to work or to be in any canning factory; and no child under sixteen years may work over eight hours a day or more than six days a week or before 6 a. m. or after 7 p. m. without subjecting the employers to the tax. Last summer children under the specified age were permitted to work in sheds outside of the factories, preparing fruits and vegetables for canning. A notable case was in the bean canneries of Lake and Mendocino counties. A ruling of the Commissioner of Internal Revenue, dated June 26, 1919, prohibits such employment without payment of the tax, and will be strictly enforced this season as it was not last season. Copies of the rulings may be obtained from Deputy Commissioner of Internal Revenue Yoell, at the Custom House in San Francisco.

Farmers Borrowed $347,990,941.

Despite the recent harassment of the Federal Land Banks, they loaned $1,191,100 to 294 farmers during May, 1920, for aid to increase production. The Berkeley bank closed loans for $140,700 during the month. On May 31 there were operating in the United States 3,983 Farm Loan Associations, including 12,298 farmer borrows, to whom $347,990,941 had been loaned. They had repaid $10,919,630. Total loans outstanding in the United States on May 31, 1920, were $337,071,311, of which the Berkeley Bank has $17,126,100, helping farmers to increase production economically.

Alpine County Loses Agriculturally.

Alpine county has only half as many farms in 1920 as in 1910, according to preliminary census reports. Acres improved have decreased from 7,579 to 4,306, and the valuation of farm land and buildings, given to the census-taker dropped from $619,443 in 1910 to $468,800 in 1920. The number of all classes of farm animals also decreased. Cattle totaled 3,754 in April, 1910, and only 1,457 in January, 1920. The chief crops in 1919 were 3,374 tons of hay from 1,810 acres, 5,330 bushels of wheat from 184 acres, and 460 bushels of oats from 21 acres. The county has only 10,042 acres in farms as compared with 32,004 acres in 1910; but notice the yields per acre!

Highway Bond Interest Meeting.

Most everybody interested in the State's bum highways was at least represented at a big meeting in San Francisco June 19. The State Highway Commisison, the Automobile Associations, legislators, and the Tax-Payers' League of California were prominent in the discussions. The meeting resolved against any increase of interest rate on the unsold highway bonds, and voted in favor of relieving counties from undue burdens imposed by the rule that they must pay interest on all bond money spent within their borders. The Highway Commission apparently still travels over the State in Pullman cars at night and refuses to believe that the highways are in abominable condition.

U. S. Navy Buys Danish Potatoes.

Half a million pounds of Danish potatoes have recently been bought in New York by the U. S. Navy at lower prices for better quality in sacks than for Maine potatoes in bulk. There was so much fusarium disease in the American potatoes that the inferior-appearing Danish stock graded better as to quality required by the Navy specifications. A few jolts like this ought to penetrate the craniums of American potato growers and make them willing to pay for seed certified free from disease; then plant it on clean ground.

Labor Scarcity Forcing Subdivision.

Labor scarcity is bringing about a desirable result as viewed recently by a farm loan investigator. Large places formerly dependent on drifting labor and skilled superintendence are hard to make profitable with present labor. They are being subdivided. The man buying a subdivision or working it on shares is a much more satisfactory labor producer than the old kind; and he makes the landowner more money. The problem now is to get the families required to carry out such a system extensively.

Fresno Irrigation Increased.

Fresno county had about 400,000 acres under irrigation in 1910, and now has 517,876, as reported by the Bureau of the Census. That figure is to be nearly doubled by irrigation works, either completed or under construction, when the total will be 957,780 acres. The report indicates that 93,735 acres will be available for settlement under works either complete or under construction. Part of the pump irrigation developed in the past ten years is simply used to supplement the gravity water.

Certified Potatoes in Wisconsin.

Wisconsin certified seed potatoes will total 150,000 bushels this year, as estimated by Chief Inspector J. W. Brann. This is a 25 per cent increase over last year, when half of the 250,000 bushels grown for certification passed the tests. There were 275 growers last year and 325 this year, some growing 150 to 200 acres for certification. Though California has been several years boosting for certified seed potatoes, very few are yet being grown.

Rain Doesn't Kill Grasshoppers.

People who thought the grasshoppers had been killed by recent rains in the northern part of the State had another think coming when the depredators reappeared with the warm weather.

WHAT CONGRESS DIDN'T DO FOR AGRICULTURE.

The U. S. Congress, which adjourned June 5th, signally ignored agriculture. The next regular session will not begin until December 6. Capper-Hersman bill, legalizing co-operative organizations, was held in committee so long that its successor, the Volstead-Capper bill, had no chance to get through the Senate, though it passed the House by a vote of 234 to 58.

The Federal Farm Loan system and and the Joint Stock Land Banks are tied up in litigation inspired by those who sympathize with themselves more than with the farmers; and Congress made no progress toward putting these institutions in the way of continuing business.

The Congress did not provide anywhere near adequately for the farm crop reporting service, which has been of so much value to our readers, nor for the market reporting service, both of which have had their wings clipped when they should be flying to higher efficiency.

Even the two-cent bean tariff did not get far, though it was long and persistently advocated by farmers' representatives in a four-cent form.

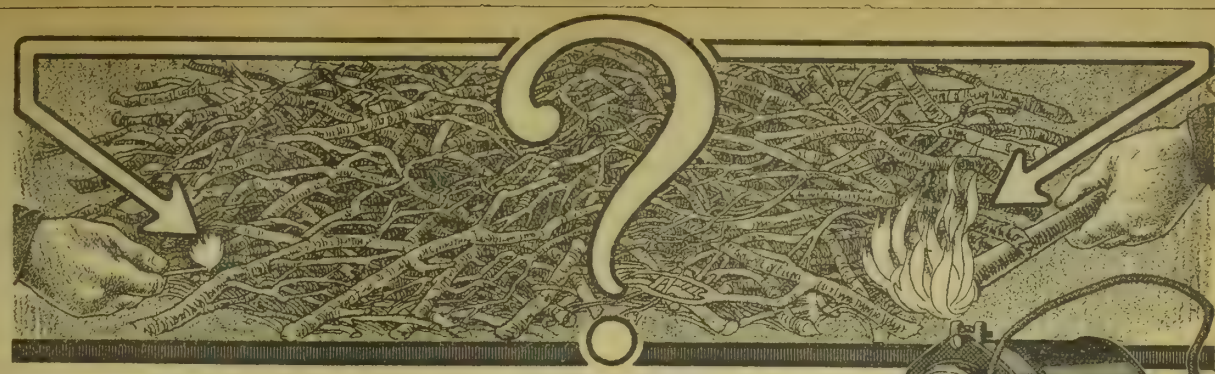
Other agricultural legislation, which did not get through, included the packer-control bills, the Muscle-Shoals nitrate plant bill, the cold-storage bill, the basket standardization bill, the pure-fabrics bill. Legislation not even attempted at the recent session includes such as would give us uniformly pure seeds, pure feeds, pure fertilizers, and pure insecticides.

The sixteen appropriation bills passed by Congress totaled $2,688,000,000, as reported by the National Grange. Of this about $31,000,000 covered the agricultural appropriation bill—a trifle over one per cent for the agriculture which U. S. Secretary of Agriculture E. T. Meredith has characterized as "an $80,000,000,000 enterprise, doing a yearly business of $25,000,000,000." The water-power conservation bill, passed in the closing hours, has received President Wilson's signature; but not so the bill which would have authorized the War Department to transfer motor equipment to the Department of Agriculture for road construction, etc.

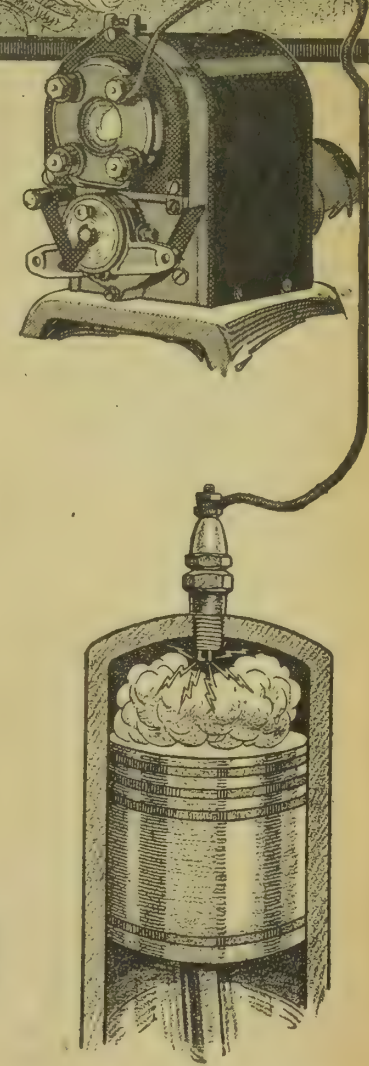
COTTON BOLL-WORM TRAP.

Corn ear worm is the bane of California corn growers. It is the same varmint that eats into cotton balls. The moth lays eggs where the young worms will find desirable food handy when they hatch. Corn silks are preferred over anything else, but corn leaves are preferred over cotton. If no corn is convenient for the moth, she lays on cotton, particularly on the green bolls, and damage results. This suggests that an occasional row of corn among the cotton, planted so it will be silking at the time most bolls have well started, will attract the moths and worms so as to protect the cotton. Observations made last August in Arizona on corn stalks in a row adjoining cotton showed 60 corn stalks infested with live worms, while no live worms were found on the cotton to the twentieth row distant, and less than one per cent of the squares and bolls had been injured.

An obseravtion in the Salt River valley by Prof. A. W. Morrill of the University of Arizona, August 4, 1919, showed infestation of fourteen per cent of the 825 bolls inspected in five different localities. In another field adjoining corn, 250 bolls were examined the same day close to the corn. Only three (1.2 per cent) had been injured by the bollworm. A quarter-mile from the corn, 10 per cent of the squares were damaged. A few hundred yards farther the damage was 12.8 per cent. A half-mile from the cornfield it was the same, seeming to show that the protective influence of the corn extended a trifle over one-fourth of a mile, but was not very effective at that distance.



Which Will Light The Bonfire Quickest?



Which will light the bonfire quickest---the blazing torch or the parlor match?

Which will ignite the fuel in your tractor cylinder quickest and get the most power out of it---the big, hot, flaming spark of the K-W Magneto, or the weaker, smaller spark of some other ignition that was never designed for a tractor engine.

The power you get from your tractor absolutely depends on how quickly and completely you burn or explode the gas in the cylinders. Severe conditions such as cheap grades of fuel, slow engine speeds, etc., demand that every piston stroke deliver maximum power in pulling the heavy load.

The tractor manufacturers who have been making tractors longest have found through years of actual field service that K-W Magnetos give the hottest spark, the surest explosion and the most power.

THE K-W IGNITION Co. (TRADE MARK)
2889 Chester Ave. CLEVELAND, OHIO, U.S.A.

TRADE K-W MARK Magneto

Fires Any Fuel—Gets Maximum Power Out of Every Drop.

BUILD UP YOUR SOIL WITH

Whip-Poor-Will Cow Peas

WHAT THEY WILL DO:

They make the best summer cover-crop.
Maintain a moist surface mulch.
Will prevent June drop.
Require less irrigation than other crops.
Need no irrigation where soil moisture has been conserved.
Build up poor soils with more nitrogen bacteria and humus than any other covercrop.
Afford the best kind of pasture for cattle and hogs.
As a hay have a food value of 43% more than Alfalfa.
Will improve your silage.
There is no better Bee Pasture.
Thirty pounds of seed is sufficient to plant one acre.
Our seed germinated 96%.

PLANT WHIP-POOR-WILL COW PEAS
Buy Your Seed from

AGGELER & MUSSER SEED COMPANY
620 So. Spring St., Los Angeles, or
767 So. Central Ave. (There is no parking limit here)
Our Seeds are handled by your local dealer

ENGINEERING ADVICE GRATIS

If you want to know about using
KEROSENE
Write — giving make of tractor, size, etc.

Ensign Carbureter Co.
217 E. 17th Street
1626 So. L. A. Street
Los Angeles

Manufacturers of the
ENSIGN FUEL CONVERTER

LONG OR SHORT HITCH?

Does it make any difference in power required to pull a load or a plow hitched close to a horse or tractor as compared with a long hitch?—H. B., San Luis Obispo county.

(Answered by Prof. L. J. Fletcher, Univ. Farm, Davis.)

The least force that will produce motion lies between the horizontal and the vertical. In other words, with an upward pull less forward pull is required. So a horse hitched close to a wagon or cultural implement gets a slight advantage over the longer hitch where the upward angle is less.

Prof. Davidson says in "Agricultural Engineering": "Lengthening the hitch does not have the effect that it is generally supposed to have. The principal effects are that the horse does not have as complete control over the load and that the angle of the trace is changed. Lengthening a horizontal trace ten or even fifty feet has practically no effect upon the capacity of the horse. Many men think they can hold a horse at the end of a 100-foot rope. A trial is very convincing that they cannot do so."

Since the tractor drawbar is much lower than the attachment of tugs to hames, there is very little upward pull on a tractor attached to the ordinary implement. Thus for tractors, it makes very little difference how far the implement is hitched behind the drawbar. With the average small tractor, the farther away a plow is hitched, the less the side draft.

PREVENTS FORDSON'S TIPPING OVER.

Fordson tractors have occasionally tipped over backward upon indiscreet drivers, who were pulling or jerking them to the limit, in low gear, perhaps with the front end raised on a levee or on an uphill grade or with the rear end dug into a hole. Such tipping over is unnecessary. It can even be made impossible by adopting the plan carried out by J. W. Cunningham, an orchardist of Napa county. An extension drawbar is bolted onto the regular drawbar to project far enough backward so that if the tractor ever should tip backward, this extension would catch in the dirt and stop it. This additional drawbar is wide enough also to permit a greater number of holes into which to hitch if it should be desirable to pull an implement off center behind the tractor. This, of course, is hard on the tractor, but is done regularly with many of them and is occasionally very desirable.

NECESSARY TO PREHEAT KEROSENE?

Tests with high-speed, heavy-duty engines burning kerosene were made made to determine the effect of heating the intake air and heating the vaporizer. Air-intake temperatures were increased 10 degrees at a time. Temperatures around the vaporizer were increased 100 degrees, at a time from 150 to 650 degrees. The loads used were 5, 10, 15, and 20 h.p. Efficiency of the engines seemed not to be affected by any of the heat changes except that at low temperatures the engines would not idle under 800 or 900 r.p.m. At high temperatures the engines could be idled down to 150 r.p.m. Heating the air and gas made the motors more flexible with kerosene fuel.

LOSS OF COMPRESSION.

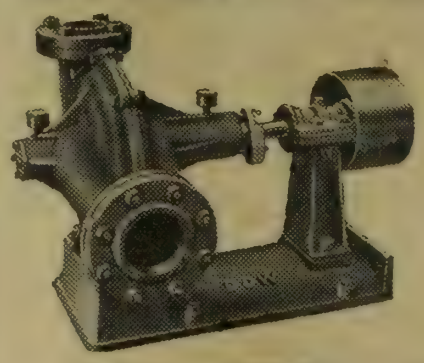
Loss of compression in an engine is due to one or more of many causes. Lubricating oil too light or too heavy will let gas leak past the piston. Ill-fitting piston rings or scored cylinders lose compression. New rings in a scored cylinder do not cure the case. The cylinder should be reground. Valves may be rough and pitted or so carbonized that they do not close tightly. They may need grinding or at least cleaning. The push-rod may be holding the valve off its seat. The valve stem may be so gummed up that it does not close quickly. Gaskets around the combustion chamber may leak. Spark plugs may leak either through the center or past the base on the outside. Some of the various cocks may be partly open. Loss of compression means more stops for gasoline.

A reduction of the tax on motor trucks operating between Oakland and Contra Costa points was recently asked by the Oakland Merchants' Exchange and refused by the Contra Costa supervisors on recommendation of A. C. Gehringer, President of the Farm Bureau of the latter county. Protection of the county roads was the reason given.

An Opportunity to Purchase A Double Suction Pump

AT A SINGLE SUCTION PRICE

DOW DOUBLE SUCTION VORTREX PUMP



Built for Hard, Continuous Service

MOTOR DRIVEN BELTED OR

Write for Bulletin 101

DOW-HERRIMAN COMPANY

Factory: Petaluma, Cal. *Sales Office, 142 Howard St., SAN FRANCISCO*

Fairbanks-Morse "Z" Farm Engines

FAIRBANKS-MORSE QUALITY F M 100%

KEROSENE

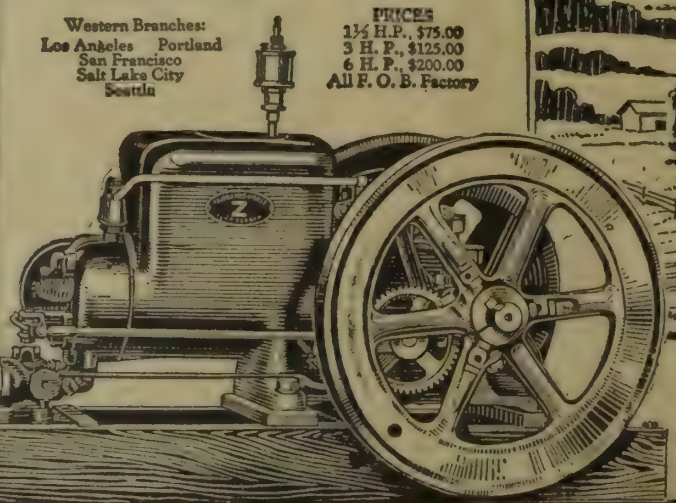
is king now that distillate is gone. It gives the same power, gallon for gallon, as gasoline, when used in the "Z" farm engine. Kerosene is the fuel for which this engine is designed. One of the many reasons why more than 250,000 farmers prefer this engine.

In the "Z" they bought dependable power—more than enough for every farm need for which the type you choose is adapted—dependable workmanship which has made the utmost of high grade materials—a correct design—Bosch Magneto—all unified by the efficient service rendered by thousands of "Z" Engine dealers.

FAIRBANKS, MORSE & CO.
MANUFACTURERS CHICAGO

Western Branches:
Los Angeles Portland
San Francisco
Salt Lake City
Seattle

PRICES
1½ H.P., $75.00
3 H. P., $125.00
6 H. P., $200.00
All F. O. B. Factory



THE BEST CARBON REMOVER.

We are frequently advised by garage men not to "monkey with the carbureter." Have it adjusted by an expert and leave it alone! Run it in all attitudes, all temperatures, all conditions of humidity in the air and all speeds, without adjustment! That makes more work for garage men to gouge you on. It would be more sensible to get one of them to show you how to tell when it is adjusted right and then make your own adjustment for varying conditions. As well try to run a tractor plow in all kinds of soil at all stages of dryness without adjustment.

On cold mornings it saves a great deal of temper and some time to make the mixture richer than usual. If you forget to turn it back you may wonder what makes the engine run so "logey" until you think of the carbureter. You may sometimes hear the engine knocking unaccountably. It is probably because you turned the carbureter too far to the right and the mixture is too thin. But if you keep the carbureter regulated to as thin a mixture as possible without the knocking, your carbon troubles will be practically nil. The writer has had his spark-plugs out only once in the last 5,000 miles and they were clean then. In traveling some 27,000 miles, we have cleaned carbon out of the cylinder heads just three times, and it never needed cleaning badly. Occasionally we get a carbon knock due to leaving the mixture too rich, as happened once when the priming rod stuck without our knowledge. The engine did not need a physic of kerosene, nor patent carbon remover, nor even water. The carbon was burned out by running on a leaner mixture than usual. This would not apply on a tractor because much of the "carbon" is simply unburnable dust.

HOW DO YOU MAKE BELTS STICK?

(Written for Pacific Rural Press.)

A man may throw dirt onto a belt to stop it from slipping. This works where slippage is due to oil or grease. But it isn't good for the belt. He may put brown soap on it. This makes it stick on account of rosin in the soap. But in an hour or so it glazes hard and then the belt needs another application. That isn't particularly good for the belt. Any belt must be kept clean and pliable in order to serve the longest useful life. To clean a dirty leather or rubber belt, simple soap suds removes grease and many kinds of belt dressing. Any mineral oil is hard on a belt, but in some cases it is necessary to lay a leather or canvas belt on a board, squirt kerosene over it, scrape it off with a knife, and when clean apply neat's-foot oil, which tends to drive off the harmful kerosene, fills spaces between fibers, and lubricates them. Apply it while the belt is running. Alcohol is better than kerosene for cleaning, but is expensive. Kerosene or lubricating oils must not be used on rubber. Saltless tallow is a good lubricant for a belt. Mix it with beeswax and you have a lubricating sticker.

Rubber belts stick better to the pulley naturally than any other kind. They are made by vulcanizing rubber into several plies of canvas. If they slip, treat the surface sparingly with warm raw linseed oil. After the rubber surface is worn off, a good canvas belt remains. It may be helped in sticking to the pulley by the various stickers mentioned and by some proprietary compounds, the best of which do not depend on much if any rosin for their sticking qualities. Lead-oil paint makes a fairly good dressing for canvas belts.

MOTOR VEHICLES IN U. S.

There are about 7,100,000 motor vehicles in the United States, of which 650,000 are used for commercial purposes (motor trucks). About 375,000 trucks are equipped with pneumatic tires. California has about 470,000 automobiles and motor trucks. Sales of passenger cars are slow now, due to the recent lessons on gasoline shortage, which have certainly scared some people.

CARBURETER AFIRE! SMOTHER IT.

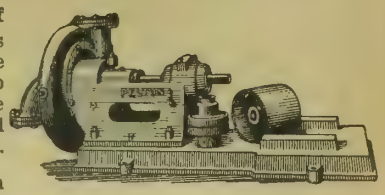
A burning carbureter is a panic-generator. But we have seen a lighted match stuck into the neck of a bottle of gasoline. It did not explode because there was not enough air to support combustion. So the short way to put out a carbureter fire is to wrap the burning carbureter with an old coat. It will even be cheaper to spoil a rug or a good coat than to let the fire get away from you. Water will not help. If gasoline can be shut off at the tank, do that and turn over the engine as quickly as possible. This will draw the flame into the engine and will soon exhaust the gasoline supply.

DIAGONAL TIRE INJURIES.

In taking a tire back to a dealer for adjustment after a blow-out, the dealer remarked that because the injury ran diagonally across the tire, it was a sign that it had been cut before it blew out. He said that defective fabric is betrayed by cracks running lengthwise around the tire. Probably if he should see such cracks all around the tire he would say it was due to running it under-inflated.

THERE are dozens of makes of centrifugal pumps, of all grades and prices. But there is only one make that can be depended on to work steadily day after day; one that will return dollar for dollar and guarantee a desirable crop return.

This "ultimate" pump can be driven by a gas engine or an electric motor. It has the best design and the strongest construction. It has the endurance to pump week after week without giving trouble.



PELTON

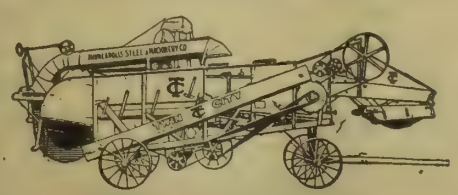
Investigate the PELTON pump. Bulletin No. 11 B gives complete details.

The Pelton Water Wheel Company

1990 Harrison Street, San Francisco.

Twin City 12-20 Plowing 30 year old Alfalfa Sod

Here are some of the reasons:
Double valve area of 16-valve (valve-in-head) engine quickly exhausts all burnt gases, leaving a clean cylinder so that the new charges deliver full power. Removable cylinder walls mean uniform cooling, quick and easy replacements. Counterbalanced crankshaft reduces vibration and wear. Pressure feed oiling through drilled crankshaft. Hyatt roller bearings throughout. All gears of special alloy steel, drop-forged, heat-treated, completely enclosed and running in bath of oil. Every part readily accessible.



All Steel Twin City Threshers
22-42; 28-48; 36-60

Here is a striking example of Twin City 12-20 performance. This picture from an actual photograph shows Twin City 12-20 near Montrose, Colorado, pulling three 14-inch bottoms through Colorado gumbo—30-year-old alfalfa sod—plowing 8 to 10 inches deep in this toughest of all land. A feat not easily matched in tractor work.

With this demonstration of what Twin City 12-20 does under extraordinary conditions, you have ample assurance that it will give you any service you will ever demand.

Its 16-valve (valve-in-head) engine means great surplus power with fuel economy that you can see. Its unusual strength and light weight are the Twin City results from the finest alloy steels heat treated. *The Twin City 12-20 is built to do the work—not to meet a price.*

See the TWIN CITY dealer nearest you. Or write for details on TWIN CITY Tractors 12-20, 16-30, 25-45, 40-65, 60-90. All-steel TWIN CITY Threshers in three sizes and TWIN CITY Motor Trucks.

Branches
Lincoln, Neb.
Des Moines, Iowa Wichita, Kansas
Great Falls, Mont.
Denver, Col. Fargo, N. D.
Indianapolis, Ind.
Peoria, Ill. Kansas City, Mo.
Spokane, Wash.
St. Louis, Mo.
Salt Lake City, Utah

Twin City Company
Selling Products of
Minneapolis Steel & Machinery Company
Minneapolis, Minn.

Canadian Distributors: Minneapolis Steel & Machinery Co. of Canada, Ltd.—Winnipeg, Man.; Regina, Sask.; Calgary, Alta.

Export Office: Minneapolis Steel & Machinery Co.—154 Nassau Street, New York City.

Distributors:
Frank O. Renstrom Co.—San Francisco, Los Angeles, Stockton, Oakland and Sacramento, Calif.
Baskerville & Dahl Co. Watertown, S. D.
Shannahan & Wrightson Hardware Co.—Easton, Maryland.
Kepler-Merrell Motor Car Co.—Syracuse, N. Y.
Southern Machinery Co.—Atlanta, Ga.
R. B. George Machinery Co.—Dallas, Houston, Amarillo, San Antonio, Texas, and Crowley, La.

TWIN CITY

12-20 Kerosene Tractor with 16-valve engine

Farming the Fordson way

Over 100,000 farmers in every section of the country are successfully farming the Fordson way.

They find that greater efficiency in operation and increased production result from using these specially designed power farming implements.

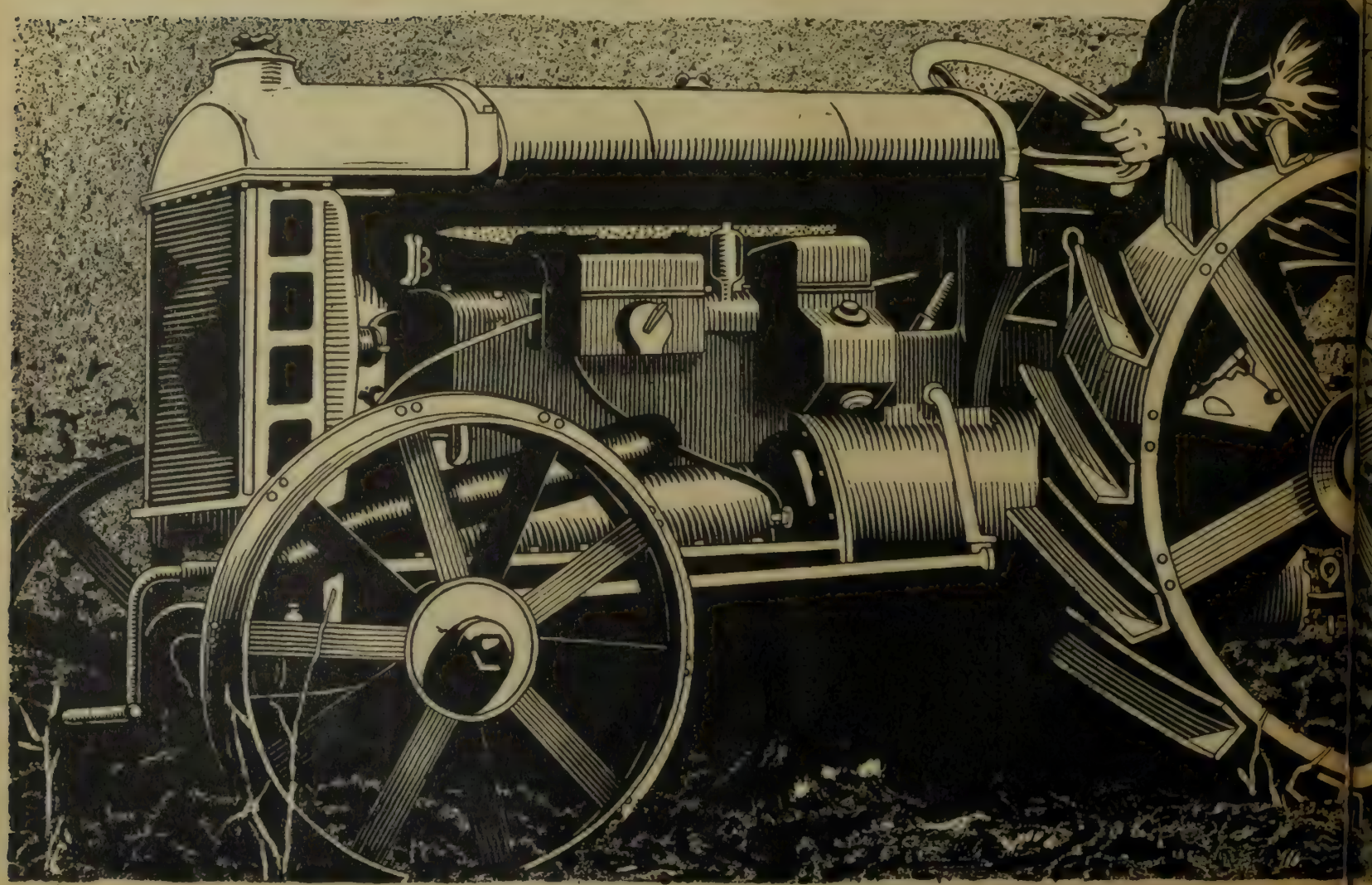
There is a specially built power farming implement for every farm operation with your Fordson tractor.

See the Fordson Dealer in your town.

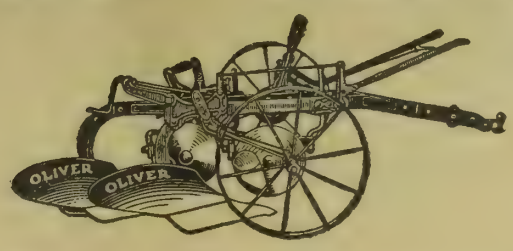
Distributor Fordson Implements

WM. L. HUGHSON CO.,

San Francisco, Los Angeles, Oakland and San Diego



OLIVER
No. 7 PLOW

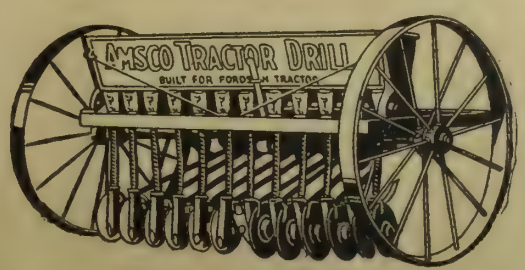


The Oliver No. 7 plow represents the most advanced design in plow construction. It is the plow that more than 100,000 farmers now are successfully using with their Fordson. It is the plow you should demand for yours.

Roderick Lean
DISC HARROWS

No seed-bed is properly prepared without the use of a disc harrow. This Roderick Lean Automatic Disc Harrow was developed exclusively for Fordson farmers. It has the unqualified endorsement of thousands of users everywhere. There are also specially built for use with the Fordson, a Roderick Lean orchard disc harrow, a spike tooth harrow, and a spring tooth harrow.

AMSCO
TRACTOR DRILL



The best prepared seed-bed produces maximum crops only when properly seeded. The Amsco Tractor Drill represents seventy-five years of drill-manufacturing experience, and is the choice of Fordson users everywhere. When you buy a drill you'll want the Amsco.

Grain in California June 1

All grain, flour, and beans in warehouses and mills and in transit in California are included in the figures below, compiled June 1 by Chief Grain Inspector H. C. Bunker of the San Francisco Chamber of Commerce. This does not include grain and beans on the farms. Figures of June 1 for several years back are given for comparison.

June 1	Flour Bbls.	Wheat Ctls.	Barley Ctls.	Oats Ctls.	Beans Sacks	Rye Ctls.
1920	257,496	651,660	583,840	88,780	1,624,670	13,620
1919	143,209	456,140	1,632,180	194,720	2,006,694	31,200
1918	239,339	353,000	451,900	119,580	523,037	17,540
1917	156,633	481,640	322,740	109,880	269,947	3,260
1916	171,456	904,760	1,679,460	186,180	554,136	15,160

The figures show more wheat and flour combined than since 1916. Barley stocks amount to a third of what they did a year ago, but are more than they were on the same date in 1918 and 1917. While bean stocks are reduced from the figures of a year ago, they are still treble what they were on the same date two years ago. The oats figures show a notable reduction under normal stocks. This, with the reduction of acreage this year, should make oats valuable.

FRUIT SHIPPERS MUST OBEY THE LAW.

No fruit shipper in California can plead ignorance of the Fruit Standardization law. Notwithstanding, daily arrests for violation of same are being made in the bay cities. The horticultural commissioners of San Francisco and Alameda counties are determined to put an end to such flagrant violations. In conversation with Fred Seulberger, horticultural commissioner of Alameda county, we learned that he had 11 cases to come before the Alameda county court this week, and it was the second appearance of one or two of the violators.

Knowing the feeling of the horticultural commisioners, the writer would suggest that the shippers take this matter seriously, for they may rest assured that if they don't comply with the law they will suffer the consequences. Suelberger stated that arrivals since the recent hot wave were the most disreputable lot of rubbish that had ever been placed on the Oakland market, and all the fruit that had been condemned had been shipped back to grower, which adds additional expense to his fine, as well as a loss of the containers in which fruit was shipped, as by the time it made the trip both ways it was ready for the scrap heap.

WHEAT SITUATION PUZZLING.

(Written for Pacific Rural Press.)

The wheat situation is a little peculiar. With visible supplies in America about twice as great as on the same date last year, there seems little life to the market. No. 1 hard white wheat in Minneapolis exchanged hands June 23 at $2.85 and $3 per bushel, notably above the Government guarantee, which recently expired, but lower than on previous dates. In the week preceding June 23, the visible supplies in the United States and Canada decreased 13,641,000 bushels, or about 10 per cent. Wheat harvest is already well under way in the southern part of the wheat belt; and at the present rate of use, harvest will be over before three-fourths of the present stocks are used up. After all, this would leave only 30,000,000 to 40,000,000 bushels holdover out of a total crop in the United States alone of 941,000,000 bushels. The demand for shipment to certain countries in Europe has been strong. The grain exchange will open for resumption of trading in wheat futures on July 15. There was objection to this plan, but the needs of the mills and grain trade overcame the objections.

CORN CULTIVATOR SAVES MOISTURE.

A moisture-saver for corn cultivation has been worked out by J. H. Shively of Napa county. Ordinary shovel cultivators go deep and dig up sub-surface soil, which may still be moist. When it is turned up to the surface of course that moisture is wasted. It might be saved by stirring the dry soil over it to keep a soft mulch without bringing moist soil to the surface. This is done by Mr. Shively with a regular corn cultivator on which the shovels each side of the row are replaced by a weed-cutter blade about four inches wide and 18 inches long, sloping down toward the forward edge and extending squarely crosswise of the rows. This cuts all weeds, lifts the dry surface soil, breaks up all capillarity by which moisture might escape, and drops the lose blanket of soil back into place. To get good results, the first cultivation in the spring goes deep to stir it up. No plowpan has been noticed.

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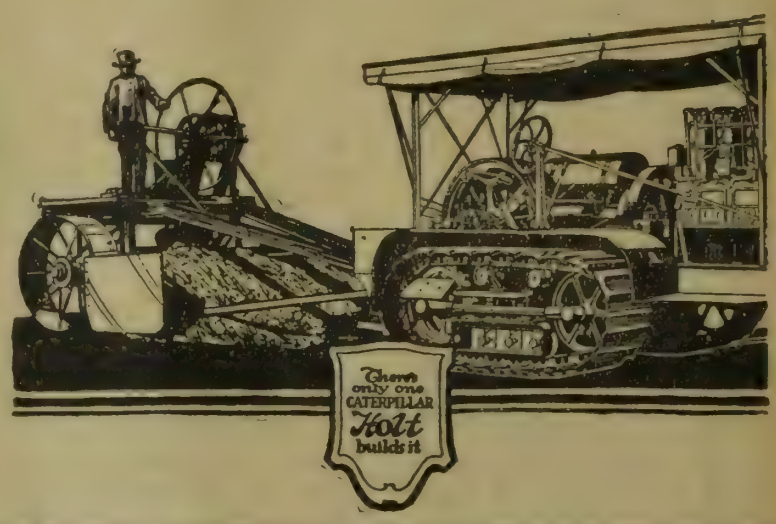

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Make Preparation for the Fall Fairs Now

Written for Pacific Rural Press by Thos. F. McConnell.

This is not written for the "old timer" in the exhibition of livestock, but rather is it directed to the man new at the business and who has a few animals that should be shown for his own advancement and benefit. Many times the owner of an animal—be it man or woman, boy or girl—has regretted it was not on exhibition at the local fair when the paucity of exhibits in that line was discovered and discovered too late.

A great many of the local, county and district fairs have classes for grade stock, stock of excellent breeding, but no registration papers to show that it is purebred. Those classes have been inserted in the premium list at the request of some one who thinks there should be an exhibit of this kind. How many have ever seen a creditable showing of grade animals outside of carlots of fat hogs and cattle? We do not say there never has been one, but they are few and far between.

Show Confidence in Your Own Stock.

We are not really in favor of encouraging such classes only for one reason, and that is to bring home to the people the great superiority of the purebreds over the ones "better than that at home, and it ain't registered either," as we hear so often remarked at the fair. Now, if you who think and say this really want to show us, who think you have not "just as good" at home, commence now to give the ones you know are so good a little extra feed and a little extra care; then you will have a better opportunity of saying, "I told you so," when the trial comes off.

The writer has often noticed the ragged, unkempt, slovenly and dirty appearance of some animals in the grade classes at the fairs in the past. They are not a credit to themselves or their owners. Do not think the judge will not see the good points if they are hidden under a coat of manure, dirt and old hair. It is the judge's business, however, to pick out the best animals and the condition and manner in which they are shown are taken into consideration when the awards are made. It is just as important for the pig or calf, colt or cow, to have its "Sunday-go-to-meeting" clothes on to attend the fair, as it is for the owner to have his or her "best bib and tucker" in evidence.

If a person has a superior animal of any kind it should be exhibited, if possible. Why? Because any one should have public spirit and pride enough about themselves to help make the community enterprises a success. A prize-winning animal advertises the owner's place and livestock business. A successful county fair, made up of good individual exhibits, is a good promotion scheme for a county, and so ad infinitum. An old English saying has it that "take care of the pennies and the pounds will take care of themselves"; this may apply in principle to a county fair in that, if every person that has a meritorious article will place it on exhibition at the fair, the fair will take care of itself and will be a success as an exhibition. Also, if every one in a county will attend such a fair and post themselves as to the resources of their county, the undertaking will be a success all around. It will go forth that such a county had a wonderful fair, that it must be a wealthy, prosperous region from the very fact that such a rousing good time was experienced. This applies not only to small fairs, but to district, state and even the greatest fairs and shows.

If You Have Only One, Show It.

Do not hesitate to make an exhibit if only one animal is good enough. Fit that and show it. All livestock exhibitions are made up of individual animals. One pig or goat or chicken, properly fitted and shown, reflects more credit to the owner and adds more to his reputation than half a dozen poorly fitted mediocre ones.

Don't try to excuse yourself by saying that you don't know how to fit your stock and will not have any chance in showing against more experienced exhibitors. If you really want to raise prize-winning livestock, commence as soon as possible by attending fairs with it. Go to some one you know who has shown successfully, call upon your Farm Advisor, write to your farm paper, but "get busy."

The first thing to do is to select your animals. This is the most important point of all. If a large number are available from which to make the selection, so much the better. Two or three times the number needed should be placed by themselves to receive the special care and attention necessary to properly develop them. In making the choice have in mind the type that has won in the past. If possible, the advice of some one of experience will be of great value at this time.

After the selection of the animals is made then gentle and teach them to lead or drive handily. Nervous and obstinate animals should receive especial attention. Those of vicious dispositions should never be shown. Calves and cows should be taught to lead to halter, and service bulls should be handled with a staff. Hogs should be handled with hurdles. Animals that are easily controlled can be handled and shown to advantage. If they are easily handled they can be taught to pose in the best positions, which is very important.

The Conditioning Process.

Feeding animals to produce the best results offers a field for the display of much ability and judgment. Start the selected herd along slowly, gradually increasing the feed as the development takes place and the appetite and condition indicate. Be on the lookout for scouring, lack of appetite, loss of condition, as indicated by staring coat, feverish condition, etc. Be on the alert for abnormal symptoms.

Watch development with an eye to the rejection of the ones that, as time goes on, are showing a marked falling behind in the race for perfection. Sometimes the rejection may be for only the present season, and the animal will be a "comer" for the future, but do not try to carry those along that really fail to develop as they should.

The toilet of the show animal is of great importance, and more attention should be paid to this point by the exhibitors of grade animals if they expect their exhibits to merit serious attention. It is impossible to give in a newspaper article anything more than a mere hint at the detail of this part of the procedure for all classes of livestock. Cattle and hogs are washed, brushed, combed, feet trimmed carefully, and in case of the cattle the horns and hoofs are polished until they shine like mirrors. Sheep have their feet trimmed, some of them have their fleeces trimmed, some have the fleece treated with oil and perhaps a little coloring matter. Blanketing of everything except hogs is practiced by many herdsmen and shepherds, and is necessary to produce the nicest appearance and highest bloom.

Don't Neglect Exercise.

Exercise must not be neglected, especially for some of the older animals. Too close confinement for hogs and sheep especially is to be avoided. The exercise will keep them in better health so the appetite will be good and the flesh firmer and of a better handling quality. Exercise regularly and every day.

Let us go back for a short space to the selection of animals for exhibition. As the breeder gains in knowledge he will commence to select his show herd earlier every year until as soon as an animal is born it will be critically inspected to see if it carries the lines of a possible champion. This should not discourage the new beginner now because the experience must be gained first.

Another important point and that is handling the animal in the showring under the eyes of the judge. The animal that has been well trained and will respond readily to the exhibitor has much the advantage over one that is wild and awkward. The exhibitor, too, should study the judge and try to show his animal to the best advantage. Do not try to deceive but do not neglect to present the animal properly.

It is not best to fit breeding animals too highly, especially the older ones. More than one has been spoiled by overfitting, feeding too wide a ration and lack of exercise. Remember, however, that the highly fitted, beautifully groomed animal will catch the eyes of a majority of the judges.

Do not understand the writer to say that fitting will make the inferior animal win, but it will "cinch" the ribbons for the good ones. It also gives the public a good impression of the exhibitors' animals.

Publicity Permissible.

Years ago some fair associations would not allow exhibitors' business cards or signs about the pens or animals until after the awards were made. Now all that is changed, and usually the pens and stalls are covered with signs and cards. Some go to the extreme in this way, but advertising is the main object so we will present no adverse criticism on this phase of the subject. By all means the new or small exhibitor should have signs telling who the exhibit belongs to, the name of the farm, animals' names and not forgetting the post-office address of the owner.

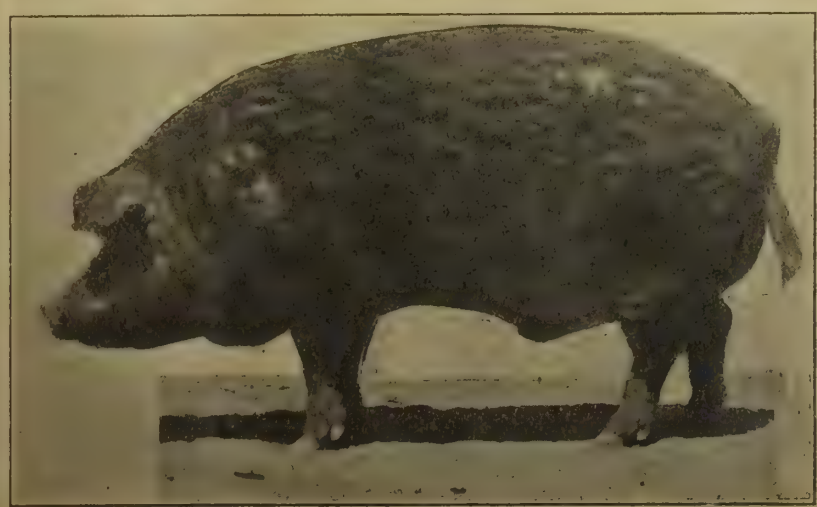
The main object of this article is to encourage the new beginner and owner of meritorious animals to enter them for exhibition at the local fair, thereby helping themselves and their community at the same time. Your exhibit and attendance is needed. Now let the secretary of the local fair hear from you with a request for a premium list, and then later with an entry. This is addressed to the boys and girls, as well as to the older people. If every one will try California will have exhibits at the county fairs this fall that will be astonishing.

NEW WORLD-RECORD COW IN CALIFORNIA.

Toyon Farm Association announces that its Lady Aaggie Echo Hengerveld has completed her year's work with close to 1200 lbs. of butter from over 28,000 lbs. of milk, thereby breaking the world's senior 3-year-old milk and butter record. The previous butter record of 1171.1 lbs. was held by Jewel Pontiac Segis, and the previous milk record of 27,949.4 lbs. was held by Eli Aaggie Fayne Johanna. Lady Aaggie's record has not yet been confirmed by the Advanced Registry Office. It is a matter of considerable satisfaction to Toyon Farm Association to have this world's record back in its herd. In 1917, its Ormsby Segis Marie held this record with 1074.54 lbs. of butter from 27,025.7 lbs. of milk.

Lady Aaggie Echo Hengerveld unites the blood of great transmitting animals, being by a grandson of Aaggie Cornucopia Pauline Count, and from a daughter of Sir Johanna Canary De Kol, the sire of Spring Brook Bess Burke 2d, the only cow in the world with three 7-day records above 35-lbs. in connection with three yearly records above 1000 lbs. of butter.

Bred along such high-producing lines, it was only natural to expect a creditable performance from her, but to have her break a world's record under the conditions existing in this case shows her to be a remarkably persistent performer. Lady Aaggie was purchased several months after freshening from the A. E. Smith Company of Sumas, Washington. Unquestionably the long journey and the complete change of climate and environment had some effect on her total production. Any cow that can break a world's record under such conditions is a promising prospect for further and greater honors.



LORD'S ORION CHERRY KING—In Lamb Dispersal Sale.

DISPERSAL OF ELMER LAMB'S HERD OF DUROCS.

Every breeder of Duroc-Jerseys in California, and we might also say on the Pacific Coast, knows of Elmer Lamb and the red hogs he has bred. It is with genuine regret that we are announcing the dispersal sale of his herd—the effort of years of consistent work in the establishment of his ideal type. It is not often that breeders have the opportunity to obtain foundation stock of this high quality.

The herd is headed by Orion Cherry Pathfinder, out of Mary Jane Pathfinder—herself one of the attractions of the sale—and sired by Orion Model, making him a son of Pathfinder and Orion Cherry King Jr., two of the greatest boars of the breed.

Another herd sire in the sale—owned jointly by Mr. Lamb and W. M. Way—is Lord's Orion Cherry King, whose picture speaks for itself. In this sale an opportunity is accorded breeders to procure the best of the breed.

California Central Creameries Company have issued a letter to its patrons inviting them to invest and become stockholders in the corporation.

TESTIMONIALS

"Cows increased in one week 3 per cent in milk."
A. L. McCULLOCH, Alpaugh, Cal.

"I never saw hogs do so well or grow so fast as on this molasses ration."
C. H. HARTWIG, Yuba City, Cal.

"It has enabled me to keep my stock in better condition at less expense."
J. M. HENDERSON, JR., Sacramento, Cal.

"Have one calf that refuses to drink new milk—prefers skim milk with molasses. What do you know about that?"
B. HECKLEY, Santa Rosa, Cal.

"It has been a great advantage in getting the stock to clean up the roughage."
H. H. AMES, Chowchilla, Cal.

"One cow will turn down the choicest handfuls of alfalfa hay unless it has been 'Molassed.'"
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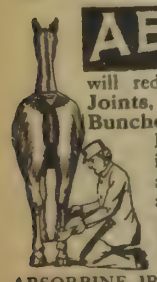

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Two miles out North First Street.

Record of Actual Profit from a Dairy

(Written for Pacific Rural Press by Ralph Newman.)

A while ago the Rural Press reported a plan launched by the Northern California Milk Producers' Association to get at the actual cost of producing milk by aiding dairymen in keeping accurate cost sheets at the dairy. This plan has been in more or less wide operation now for some five months and some interesting facts are developing. For example, out of eight typical dairies, six have shown a loss and two a profit, not a profiteering profit, but enough to be detected by the naked eye. The further fact appeared that none of the dairies showing a loss fed concentrates, while both of those showing a profit did feed them. Hereupon the writer became excited and rushed out to see the profit-makers and find out just how it was done. He only found one of them, but succeeded, by dint of persistent persuasive questions, in getting his story. The hero of the tale is J. N. Dimmick of Galt, and this is how he put it over.

Good Cows for a Starter.

"My dad and I," he said, as we walked toward the stable, "have been building up this little herd for fifteen years, keeping the best and selling the rest." We found about two dozen exceptionally high-grade Jerseys, headed by a fine registered bull of Venadera breeding. One look at the cows and their production records bore out the modest statement that they are good ones.

In 1918, with the "average feeding," which means practically a straight alfalfa diet, these cows did fairly well as good cows go on that treatment. In 1919, with the addition of a silo filled with honey sorghum, coupled with better care, these cows made a gain of 53 per cent during the first six months of 1919 over the last six months of 1918. This capped the cow-testing association prize, but it didn't satisfy the owner.

Brainy Feeding.

He began studying concentrates. An effort to get the makers of mixed feeds to give him the 100 per cent analysis of these feeds failed (only one came through with more than a vague promise), so he passed them up and decided to stick to primary feeds and do his own mixing. Then the market gave him an awful jolt. Finally, after weeks of study, he decided on molasses. Into this, thinned a little with water, he stirred oat hull feed. He paid $45 a ton for the latter because he found the cows were much happier taking their sweet in this form than when it was just daubed on thin hay. With light feeds of alfalfa hay, heavy doses of sorghum silage and good jolts of molasses, he went after those cows last winter. In addition, during November, December, January and part of February, he heated the drinking water—$13.50 was invested in a tank heater, $10.00 was spent for fuel, and Mr. Dimmick swears that the net return was $200. The result: Cows sleek, fat, contented, with another gain for the first four months of 1920 over the last four months of 1919 of 50 per cent. I know this is right, for I went over the books with him. And the outcome of this two years of intelligent, careful work with good grade cows, is a dairy showing a modest profit after all legitimate costs, including concentrates and a salary for the manager have been deducted from the gross income.

Rye and Pea Vines for Silage.

On the place is now growing a field of rye and Canadian field peas. The rye is six feet high, with a mass of pea vines striving in vain to bend down the straight stems. Rye was chosen because it was considered the only grain that would hold up the peas. This crop will go into the silo next week, after which the same ground will be planted to honey sorghum for winter silage, Mr. Dimmick being strong in his convictions that this is the best silage for his conditions. Last year he got 26 tons of it to the acre with 3 floodings and no cultivation.

When the writer called, a milking machine was being installed to help solve the heart-breaking labor problem.

A Bit of Silver Lining

(Written for Pacific Rural Press.)

Years ago, in the Salt River Valley of Arizona, before the Roosevelt Dam was built, there came a year of drought and water shortage in that driest of dry localities. All the ranches nearly were showing signs of the lack of water. There were exceptions, however, and when a Mr. Kilpatrick, who owned an alfalfa and stock ranch on the Tempe Road, east of Phoenix, was asked what caused a general look of prosperity about his place when neighboring ranches were showing the effects of water shortage, both in the crops and condition of the livestock, he attributed the difference to better methods of handling the irrigation water whereby every drop was distributed carefully. He had plenty of alfalfa to feed his livestock and some left over to sell his neighbors. He made more money than during the so-called better years. It certainly was a pleasure to see his ranch and hear his optimistic talk at that time—truly a silver lining to the cloud of discouragement that spread over that fair valley at that time.

Now comes a letter from one of the progressive swine breeders of the San Joaquin valley that polishes up the silver lining in the cloud of mental depression which overlies the purebred hog industry at present in California. We give it without comment:

"Winton, Cal., June 23, 1920.

"Pacific Rural Press—Gentlemen: Business is booming in spite of the general reactionary feeling in the livestock industry. While many dairy and swine herds are being cut down or sold out completely, a strong feeling of confidence seems to underlie the situation among the purebred men.

"I find that an unusually large number of sows have been marketed, which is a healthy sign to my mind. It is the surest and quickest way of getting the scrubs and grades another step toward oblivion—as it is far better than an even bet that when they are replaced on the farms and ranches it will be with purebreds.

"For a long time we have been hammering at the farmer to "use better sires"; now it is becoming, "use better sows, also." When it is considered that in one season, two or three outstanding purebred sows mated to a real boar will enable the farmer to have a good-sized herd of purebred gilts as a foundation herd to build on, there is little excuse for his continuing with scrubs.

"My own personal business has been largely in bred sows and gilts which are going out to found new herds. The farmers are realizing that it is better business to pay two or three hundred dollars for an outstanding bred sow than the same money for half a dozen grades. And they never go back to the scrubs.

"Since January 1, 1920, I have sold 45 head of breeding stock—practically all was placed through Rural Press ads. I have tried other mediums, and while they may be useful under certain conditions, I have found a uniformity and consistency from Rural Press advertising that I have failed to locate elsewhere. Frankly, the general atmosphere of the paper is such as appeals to the very class I wish to reach—progressive, wide-awake, thinking people, who have eyes, ears and brains, and are using them. Very truly yours,

"GEO. L. HORINE."

Lousy Hogs and Their Treatment

(Written for Pacific Rural Press.)

The louse, unless extra precautions are taken to keep him clean, the hog has always with him. In this time of high-priced feed and comparatively low-priced hogs, all means to produce pork economically must be observed. One thing is cleanliness about the hog pen and lot. No one ever found many lice on hogs in clean quarters, because the very methods that keep the premises clean keeps the hog clean also.

Lice and filth go hand in hand and where one is found thriving the other will soon arrive. Probably you will say the filth arrives first. This is true, no doubt, but if the lice are the pioneers they will be like the early settlers in this western country of ours—they won't stay long where the country does not suit them. Therefore if the hogs are lousy, clean up the premises the first thing.

What do you suppose would be the difference in growth between two lots of pigs that were exactly alike so far as breeding, age and size were concerned, if one lot was placed in ideal surroundings and kept clean with the other lot in filthy quarters—both lots to be fed exactly alike, the one kept clean and the other allowed to remain lousy? The difference it is safe to say would be that between profit and loss especially these days of expensive feeding.

Summer days are good days for lice if they are not eliminated. All buildings should be cleaned often enough to keep them free from stray lice that would reinfest the animals constantly. Whitewash looks nice and is good, but coal oil or crude oil is much more effective in destroying lice if applied to all cracks and crannies three or four times a year.

After the living quarters then the animals themselves should receive attention. Hog wallows if properly prepared and kept are a great help in keeping piggy pure on the outside. The wallow should be of cement if possible and the water renewed often enough to keep it from becoming filthy. Coal tar dip in the proportion of about 1 part of dip to 60 of water may be used, but be sure to add more dip when the water is changed.

Rubbing posts set deeply enough so that the hogs cannot push them over when rubbing and wrapped with burlap will help amazingly if the absorbent material is kept saturated with crude oil. Some swine growers set the posts at an angle so that the hogs can get both on top of and underneath them.

Dipping the animals at intervals is practiced on some ranches with excellent results. As a dip for hogs on the Post-Card Ranch near Corcoran, Roy J. Filcher, manager, uses a light gas oil, 28 degrees gravity, and has excellent success with it. The greater part of the liquid in the dipping tank is composed of water and sheep dip, as is frequently the case, but a layer of the gas oil covers the top. As the hogs go under and then come up again every part of the skin is washed with this oil and the lice have not a chance against it.

A SUGGESTION FOR THE PROPOSED STOCK SHOW.

(Written for Pacific Rural Press by Ralph Newman.)

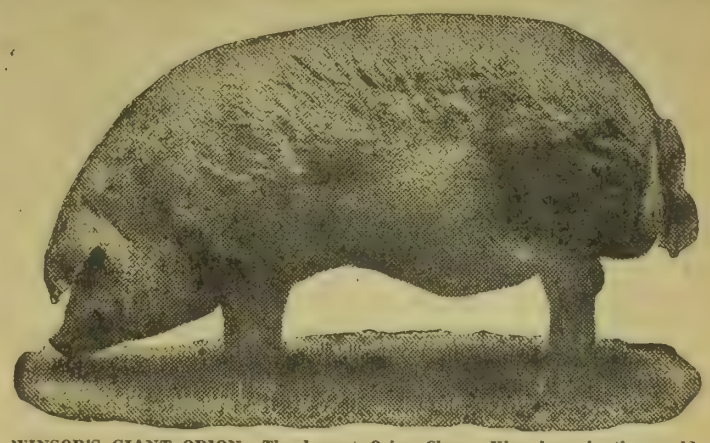
In May, New York pulled off a "Milk and Child Health Exposition," planned to reach consumers with the message of milk. It is reported to have been a success in spite of the fact that the mayor played the usual cheap politics by characterizing the milk business as a "hold-up."

One feature of the show was an actual herd of cows, whose milk was distributed by nurses from the department of health to children in a demonstration of the value of milk.

And therein is the suggestion. At the Stock Shows in Los Angeles and Oakland, the Dairy Council or the Associated Dairymen, or both, ought to have there a good-sized, regular herd of dairy cows. A sample feed for each cow should be prominently displayed with a card showing exactly what it costs. And so on, clear down the list, showing every item in the cost of the production of the milk from that herd. Then the milk should be used for a real, scientific demonstration of its value as a food.

Does anybody doubt that any city woman, after studying such a display, actually seeing how much it costs to feed the cows, care for them, milk them, and care for the milk till it is ready for delivery, will question the dairyman's right not only to the cost of production but a reasonable profit as well?

BRED SOW SALE



WINSOR'S GIANT ORION—The largest Orion Cherry King boar in the world.

Sows by the world's leading sires, including Great Orion Sensation, Orion Sensation and Pathfinder. Backed by Winsor Ranch service.

BIG TYPE DUROCS

The profitable kind and the kind you must have to

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Write for catalogue of sale to be held at

LOS ANGELES--JULY 28th

If you want to make money on DUROCS and have your herd contain popular Durocs, buy sows bred to

WINSOR'S GIANT ORION and GREAT SENSATION 3RD

MORRIS C. ALLEN, Address, Bonita, Calif. WINSOR RANCH R. K. WALKER, Address, Bonita, Calif.

THE MOST PROFITABLE BROOD ANIMAL ON THE FARM

THE OLD RED SOW

She Is No Slacker, but Does Her Bit and Guarantees Returns on the Investment.

SHE IS ALL THIS BECAUSE

The Duroc sow reproduces more rapidly. The Duroc sow is a prepotent breeder.
The Duroc sow is a good mother. The Duroc sow is an easy feeder.
The Duroc sow is a wonder grazer. The Duroc sow is the most popular.

SHE FEEDS THE WORLD, PAYS DEBTS AND MAKES PROSPERITY.

For information relative to DUROC-JERSEY HOGS, write to S. E. WHITING, Secretary-Treasurer

California Duroc-Jersey Breeders' Ass'n

R. R. 4, Box 810, SACRAMENTO, CALIF.

MORE PORK IN LESS TIME

Duroc-Jersey hogs have a tendency to put on great amounts of pork at an early age. They are easy-feeding animals, and raise large families. These hogs were introduced less than 50 years ago, and yet in 1918, 51% of all the hogs marketed in the country were "Duroc-Jerseys." They are uniformly red in color. Increase your profits by raising Duroc-Jersey hogs.

Write for "DUROC-JERSEY HOGS ARE PROLIFIC AND PROFITABLE"—sent free to hog-raisers by the largest swine record association in the world. Over 12,000 members.

The National Duroc-Jersey Record Association. Dept. 120 Peoria, Ill.

Llano Vista Ranch Grand Champion Hampshires

JUDITH—No. 126448
Sire: Calif. Lad, 45021. Dam: Mabel, 113078.

This pioneer herd has brought to light the winning blood lines in our big shows and is responsible for the growing interest in the breed. We have furnished foundation stock for many new herds throughout the State. Bred sows, service boars and pigs for sale.

F. A. LANGDON, Mgr.
Perris, Calif.

Duroc-Jersey Hogs for Sale

BOARS AND GILTS
BRED SOWS
SOWS WITH LITTERS

DIABLO STOCK FARM,
E. F. PETERSEN, Supt., Danville, Cal.
G. W. EMMONS, Owner, Oakland.

They are the large type and the best blood strains to be had anywhere.

HERD BOARS AND SOME OF THE SOWS

Lucy Orion's Model
California's Defender
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Lucy Orion's Mayflower
Great Wonder I Am Gano
Pathfinder's Queen
Prize of Tulare Belle
Twin Oaks Attraction
Lady Defendress 70th
and 50 others

WEANLINGS, $15.00 EACH AT RANCH.—A large number always on hand to choose from. Crates, $2.50 each, refunded when returned prepaid in good condition.

MAIL ORDERS SOLICITED. SATISFACTION OR MONEY BACK.

Big Type Polands

May and September GILTS Bred to

GOLDEN WEST KING

Grand Champion California International Livestock Show, 1919

PRICED FOR QUICK SALE

A. BUCKLAND & SON

ROUTE E, BOX 126, FRESNO, CAL.

HAVE YOU SEEN THE DUROC PROSPECT?

HERD SIRE CHOICE WONDER III { Mahaska Wonder { Great Wonder / Grand Lady 20th ; Grand Lady 72nd { Grand Model / Rose }

Littermate (gilt) topped Ed Kern's Last Sale at $5600

Write for yours from the most select herd in California.

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DIGESTER TANKAGE

Send for Sensible Folder on Feeding Hogs

WESTERN MEAT COMPANY

Animal Food Dept. 704 Townsend St., San Francisco

DUROC BOARS

TWO ATTRACTIVE YEARLINGS sired by Orion's King Gano. Big-type, stretchy, heavy-boned and good feet. ONE FALL BOAR by Chief Sensation and one by Pathfinder's Likeness. Also SPRING PIGS, either sex, sired by Orion's King Gano.

SATISFACTION GUARANTEED.

DONALD H. GRAHAM, Lancaster, Cal.

TWO DAY AUCTION SALE

FAMOUS CONEJO RANCH HERDS

Duroc-Jersey and Hampshire

FOR YEARS the Conejo Ranch has been recognized for the high-class purebred hogs in both Duroc-Jersey and Hampshire breeds that they have raised. At every stock show for the past few years Conejo animals have been prominent in the championship and first-prize classes. Every year the standard of the Conejo hogs has been raised with the result that this Ranch today is able to offer a remarkable big type, preferred by all breeders.

ALL SALES of Conejo animals in the past have been made privately, but the management has decided on a new policy of auction sales. These two sales for this year are announced as

THURSDAY, JULY 29th
DUROC-JERSEY SALE
FRIDAY, JULY 30th
HAMPSHIRE SALE

THE OFFERINGS in both classes will be carefully selected bred gilts and a few tried sows.

MAKE ARRANGEMENTS to take in this sale. Luncheon will be served at the Ranch. Its location is forty miles northwest of Los Angeles on the Ventura State Highway. If you are coming by train, notify our Los Angeles office regarding transportation desired.

CONEJO RANCH
NEWBURY PARK
VENTURA COUNTY

Los Angeles Address,
JANSS INVESTMENT COMPANY, 4th Floor Metropolitan Bldg.

PUREBRED SHEEP FOR SALE

IN LOTS TO SUIT

1000 PUREBRED RAMBOUILLET RAMS

ONE AND TWO YEARS OLD
Large, Smooth Bodied, with Excellent Conformation

500 PUREBRED SHROPSHIRE RAMS

ONE AND TWO YEARS OLD
Quality Equal to the Best

We also offer in lots to suit

10,000 YEARLING SHROPSHIRE-MERINO GRADE EWES

For further particulars write

MILLER & LUX, Incorporated

Merchants' Exchange Bldg., San Francisco

Livestock and Dairy Notes

LIVESTOCK SALES DATES.

July 21.—Elmer Lamb, Ceres, Duroc-Jerseys.
July 28—Winsor Ranch, Los Angeles. Duroc-Jerseys.
July 29, 30—Conejo Ranch, Newbury Park Duroc Jerseys and Hampshires.
August 11—Butte City Ranch, Butte City. Shorthorns, Shropshires, Berkshires and Shetland Ponies.
August 21. — Merced Co., Poland-China Breeders' Ass'n. Merced.
Sept. 27 — McCarty-Shinn-Elliott, Tulare. Poland Chinas.
October 6.—Kings County Poland-China Breeders' Association, Hanford.

The Dairy.

The herd of the late S. P. Foster of Arcata averaged 1.57 lbs. fat in May, and one cow made 790 lbs. fat in one year.

Will Turner of Arcata secured an average of 1.67 lbs. from 60 cows, and has 20 grade Jerseys that in May made over 2 lbs. fat apiece.

The palm for grade-herd production certainly goes to Humboldt. Coppini Bros. of Ferndale, with 56 grade Jerseys, made an average of 1.78 lbs. fat for two months in succession.

The Southern California Holstein-Friesian was organized at the Anderson sale at Burbank. G. W. Burr of Burr Farm is president and R. M. Condee of Chino, vice-president.

All the plants in Humboldt buying milk are paying for butterfat and skim-milk separately. For instance, the Libby, McNeil & Libby Condensery at Loleta paid this month 62½ cents for fat and 35 cents per hundred for skim milk.

C. S. Rasmussen of Loleta has a grade Guernsey cow of his own breeding that in one year made 759 lbs. fat from 14,644 lbs. milk. In May of this year, on his second dairy, the average fat production was 1.72 lbs. for a herd of 42 cows.

The C. W. Anderson sale of Holstein-Freisian at Burbank was an excellent one, with an average almost equal to the record for California. The top was the cow Mabel De Kol Niko 2d, going to Santa Anita Rancho for $1,750. Fred Hartsook was the heaviest buyer, taking 20 head; Sunshine Ranch took 10 head, Santa Anita Rancho, 8 head, and 7 head went to the Welch Company, Honolulu, H. T.

R. F. Fisher of Carlotta, said to have the only strictly purebred herd of Holsteins in Humboldt county, has reached the conclusion that, with dairy conditions as they are, he can get a larger return from his farm with less work in some other line and will shortly sell his entire herd. He now has 4 cows on semi-official test. In 232 days one has made 586.82 lbs. fat. This is his cup-winning Sugar Queen Topsy. Another, in 178 days, has made 361 lbs fat and still another 387 lbs. fat in 173 days. The herd is headed by Sequoia Alcartra Beets, a grandson of Tilly Alcartra.

Swine and Swinemen.

R. J. Yates of Orland is preparing to make a large exhibit of Poland-Chinas at the State Fair this year.

At Porterville the prices obtained for hogs at the market hog auctions last week were very satisfactory, as $15.90 was obtained for the top lot. The bulk went at figures closely approaching this.

The Boys' Pig Club of Lone Tree has demonstrated to its own satisfaction that purebred pigs will feed more economically than scrubs or grades. The results in the feeding experiments just closed justify these conclusions.

A Poland-China boar, Bailey's Superba, owned by L. B. Bailey, Baker City, Ore., is said to be the largest boar in the world. He weighs 1200 lbs. in service condition and measures 44 inches tall and 85 long, with a 12-inch bone.

The Western Berkshire Congress recently presented Percy F. Wright of Calistoga with a silver trophy for winning the first prize in the all-breed Pig Club contest, recently held at Calistoga. The winning animal was a Berkshire boar pig, weighing 237 lbs. at seven months of age.

Prices obtained for market hogs last week at Tulare were another demonstration of the Farm Bureau method of selling hogs. Prices were a shade higher than the week before. The top price was $15.85, which was better than San Francisco prices of the same date. At Visalia the prices were not quite so good, but still better than "city" prices.

The next semi-annual consignment sale of the Kings County Poland-China Breeders' Association will be held Wednesday, October 6th. This date was selected at the annual meeting of the association held on the second Monday of June. The officers elected for the following year are: W. L. Haag, president; H. D. McCune, vice-president; R. L. Waltz, secretary.

Castleview Ranch reports recent sales as follows: High-class show sow to Bastanchury Ranch, La Habra; service boar to H. C. Sweeney, Lompoc, Calif.; service boar to J. F. Caspari, Prescott, Ariz.; service boar to J. G. Throckmorton, Sebastopol, Cal.; service boar to Mrs. A. Necessal, Geyserville, Cal.; and a very high-class gilt, sired by Achiever, to the Italian Vineyard Co., Guasti, Cal.

Some of the sows in the Winsor Ranch sale of Duroc-Jerseys at Los Angeles on Wednesday, July 28th, will be bred to Great Sensation 3d, a boar recently sold by this noted ranch to W. H. Dupee of Edgemoor Farm, Santee, for $8,000. This is the highest-priced boar ever sold by a western breeder and the opportunity to secure Winsor Ranch sows bred to him will lapse on the above date. Duroc breeders should not miss the chance.

Did you notice the front page picture last week? Looked like a good place to raise hogs, did it not? Also it is one of the nicest places to hold a swine sale in southern California. Located on the Ventura Boulevard, 40 miles from Los Angeles, at Conejo Ranch, on July 29, Durocs of supreme quality and breeding will be offered. On the following day the Hampshires will come before the bidders. Those who are familiar with the Conejo herd of this breed know that an excellent chance will be presented to buyers to purchase some of this fast-coming breed.

Beef Cattle

The meeting between a committee appointed at the assembly of cattlemen at San Jose, June 19th, and the executive committee of the California Cattlemen's Association for the purpose of discussing conditions affecting the livestock market, met at the offices of the association last Monday. No new plan for the betterment of present market conditions was offered and after adopting a resolution favoring the inspection of all meats slaughtered for food the meeting adjourned.

Sheep and Horses.

The embargo against the importation of cattle and sheep from Australia will be retained until contagious pleuro-pneumonia is eliminated in that country.

The California market for lambs has dropped from the war prices of the past. J. McGlinchey of Livermore marketed 1800 at $6 and a slightly heavier band of 2500 brought $7. Before the war these figures would have been considered good.

Farmers in the vicinity of Coloma, Placer county, have started several small flocks of sheep and find them profitable. One owner of a flock of 25 uses them in cleaning up the weeds in his orchard and has loaned them to his neighbors for the same purpose.

Data gathered by the Horse Association of America show that much of the area formerly raising forage crops in the southern states is now growing cotton and tobacco. Even the famed blue-grass region of Kentucky and Tennessee have yielded to the

lure of King Cotton and Lady Nicotine. This results in a heavy demand from those states for heavy mules as they are not raising more than one-tenth of their needs in this line.

IN RE HEBE ADVERTISING.

It sometimes happens that a Republican candidate for office will advertise the fact and his request for support in an opposition journal, or may be it is a Democrat looking for "fair-minded" voters to tell them about himself in a paper aligned against him. This does not mean at all that said publications lend their editorial or moral support to such advertisers.

Probably many of the voters in the ranks of the Democrats do not like to see Republicans advertising in their organs, but they will do it nevertheless, and vice versa.

The advertiser wants to tell his story to those who do not know about him or his goods, and as long as he tells the truth in a fair, reasonable manner the majority of people are willing he should. In this respect the Ayer Advertising Agency has this to say about "Hebe" advertising: "We believe that the farmer is entitled to know the truth about Hebe. We also believe that the Hebe Company is entitled to tell its side of the story and it claims the moral right to be heard, a right which is never denied in any broad-gauged publication. The Hebe Company is under no illusions and knows that the granting of this right by the publication does not mean an endorsement of its products by the publication. . . . We do not believe that the Pacific Rural Press can afford to slight the ordinary rules of fairness by barring the Hebe Company from its advertising columns."

In consideration of the fact that two or three of our subscribers have taken exception to our carrying Hebe advertising we have published the above statement.

LIVESTOCK DIRECTORY.

Rate 8½ cents per word each issue.

SWINE.

Poland-Chinas.

TOHOQUA POLAND-CHINAS—Strictly big type. Junior and Grand Champion sow at Glenn County Fair. Young breeding stock to sell; bred right, grown right and priced right. Ferguson & McKaig, Orland, Cal.

ELDERSLEY AND SHADY BROOK Farms big-type Poland-Chinas that make money for the Feeder, the Farmer and the Breeder. Prices reasonable. J. H. Ware, Brown's Valley, Calif.

BRED GILTS for sale. A few choice ones bred for fall farrow, to a good son of F'Big Jones, the Iowa 1920 Grand Champion. N. Hauck, Alton, Humboldt Co., Cal.

J. F. McSWAIN, Breeder of Poland-China hogs. Herd headed by Big Model Fellow, Reserve grand champion 1919 State Fair. Boar for sale. R. 3, Merced, Calif.

REG. POLAND-CHINAS — large type. Weaned boars or gilts, $15.00; also boars ready for service. Satisfaction guaranteed. J. E. Thomas, Gilroy, Cal.

WAUKEEN HERD POLAND-CHINAS — Home of King's Big Bone Leader. A few service boars for sale. Les McCracken, Ripon.

LAKESIDE STOCK FARM—Large, smooth and big-boned Poland-Chinas. Geo. V. Beckman & Sons, Lodi, California.

REGISTERED POLAND-CHINA SWINE—Prize-winners. Finest stock in the State. M. Bassett, Hanford, California.

REG. BIG TYPE POLAND-CHINAS—Service boars and weanling pigs J. H. Cook, Paradise.

LIBERTY HERD—Service boars. July weanlings. J. W. Raymer, Soledad.

LARGE TYPE POLAND-CHINAS — Winton Poland-China Farm, Winton, Cal.

POLAND-CHINAS—Strictly large type. J. F. Lehman, Lodi, Cal.

Berkshires.

BRED GILTS.

Bired by Mayfield Rookwood 2d, a Grand Champion Boar, out of 600-700 lb. sows, and actually bred to "ACHIEVER," our English Blood Boar, the Sire that puts more bone and pork-making qualities into his pigs.

Priced reasonably and absolutely guaranteed. Castleview Ranch, Santa Rosa, Calif.

ANCHORAGE FARM BERKSHIRES
Orland, Calif.
HERD BOARS—STAR LEADER, Junior and Reserve Grand Champion of the World. The Grand Champion carload of barrows, over all breeds, at the San Francisco Live Stock Show, was sired by a son of Star Leader. NATOMAS BARON DUKE, grand champion of California. For sale, bred gilts, open gilts, young boars and weanling pigs. Write for booklet, prices and list of sows.

TWO SOWS and an unrelated boar for $100. These are purebred registered Berkshires, sired by Grand National boar Baron Duke 201st and Rincon's Rival 2nd; also a grand champion, Baron Duke 201st is dead and this the last opportunity to secure pigs from one of the greatest boars of the breed. The pigs are from 700 pound sows. They are guaranteed to please or your money refunded without question. Sandercock Land Co., 703 Market St., San Francisco. In charge of Natomas Land Sales.

BERKSHIRES — Purebred registered — 4 bred sows, beautiful animals, will farrow soon; a wonderful "Star Leader" boar—a real show animal as good as any in the State. To close out am offering this choice stock at an extremely low price. A special offer for the lot. Wm. C. Laux, Morgan Hill, Cal.

SOW PIGS and Boar Pigs sired by Ames Rival 118th, Ames Rival 70th, Ideal Royal Lee, Champion Masterpiece 8th, Escalon Majestic and Achiever, and out of prize-winning sows. A postal will bring prices. Geo. A. Stingle, Lark Meadow Ranch, El Monte, Cal.

GRAPE WILD FARMS—Berkshires—Guernseys. Big-type Berkshire Boars of serviceable age, sired by Big Leader—greatest son of Grand Leader 2nd. Panama-Pacific Grand Champion. A. B. Humphrey, Prop., Escalon.

BERKSHIRES—We are compelled to reduce our herd, owing to green feed shortage. Write us today. R. J. Merrill & Son, Morgan Hill, Cal.

QUALITY BERKSHIRES — Young stock, both sexes. Calac Orchards, Geo. P. Upham, Martinez.

REAL GOOD BERKSHIRES — Cholera immune. Frank B. Anderson, Sacramento, Cal.

CARRUTHERS FARMS' BERKSHIRES — Cholera immune. Live Oak, California.

Duroc-Jerseys.

HONEST PIGS FOR HONEST PEOPLE!—I want every California farmer boy and girl between the ages of nine and ninety, who wants to raise **Registered Duroc Jersey Hogs,** to write me. Folks—there is mighty good money in the old red hog, and I am going to prove it to you at my expense. Without costing you one cent I will ship you a registered Duroc pig, tell you how to care for her, breed her later at my expense, and after she has farrowed you a litter of pigs, buy her from you if you wish to sell. Write today for full details of my offer, as the number of gilts is limited. Geo. L. Horine, Winton, Cal.

HOGS—Duroc-Jersey, big-type, registered, Brookwater blood lines; 6 bred gilts due to farrow August—$150 each; will weigh 300 and over; also 5 brood sows, Eastern and California bred, three and four years old; will weigh 600 and over—$200 each. Must be sold at once. Apply Sells Ranch, P. O. Box 88-A, Route 2, Merced, Cal., or 1010 Claus Spreckels Bldg., S. F.

DUROCS—BIG-TYPE—HIGHEST QUALITY—popular blood lines. Herd headed by Johnson's Defender, Jr. and Western Pathfinder. Bred sows and gilts and young boars for sale at moderate prices. Greenwood Farm, Witherow & Stafford, Live Oak, Cal.

REGISTERED DUROC BRED GILTS—Of Defender breeding and bred to Orion, futurity winner boar. Finest type. September farrow. First check for $100 delivers her within radius of 300 miles. Dr. L. J. Anderson, Placerville, Cal.

BIG-TYPE DUROCS—Herd headed by California Orion King. Am offering excellent young boars at right prices. Inquiries invited. Harvey M. Berglund, Dixon, Calif.

WINSOR RANCH DUROC BOARS—Big-type utility boars for farmer trade; priced to move. R. K. Walker, Swine Dept., Morris C. Allen, Ranch Manager, Bonita, San Diego, Co.

JACK LONDON RANCH, Glen Ellen.—Exceptionally good weanlings. Bred sows and gilts. One good yearling boar and one fall boar. Prices reasonable.

ROCSTEIN RANCH DUROCS headed by Lord's Orion Cherry King. Breeding stock for sale at all times. W. M. Way & Son, Rt. 1, Box 320, Modesto.

BARGAINS in bred sows and gilts. Pathfinder and Great Wonder I Am blood. Derryfield Farm, Capital National Bank Building, Sacramento, Cal.

DUROC-JERSEYS — Fine big-type gilts, tried sows and boars. Eastern and California bred. H. P. Slocum & Son, Willows, Calif.

REGISTERED DUROCS—Choice gilts and weanlings, either sex. Breeding and satisfaction guaranteed. H. E. Boudier, Napa.

BIG-TYPE DUROCS — Gilts and boars of Winsor's Giant Orion breeding. Falfadale Farms, Perris, Calif.

DECEMBER AND MARCH DUROC BOARS—Pathfinder breeding. Sterling Smith, Route 1, San Diego.

DUROCS—Some fine weanlings for July delivery $15.00 each. R. S. Mossman, Anioch, Cal.

FOR THE BEST in Durocs, write June June Acres Stock Farm, Davis, Cal.

Chester Whites.

CHESTER WHITES — E. E. Fulton, Fair Oaks, Cal.

Hampshires.

REGISTERED HAMPSHIRE HOGS—"Belted Beauties" need no apology. Pigs, young boars, gilts and sows for sale. Uneeda Hampshire Swine Farm, Gardena, Calif.

FOR IMMEDIATE SALE—A few choice registered Hampshire swine. Both sexes. J. M. Christen, Pacheco, Cal.

DAIRY CATTLE.

Holsteins.

OAKDALE HOLSTEIN FARM, Pacheco, Contra Costa Co., J. M. Christen, Prop., Breeder of registered and high-grade Holstein cattle and purebred Hampshire swine.

EL DORADO HERD OF HOLSTEINS — Alex. Whaley, Tulare, California.

TOYON FARM ASSOCIATION
UNDER STATE AND FEDERAL SUPERVISION
SMALL FOUNDATION HERDS, HEIFERS and BULLS
PERFECT IN HEALTH, RIGHT IN TYPE, PRODUCTION AND BREEDING
MILLS BLDG., SAN FRANCISCO
Farms at
BRENTWOOD and LOS ALTOS
350 HEALTHY HOLSTEINS

THE LEWIS COMPANY BAYWOOD HERD
Bulls from yearly record stock.
Health under State supervision.
Terms on purchases if desired.
Herd Sire: Ormsby Segis Marie Lad.
Martin Zgragen, Herdsman
Hollister, California
THE LEWIS COMPANY, Owners
The Lewis Building, San Jose

REGISTERED HOLSTEIN-FRIESIANS — Both sexes choice stock; tuberculin tested. Sunnybrook Ranch, H. H. Sisson, Mgr., Willits, Cal.

THE VICTORY HERD—Registered Holstein cattle and Duroc Jersey swine. H. E. Spires, Hillcrest Farms, Caruthers, California.

A FEW YEARLING registererd bulls by King Morco Alcartra 2nd, from good producing cows. H. M. Cross, Merced, Cal.

CREAMCUP HERD — Registered Holsteins. Pontiac bull calves. M. Holdridge, Rt. A, Box 437, San Jose.

REGISTERED YOUNG HOLSTEIN Bulls from high-testing dams. E. Peterpostin, Hughson, Cal.

REG. HOLSTEINS, both sexes. World's record backing. Kounias Reg. Stock Farms, Modesto, Cal.

FOR SALE—Having disposed of my herd, will sell registered Holstein bull at a sacrifice. F. N. Brown, R. F. D. 168, Oakdale, Cal.

PALO ALTO STOCK FARM, Palo Alto, breeders of registered Holsteins. Heifers and service bulls. Reasonable prices.

REG. HOLSTEINS—A. W. Morris & Sons Corp., Importers and Breeders, Woodland, Cal.

F. H. STENZEL, SAN LORENZO—Breeder of Registered Holsteins. High test producers.

REGISTERED HOLSTEINS — Best blood lines of the breed. R. L. Holmes, Modesto, Cal.

CHOICE HOLSTEIN bulls for sale. No females. Millbrae Dairy, Millbrae, California.

GOTSHALL & MAGRUDER — Breeders of registered Holstein-Friesians. Ripon, Calif.

Jerseys.

SERVICE JERSEY BULL, bull calves. Financial King blood, Chester White boars, prize winners. Best blood, type, production. N. H. Locke Co., Lockeford, Cal.

SUNSHINE FARM JERSEYS—No females for sale. Bulls from high-testing cows for sale. E. E. Greenough, Merced.

JACK LONDON RANCH, Glen Ellen—Two fine Jersey bulls, one ready for service.

Milking Shorthorns.

REGISTERED MILK AND BEEF SHORTHORNS, bulls and heifers for sale; catalogue free. Thomas Harrison, Santa Rosa Stock Farm, Santa Rosa, California.

INNISFAIL HERD MILKING SHORTHORNS—Young stock for sale; both sexes. Owned by Alexander & Kellogg. Leased by J. D. Rowe & Son, Davis, Cal.

BREEDERS OF REGISTERED SHORTHORNS—Milk strain; choice young stock for sale. John Lynch Ranch, Box 321, Petaluma.

Ayrshires.

ELKHORN FARM AYRSHIRES — Choice young bulls at reasonable prices. J. H. Meyer, 440 Montgomery St., San Francisco, Calif.

STEYBRAE AYRSHIRES — Registered; all ages. E. B. McFarland, 414 Claus Spreckels Building, San Francisco, Calif.

NORABEL FARM AYRSHIRES—Le Baron Estate Co., Valley Ford, Cal.

Guernseys.

A FEW REGISTERED Guernsey cows for sale tested by the State Veterinarian and found free from tuberculosis. Address E. R. Frey, Byron, Cal.

BEEF CATTLE.

SHORTHORNS—The foremost beef breed—Have a limited number of stock for sale, both sexes. If you wish to start a small herd I can probably supply your needs. T. T. Miller, Hollister, Cal.

REGISTERED SHORTHORNS—Julien Ranch, Grenada, Siskiyou Co., Cal.

ALAMO HERD REGISTERED HEREFORDS (founded by Governor Sparks). Herd and range bulls. Reasonable prices. W. D. Duke, Gazelle, Siskiyou county, California.

RANCHO SAN JULIAN SHORTHORNS—Purebred range bulls, unregistered, for sale. Estate Thos. B. Dibblee, Santa Barbara, or Lompoc, Calif., John Troup, Supt.

HEREFORDS—Sierra Vista Herd, Minturn, California. Over 100 registered animals. Fairfax and Repeater bulls head the herd. On highway.

THE NEVADA HEREFORD RANCH—Jno. H. Cazier & Son Co., Prop., Wells, Nevada. Reg. Hereford cattle. Breeding stock for sale.

JACK LONDON RANCH, Glen Ellen—Shorthorn bull ready for service, and some good bull calves.

ABERDEEN-ANGUS cattle of quality and breeding. Lilac Ranch, Escondido, Cal.

SIMON NEWMAN CO., breeders of Registered Herefords, Newman, California.

HEREFORDS — Mission Hereford Farm, J. A. Bunting, Prop., Mission San Jose, Cal.

REGISTERED HEREFORDS—H. H. Gable, Diamond G Ranch, Esparto, California.

GEORGE CALLAHAN—Breeders of registered Herefords. Milton, California.

GEORGE WATTERSON — Breeder Registered Herefords. Bishop, California.

REGISTERED SHORTHORNS — Fair Oaks Ranch, Willits, Calif.

SHORTHORNS — Carruthers Farms. Live Oak, California.

SHEEP AND GOATS.

FOR SALE—Rambouillet rams and ewes—purebred; the very highest grade of large smooth body; heavy shearers; the wool and mutton type. Immediate delivery of individual or carload lots. You can find none better or of higher grade. Address Glenn, Cal. Location, 8 miles south Hamilton City, 1 mile west Ordbend. Windell Orchards Co.

FOR AUGUST 15TH DELIVERY I offer 100 Rambouillet Ram Lambs and a few yearlings, all from registered rams of most noted breeders of America and from big-boned, smooth, heavy-shearing, purebred ewes. Special rates on the lot; also a 3-year-old registered Butterfield ram for sale. W. H. Guscetti, Loyalton, Cal.

F. A. MECHAM ESTATE, Petaluma, Cal.—Breeders and importers of Shropshire, Rambouillets and American Merinos, both sexes. Also Red Polled cattle. Take electric car at Petaluma or Santa Rosa for Live Oak Ranch.

WRITE ME for early Rambouillet ram lambs, ready for light use, by September 1. Also a few yearlings. Carl Lindheimer, Woodland, Cal.

HARRY L. HUSTON, Winters, Calif.—breeder and importer of Shropshire sheep. Stud and range rams. Prices on application.

J. R. BLOOM, Dixon, Calif.—Twenty-five years breeder of purebred Shropshire sheep. Rams for sale. Single or carload lots.

FOR SALE—Yearling Southdowns. Twenty-five rams, thirty-eight ewes. Mary S. Crane, Route 3, Box 353, Santa Rosa, Cal.

FOR SALE—Purebred Shropshire buck lambs and long yearlings. Address C. D. Dean, R. F. D., No. 1, Yuba City.

DORSETS AND ROMNEYS — Dorset ram lambs for sale. John E. Marble, South Pasadena, California.

HARVEY S. VAN VLEAR, Lodi, Cal.—Breeder and importer of Registered Hampshire sheep.

CALLA GROVE FARM, MANTECA, CAL.—Breeders and importers of Hampshire sheep.

KAUPKE BROS., WOODLAND, CALIF.—Breeders and importers of Hampshire sheep.

CHAS. KIMBLE—Breeder and importer of Rambouillets. Hanford, California.

BULLARD BROS., Woodland, Calif.—Breeders and importers of Rambouillet sheep.

DR. A. S. ALMEIDA, Dixon, Cal. Reg. Shropshire sheep.

MISCELLANEOUS.

BUTTE CITY RANCH
SHORTHORN CATTLE, SHROPSHIRE Sheep, Berkshire Hogs, Shetland Ponies, Bronze Turkeys, White Plymouth Rocks. Stock for sale at all times. Next sale all breeds, Wednesday, August 11, 1920, at ranch. W. P. Dwyer and W. S. Guilford, Box P, Butte City, Glenn county, California.

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SIX BORDER SCOTCH SHEEP DOG Puppies, imported from New Zealand. Highly bred stock. Dogs, $30. Females, $25. Ben Shaw, Hollister, Calif.

CHOICE STOCK EWES AND BUCKS. Also herding Collie dogs. John G. Mee, St. Helena, Calif.

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It cuts, grinds, pulverizes in one operation. You feed snapped corn, alfalfa, kafir corn, corn fodder, etc., into the feed table; and feed ear corn, oats, wheat, barley and other small grain in the bin—and out comes a fine nourishing feed that fattens your stock on material heretofore thrown away.

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700 PUREBRED (NOT REGISTERED) SHROPSHIRE EWES

with lambs of both sexes at foot

This offering is from the famous (International and Local) San Ramon Flock. They can be purchased as a whole or in lots to suit. Ewes can be seen on pasture, Sargents Ranch, near Bradley, California.

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Rambouillets

700 2-YEAR-OLD RAMS

PRICE REASONABLE

These highly bred sheep are ideal in type and wool, vigorous and ready for service.

For further particulars write or call

J. BIDEGARAY, Fresno, Calif

First Annual Ram Sale at Davis

(Written for Pacific Rural Press.)

Sheep men can congratulate themselves on a successful beginning of their annual ram sale, held at Davis last week. Some doubts were expressed before the sale as to what would be the outcome, but when the autos filled with people commenced to arrive during the forenoon of Thursday, the prospects for a good sale were excellent.

Sheep breeders, both from the purebred ranks and those growing sheep for market and wool alone were in evidence from Shasta's snowy peak to where the cool waters come down from the wonder regions of Whitney far to the south. They came not only to look on, but to bid and buy, to show that while wool might be a slow sale just now they know people want woolen clothing to wear and lamb to eat.

Creditable Consignments.

Consignments from some of the best flocks in California were in evidence and while no spectacular prices were realized the amounts received were generally satisfactory.

Rambouillets were strongly in evidence from such flocks as Bullard Bros., Chas. Kimble, G. N. Merritt & Son, University Farm, and several others. Without going too much into detail the offerings in this breed will hardly be excelled in quality anywhere, as there are flocks in California of supreme excellence carrying superior fleeces on bodies of great size and symmetry.

In numbers, the Hampshires slightly exceeded their nearest competitor, the Rambouillets, with consignments from most of the principal flocks in evidence. C. Harold Hopkins, Kaupke Bros., Spencer Ranch Co., University Farm, Calla Grove Farm, and Wm. Bond had from one to eighty to tempt those needing black faces of this breed.

The number of consignors of Shropshires were larger than any other breed, but they had small offerings, although many were of supreme quality. J. W. Marshall, Butte City Ranch, H. L. Huston, B. B. Shaw and others were consignors

The top stud ram of the sale was a yearling Rambouillet consigned by Bullard Bros. He sold for $250, going to Elbe & Huffman of Glenn. J. W. Marshall topped the Thursday sale with a Shropshire ram selling for $160. The Hopkins Hampshires were attractive and one stud ram brought $140.

Among the range rams five yearling Hampshires consigned by C. Harold Hopkins topped the Thursday offerings with a lot of 5 selling for $550, and the buyer got a bargain. Bullard Bros., with their range Rambouillets looking like stud rams, were up near the top with several lots. The University Farm Rambouillets were also attractive, bringing good prices. G. N. Merritt & Son had two attractive lots of Rambouillets with superb covering and great size. Two lots of Rambouillets, consigned by A. S. Mann of Ukiah, were sent in without fitting and feeding. Owing to their good size and covering they brought fair prices.

Southdowns are out of their element in a California sales-ring, as their seeming lack of size and the actual shortness of their wool gives them a handicap which they cannot overcome. No breed, however, is their equal so far as mutton form is concerned, or will yield as much gain for feed consumed.

Satisfied Buyers.

Among buyers who supported the sale strongly were the Montana Land Company, G. C. Uhl, Hon. Ben F. Rush, Cone Ranch, J. E. Bidegary, Joseph E. Harby and A A. Sousa.

It is to be hoped now that it has been demonstrated that it is possible to sell rams at auction in California that such a sale will become an annual event, attracting buyers from all over the Pacific Coast. It would seem almost as though it might be made to take on the character of an exhibition the first day and have a sheep show. If this was done it would be much more pleasant for consignors and visitors if there were better hotel accommodations at Davis.

What Grade Percheron Mares Produced

In these days of high-priced feed and shortage of gasoline the rancher who was contemplating eliminating the horse on his ranch might like to read what Milton P. Jarnagin of the Georgia College of Agriculture says on the subject in the Breeders' Gazette:

In January, 1910, the animal husbandry division of the Georgia College of Agriculture purchased two high-grade Percheron mares weighing approximately 3,100 pounds for $470. The mares have done faithful and satisfactory work for the past ten years. They have hardly missed a day in the field, since their foals usually came before the rush of work. Because of their greater weight and strength they have proven more valuable than mules from the standpoint of heavy hauling. In all fairness it should be stated that they do not stand the heat quite so well as mules, and for a few weeks during the hottest part of the year they are at a slight disadvantage. But when their superiority for hauling and heavy draft is considered, it is felt that they do as much work during the year as would be done by a span of mules.

After ten years of service the mares were sold for $250. Our treasurer's book shows receipts from the sale of their colts amounting to $1,255. In addition to this there is left on the farm a pair of three-year-old fillies by a registered Percheron stallion which can be sold for $500. They carry one more cross of pure blood than their dams, and it is felt that they are more valuable than their mothers were at the same age. There is at the college another filly coming one-year-old which was produced by one of the mares. A fair valuation of her would be approximately $100. Thus it will be seen that with the $1,255 worth of colts actually sold and the $600 worth of fillies remaining on the farm there has been a total return for the produce of the mares of $1,855 in ten years. In addition to having worked ten years the mares lack only $25 of having paid for themselves four times over with their foals. After ten years of dual-purpose use as workers and brood mares, they brought more than one-half of the original cost price. Can a tractor beat it?

CALF CLUBS IN HUMBBOLDT COUNTY.

The Humboldt County Calf Club is going strong with 73 members. The calves, all by purebred bulls, were weighed in on May 1st, and will be fed until September 1st, when, at the County Fair, the prizes will be awarded on the following basis:

Gain in weight, 50 points; neatness and accuracy of record, 10 points; essay on feeding and care of calf, 10 points; type and general condition, 30 points.

The Jersey Breeders' Association in the county also have a purebred calf club for boys and girls under 18 years with 22 members.

And there is another open class club for everybody with any kind of a calf. In this class the show-ring only will decide the contest.

The Central California Creameries in Humboldt are specializing on Swiss cheese. They have worked out a formula of their own and are enthusiastic over the result.

Modesto Meeting of Organized Dairymen

(Written for Pacific Rural Press by Ralph Newman.)

It was an important thing—that mass-meeting in Modesto last Saturday under the auspices of the Associated Dairymen of California, called to consider the standardization and co-operative marketing of the dairy products of all the local associations. All the locals, except the Central, with headquarters at Modesto, had declared for the State program, and the purpose of this meeting was to discuss the matter with this association. Members of directorates and dairymen from nearly all parts of the State were there.

Central Association Withdraws.

When President Watson, of the Central Association, declined a seat on the platform because he had withdrawn from the State Association, the fact (which proved to be news to many members of the association) became public that the directorate had parted company with the rest of the State. Mr. Watson was called on for a statement, which he gave very frankly. He mentioned two main reasons for withdrawing his association: (1) Because his directors believed their association should not be asked to contribute to the expense of a State body that apparently had nothing to offer them especially; as being the largest local, the tax would fall more heavily on them than on any of the other associations. (2) They were opposed to the plan of co-operative marketing as advocated by the State body. In defending their position he drew a parallel between that and the marketing method of the Raisin Growers.

Competitive System Weighed and Found Wanting.

This brought Wm. Glass of the Fresno Republican to his feet. Mr. Glass is connected with the Raisin Growers, as well as being a director of the San Joaquin Milker Producers' Association, and he pointed out in no uncertain terms the fact that the Raisin Association absolutely controls all of the selling after the association itself has determined the price. He said the old competitive system had been "weighed and found wanting," and the true co-operative marketing had been the salvation of the growers of raisins and peaches. He pointed out the fact that the issue before the milk producers is a choice between co-operative and competitive marketing. The nail was driven home and clinched with the statement that so long as two thousand or two milk producers sold independently of each other, the system was competitive and not co-operative.

Market Director Daniels was present and made an earnest plea for standardization and collective marketing, driving home his argument by concrete examples of success.

Free-for-All Forum.

The president, J. M. Henderson, Jr., presiding with perfect impartiality, then threw the meeting open, and the oratory began rolling up from the floor, and kept rolling through the lunch hour and long beyond—until, in fact, the dairymen had to get home to milk the cows. And it was real, moving oratory, for it came white-hot from the hearts of earnest men.

A little amusing diversion was introduced by a San Francisco commission man and member of the Dairy Exchange, who got the floor and attempted to "throw" the old familiar "bull." He didn't last long. Instead of listening with open-mouthed credulity, as in days of old, the dairymen laughed him out of court, and then, for a time, the middleman in general "got his" in plenty.

An Excellent Spirit Displayed.

A resolution was passed thanking Governor Stephens for the appointment of Mr. Daniels and Mr. Hecke and pledging support to the Legislative Council Committee. At the close, the members of the Central Association embodied the concrete result of the meeting in a unanimously passed resolution, asking the directors to call, in the near future, a meeting of the entire membership for the purpose of going thoroughly into the matter at issue with a view to a satisfactory solution.

The spirit of the meeting was excellent and gives promise that what might have become a serious matter will be settled to the satisfaction of all directly concerned. If you think altruism is dead you should have heard the cheering when Cusick of Lockeford, a member of the Central Association, summed things up with the declaration: "The attitude of all of us must be one of unselfish helpfulness to all of us regardless of merely local interests."

Federal Board Acts in Wool Situation

The Federal Reserve Board has restored confidence in the wool industry by suggesting a plan for financing the wool growers during the present emergency. By advance arrangement with the Federal Reserve Board, wool growers, bankers in the wool-producing sections and Eastern wool markets, wool dealers, warehouse men, manufactureres, and others interested in the wool trade, held an all day session with the Federal Reserve Board.

The plan of action finally arrived at was adopted as a more simple and satisfactory way of dealing with the situation than the Cotton Loan Plan of 1914, which has been suggested. At the termination of a conference between the Board and a sub-committee, consisting of bankers thoroughly familiar with the entire situation, the Board authorized the following statement:

"A wool grower may ship his wool to one of the usual points of distribution, obtaining from the railroad a bill of lading for the shipment; the grower may then draw a draft against his bank, for such an amount as may be agreed upon by the grower and the bank secured by the bill of lading. The Federal Reserve Act authorizes any member bank to accept a draft secured in this manner at the time of acceptance, provided that the draft matures in not more than six months from the time of acceptance. After acceptance such a draft, bearing the endorsement of a member bank, is eligible for rediscount or purchase by a Federal Reserve Bank, provided that it has a maturity of not more than three months from the date of rediscount, or purchase.

It was suggested that the Federal Reserve Board communicate with the Federal Reserve Banks, pointing out that shipments of wool to points of distribution may properly be financed by acceptances in the above manner."

At a further meeting of all interests concerned, it was the unanimous opinion that the plan suggested above was practical and feasible, and that no extraordinary difficulty would be encountered in the necessary financing to carry along the present season's wool clip until a normal buying market should reassert itself, which it was the firm belief of all would be within a very reasonable length of time.

NOTED NEWSPAPER MAN ON STATE FAIR STAFF.

J. A. Robson, former director of the Humboldt County Promotion Bureau, has been appointed publicity expert for the coming State Fair. Mr. Robson takes up the work July 1st and will proceed to make things hum for the biggest, best and most attractive fair ever held in California.

The Co-operative Creamery at Ferndale is one of the four plants in Humboldt now working on a large order of butter for the Navy.

The Supreme Evidence of

DE LAVAL

CREAM SEPARATOR SUPERIORITY

Naturally the cream separator does not make or break the average farm user. The majority of them have no sure means of knowing just what their separator may be saving or wasting.

But the big user in the whole milk creamery or city milk and cream plant does know, and in the long run the separator means success or failure in his case.

That's the reason why 98 per cent of the world's uses of factory size cream separators use the De Laval, and why the few such machines of other makes occasionally sold soon find their way to the scrap heap.

And it may well be remembered that De Laval superiority means relatively just as much to the small as to the big user. Ten dollars a month mean as much to the farmer as ten dollars a day to the creameryman.

It's not only a matter of quantity and quality of cream, but of capacity, labor saving, dependability and durability over a long term of years.

A De Laval catalog helps to make these facts plain. The trial of a De Laval machine does so better still. Every local De Laval agent stands ready to prove them.

If you don't know the nearest De Laval agent simply address the nearest main office, as below.

DE LAVAL DAIRY SUPPLY CO.

THE LARGEST DAIRY SUPPLY HOUSE ON THE PACIFIC COAST

61 BEALE STREET SAN FRANCISCO, CAL.

LIVE OAK STOCK FARM

SHROPSHIRES
RAMBOUILLETS
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SHEEP

We have for sale this season 400 head rams, yearlings and 2-year-olds. All purebred. Will sell singly or in carload lots.

Also 15 Head Purebred Red Polled Yearling Bulls

For further particulars apply

F. A. MECHAM ESTATE

PETALUMA, CAL.

Poultry for Profit

BETTER EGG PRODUCTION.

"There isn't any money in hens," is often heard from farmers who give fowls very indifferent care, and do not keep any record of the cost of feeding or of the receipts returned. A flock of poultry properly managed on a farm will return a greater profit than under any other conditions because they pick up a large amount of waste products and only a comparatively small amount of feed has to be bought. Much greater returns would be secured from the average farm flock if the poor layers were culled out, as some of the birds hardly pay even for this feed which has to be purchased. This keeping of a free boarding house for a lot of hens is as poor business, however, for the general farmer as it is for the poultry man who is making a business of egg production. A hen that lays no eggs requires as much feed and care as one that lays many. The thrifty see to it that their flocks consist of layers.

Hens of a good egg-laying strain will lay more eggs, in the course of a year, than will a flock of mongrels. In the majority of instances it is not feasible to sell all the old flock and start a new standard-bred one; but, if standard-bred roosters are used to head the flock for three or four generations, the resulting flock will resemble purebred fowls. The better way, however, is to get hatching eggs from a good strain of purebred fowls.

Culling must be practiced in all flocks if a profit is to be made. In the better flocks few birds will be discarded, but in the ordinary farm flocks from 40 to 60 per cent are often found to be poor layers.

Only a little practice is required before a person can readily distinguish between a good-laying hen and a poor one. County and home demonstration agents give this information by means of demonstrations and the United States Department of Agriculture has published a circular which tells how to cull.

Feeding is one of the most important factors in egg production. On poor rations hens will live and even keep in fair health; but well-balanced, palatable feeds are necessary to get good egg production. The additional cost of a good ration compared with a poor ration is repaid many times by the extra eggs obtained. As a rule the simplest feed mixtures, composed of home-grown grains and their by-products, supplemented by sweet or sour milk or some animal feed rich in protein, such as meat scrap, will prove profitable and produce eggs at the lowest cost.

FEEDING PENNED-UP CHICKENS.

To the Editor: I am an interested reader of your poultry notes in the Pacific Rural Press. Will you please give me a few pointers on the feeding of mine during the time I have them penned up, while the grapes are ripening. I have about fifty chickens—eleven one-year-old hens and the rest hatched since January. I want a well-balanced ration, including shell, etc.; also the amount of feed per day.—L. T. L., Sanger.

As a means of encouraging the hens to lay and the young stock to increase in size, protect them against winds, and constantly provide within the enclosure an abundance of shade, fresh water, and soft, damp earth in which to wallow; also some litter in which to scratch for grains. We assume that the fowls are thriving on the present feed, and in that case attention to the above details are of greater importance than a radical change of feed. Under any circumstances fowls should have green stuff daily, and at all times have access to a supply of crushed shells, charcoal, grit, and cracked bone. In order to be able to calculate an economical balanced ration for the hens and for the young birds, it is necessary to have a list of the materials that are available and their cost or market value. It is now considered more convenient and economical to use the commercial mixed feeds that are sold almost everywhere. The hens should be fed with a mixture known as egg-maker, and with scratch feed or other grains. If they are given an abundance of greens each hen should be fed daily with 1½ ounces of the egg-maker and the same amount of scratch feed or grains. The young birds, that we suppose are now about two or three months of age, should be fed with approximately one ounce of a mixture known as growing chick mash, and an equal amount of scratch feed, in addition to the greens. To obtain the most satisfactory results they should have all the greens they wish to eat.

THE INFERTILE EGG FOR SUMMERTIME.

Absolutely millions of dollars' worth of market eggs are spoiled each summer because they are fertile and it is the farmer that pays for this large loss. From years of experience the markets have found that one out of every five eggs that are marketed are bad and as a result the price is lowered accordingly.

Fertile eggs kept in a warm room will become unfit for food just as quickly as milk will sour. The eggs do not have to be placed in the incubator or under the hen for the germs to start development. The growth of the embryo will take place, no matter whether the fertile egg is in the incubator, under the hen, in a warm living-room, pantry or hayloft, in a hot country store, in a wagon enroute to town, or exposed to the heat from the sun in any manner.

There is no reason for keeping the males with the laying hens after the hatching season is over. Contrary to the opinion that the hens will lay more eggs if the male is kept with them, it has been proven the opposite is true.

The males may be killed, sold or confined in separate pens. If the farmer desires to use the males for the next season's breeding they can be confined during the hot summer months. Not only will this insure infertile eggs from the laying stock, and eggs that will not easily spoil, but the males will make better breeders the following season.

When the production of infertile eggs increases the prices for eggs will advance during the summer months, and the resulting losses from bad eggs will be turned into profit. Good, clean, fresh, infertile eggs will bring a premium on any market.—Walter L. Payne.

WELL-DRAINED SOIL FOR POULTRY.

Poultry can be raised successfully on any well-drained soil. A light loam which will grow good grass is well adapted for this purpose, while a very light sandy soil through which the water leaches freely will stand more intensive poultry conditions, but most of the green feed for the fowls kept on such a soil will have to be purchased.

A heavy clay or adobe soil is not well adapted to poultry raising, as such land does not drain readily, and it is much more difficult to keep the stock healthy, poultry specialists on the Government poultry farm have found. Long stationary houses, or the intensive system, saves steps, but it is easier to keep the birds healthy and to reproduce the stock under the colony system, where the birds are allowed free range. Breeding stock, and especially growing chickens, should have an abundance of range, while hens used solely for the production of market eggs may be kept on a very small area with good results.

The colony house system necessitates placing the houses, holding about 100 hens, from 200 to 250 feet apart, so that the stock will not kill the grass.

BROODY HENS.

One of the best methods of interning a broody hen is to have a well-ventilated coop or box with slatted or wire bottom so that the air will circulate freely and thus help to reduce the broody fever. Hens thus incarcerated should be well fed in troughs kept just outside of the coop and also should be given skim-milk or buttermilk. Good feed is essential at this time that the egg-producing organs may maintain their force and vigor. The coop may be kept in the poultry house or outside if well protected. From three to seven days' confinement should suffice to effect a cure.

CALIFORNIA FARM BUREAU EGG-LAYING CONTEST.

(By Max Kortum.)

The 340 contesting hens at the contest laid during the week ending June 19, 1347 eggs, a decrease of just 50 eggs from the previous week's production. Percentage of production was 56½ for the week. The seventh month of the contest ended on the night of June 15th. A report for this period will be published next week. High pens for the past week are as follows:

Owner	Eggs
R. C. Gibson, Newhall	51
B. F. Rose, Santa Cruz	50
Bellows Bros., Lakeside	50
Geo. Gray, Santa Cruz	49
Theo. Clark, Santa Cruz	49
Warren Wood, Santa Cruz	48
S. L. Gibson, Santa Cruz	48
Geo. Barker, Santa Cruz	47
Hollis Peck, Santa Cruz	46
D. B. Walls, Petaluma	45
Mrs. M. B. Wilson, East San Diego	45
Mrs. M. J. Stephenson, Santa Cruz	45

POULTRY PRATTLE.

When warm weather comes, the ventilation of the poultry house will need to be looked after. If the fowls are crowded, it is a good plan, when practicable, to increase the number of perches and place them farther apart. Fowls frequently are quite uncomfortable in warm weather when too closely bunched on the perches.

Poultry Breeders' Directory

Rate 3½ cents per word each issue.

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ASK YOUR DEALER

REDEEMING THE WORLD IN HUMBOLDT.

(Written for Pacific Rural Press.)

Ain't (human) Nature Funny? It is Sunday and we are camped among the majestic redwoods of Humboldt—gigantic trees, many of them here, when the Man of Nazareth preached his world-changing sermons from the cedar-clad hillside with a rock for a pulpit. How large are these trees? I don't know, and just now I don't care—this is no time or place for a tape measure. They are big enough to inspire reverence, and so tall that the bright morning sun filtering down through them is mellowed as by the stained glass of a cathedral window, and only reaches the ground at intervals to light up a clump of ferns, making them glow in the gloom like altar candles.

The Angelus of Humboldt.

A church bell just rang. It sounded like a cross between a young boiler factory and a hurdy-gurdy. We passed the church coming in—just one of the average run of small churches, utterly commonplace, whose painted walls were shrieking dischords at its wonderful, natural setting. Why didn't they build it of redwood logs with the bark left on; why didn't they leave it in the woods among the ferns instead of making a barren waste of its yard? And on a Sunday morning like this, why didn't they let the birds call them to worship out here in God's own free temple?

Human nature is funny! But if the folks up there are content, we will not quarrel with them, provided they do not condemn us for our method of worship.

It must be the spell of the forest! Anyway, this is taking on a churchy twang in spite of me, so we may as well pass on to the catechism.

The Sin of Big Business.

Who made the world? Answer: God. For whom did God make the world? Answer: For all of his children. Who took the world away from God's children? Answer: Big business. What can restore the world to all of God's children? Answer: Well, that depends. Human nature is so funny! But I believe up here in Humboldt I have run across the germ of an answer. It is: Co-operation. I don't mean to say it originated in Humboldt, or that it thrives here more than in some other localities, but it has achieved success enough here to warrant comment and commendation.

Drive into the town of Fortuna, as tourists do, looking for a good store where the depleted larder under the back seat may be replenished. You will see a large, attractive, two-story building on a prominent corner with a big store-room occupying the ground floor. It is a modern, city-like market with groceries galore—fresh, clean and effectively displayed. And, wonder of wonders, fresh fruits, vegetables, etc., screened off in an immaculate department and so attractively displayed as to make you kin to Eve in a longing for fruit.

A Good Example of Co-operation.

The building bears the huge sign: Co-operative Store, and you straightway begin buying and asking questions. You find that this store is owned and operated by a co-operative association of local people organized under the State co-operative laws, and that the business is conducted after a safe and enduring plan. Before a move was made, enough stock was subscribed (one man, one vote basis) to insure ample capital with which to operate successfully. Regular retail prices are charged for everything and goods are sold to all comers, strictly for cash. As profits accumulate, enough is held out to insure every need of the growing business and the balance is returned to members only on the basis of their purchases.

Starting October 4, 1919, in one small room of a ramshackle building, with a stock inventorying barely $3,300, they had grown in eight months to a gross business of $61,485.16. From a monthly business of $5,000, the sales have increased at an average rate of $1,000 a month. At the close of business June 18th, the sales for the day had gone over $1200. The membership has increased from 160 to over 300, and the manager, R. G. Applegate, says it is not a matter of soliciting members, but one of taking care of the volunteers. They already have branch stores at Hydesville and Rio Dell, with similar ones well on the way for Ferndale, Loleta and Eureka.

A Real Saving Effected.

In addition to all this, they own the fine business block with store and warehouse on the ground floor and seven modernly equipped apartments on the second floor, the rent from which is added revenue for the association.

Do they make a real saving on their purchases? What they have done in eight months from the small beginning, in the increase of working capital and plant equipment, is a pretty fair answer to that question. Certain it is that if there is any profit in any well-managed retail mercantile business there is profit here, which goes back to the members to help reduce the cost of living. We inquired specifically only as to one item—cow feed. Humboldt dairymen are large buyers of concentrates. On this item they are saving from $3 to $5 per ton, and are a repressive force against soaring prices from other quarters. If you don't believe it, compare prices in Humboldt with counties where there is no such organization.

"All for Each, and Each for All."

But this question of individual saving on an individual account is only a minor one at this time. These people are helping to build a new order of civilization. They do not stand alone. They are part of the Pacific Co-operative League, with co-operative stores in Alaska, Washington, Idaho, Montana, Oregon, California, Arizona, New Mexico and Texas. This League is affiliated with co-operative societies in practically every country on the face of the globe. When you look at this Humboldt movement you are not viewing an isolated experiment. You see one unit of a mighty organization ushering in the dawn of a new order of things and pointing the way toward noon, an order of things where the business motto shall not be "Every man for himself and the devil take the hindmost," but, "All for each, and each for all," an order of things where God's world shall be given back to all of God's children.

The choir will render the doxology and the congregation will be dismissed.

Home Circle Department

THE LIFE OF THE CLIFF-DWELLERS.

Our photograph shows one of America's first recreational community centers—a khiva, at that marvellous New Mexican cliff-dweller community, the Rito de los Frijoles. Perched in a rift in the mountain wall, high above the valley floor, it seems to silently suggest that coming day when every American public school will be a day-and-night community center for grown-ups as well as children.

Most school boys have read the marvellous stories of these cliff folk of our arid Southwest, who lived among far-stretching mesas of faded blues, faded pinks, faded yellows. The latter's descendants today live in the laddered pueblos, such as the twin pyramids of Taos and the "Sky City" of Ancoma.

In straining our eyes for such distant wonders we may, however, as David Grayson quaintly reminds us, "Miss the miracle at hand." Fresh from cliff-dwelling studies in New Mexico, where every pottery shard had indicated a poem in earthernware, the writer once almost missed such a nearby miracle. He was camped on a Tehama county creek-bed. Brewing a mulligan over the camp-fire, his attention was called to a California colony of cliff-dwellers. These, however, were not cautious redskins, who, when twilight turned their irrigation ditches to molten silver, retired to their cliffs from their fields of squash, beans and maize. These California cliff-folk, although also bipeds, were feathered. They were cliff swallows. Their instinct in locating their nursery on the face of an inaccessible cliff was the same, however, as the other timed biped—the New Mexican cliff-dweller.

Khiva or Estufa. Rito de los Frijoles, New Mexico.

These swallows were busy little masons, building up, with pellet after pellet of mud, their gourd-shaped nests. Their gracefully moving wings recently had brought them over thousands of miles, across dank Brazilian jungles, and past snow-crested Mexican volcanoes to this Tehama cliff. Here their babies would be as well protected as the New Mexican cliff-dweller bairns who once lived in the khiva pictured above.

One wondered if these swallows were not members of a malaria-control league, for their food seemed to be largely mosquitoes. That they had learned something of the strength of numbers is crystallized into our saying: "One swallow does not make a summer." This well indicates that they work in flocks. To gain an insight into human cliff-dwelling life ask the nearest county library branch of Bandelier's "Delight Makers," one of the most fascinating of American novels.

Vacation time will soon be here. New found pleasures await him, who, learning to read a roadside, sends to the Director of the Geological Survey, Washington, D. C., for a contour map of his vacation country.—From California Study League, care of C. M. Goethe, 720 Capital National Bank Bldg., Sacramento, Cal.

FARM HOME TOURS.

(Written for Pacific Rural Press.)

And now somebody has started a drive for the farm home tour. The farm bureau tour, where the members of one center bundle into their autos and visit farms in other sections of the county, to get pointers on better farming, has come to be quite popular.

Why not, then, a similar tour, especially by the women of farm homes, to get the latest and best ideas on home improvement as well as to get better acquainted?

It doubtless would be some task to get the farm women of any neighborhood together on a certain day for such an excursion, but some one might do a worse thing than to try it.

The moral effect of even the possibility that a number of women from another community might visit one's home before the summer is over would be something. Maybe not, but one woman to whom this scheme was broached, volunteered the opinion that some home premises would receive an awful overhauling if the owners suspected that sometime during the month an excursion of suggestion-seeking women might be along for a visit.

The best place in the world to study agriculture is on a farm, and the best way to get inspiration and suggestions for home improvements is to see how these things work out in homes where they have been installed. The suggestion for a farm-home tour is a good one, worth trying out. Anyway, the next time there is a farm bureau excursion make it a home as well as a farm demonstration trip.

ECONOMIZING ON SHOES.

Trying to cut the high cost of clothing I purchased a pair of shoes for $6, instead of paying $9 to get the same grade of shoe I used to buy for $4. The new ones were made of good leather, with cloth tops, but were not as stylish as others with higher tops and made of poorer material. But when I came to wear them I found the soles and the entire shoes so stiff it was torture to wear them any length of time, and I feared they were no saving after all. Then I remembered that a dealer in leather had once told me how to soften leather with hen oil.

So I dressed a fat hen, tried out some of the leaf fat and poured it into an empty cold cream jar. Then I took a basin of hot water and with a sponge applied the water to the soles of the shoes and the part across the toes. As the water soaked in I wet it again till real damp, then applied the hen oil and let it remain a while. It was soon absorbed, then more was applied; this was repeated four or five times, bending the shoes back and forth to limber them up. Then I put them away to dry. The next day they were as pliable as the high-priced shoes and perfectly comfortable.

This same process is splendid to use on harness and other leather. You must remember that all leather should be thoroughly soaked with warm water before any oil is applied to soften it.—Viola M. Lee.

HIS ANCESTORS WERE ALSO PROMINENT.

"Speaking of old families," said the aristocrat of the party, "one of my ancestors was present at the signing of Magna Charta."

"And one of mine," said little Ikev, who was also present, "vos present at the signing of the Ten Commandments."

IN ONE SURELY.

"I never hurry or worry."

"What branch of the government service are you in, old man?"

THE RIGHT TO WORK.

Out on the roads they have gathered, a hundred thousand men,
To ask for a hold on life as sure as the wolf in his den.
Their need lies close to the quick of life as the earth lies close to the stone;
It is as meat to the slender rib, as marrow to the bone.
They ask but leave to labor for a taste of life's delight,
For a little salt to savor their bread, for houses watertight.
They ask but the right to labor and to live by the strength of their hands,
They who have bodies like knotted oaks and patience like the sea sands.
And the right of a man to labor and his right to labor in joy,
Not all your laws can strangle that right nor the gates of hell destroy,
For it came with the making of man and was kneaded into his bones,
And it will stand at the last of things on the dust of crumbled Thrones.
—Edward Markham.

THE GUIDING OF IMAGINATION

"When my boy was only four years old, I began to punish him every time he told a lie. It took great persistence to cure him, but now he is the most truthful child you ever knew. You can depend upon his word every time." The father spoke with great pride, ignorant that the merry little lad next door who was the companion of his own sullen boy had also passed through three years of "romancing" but with no punishment for lying and consequently no unhappy memories to carry into later life.

Every little child passes through a mental stage when he finds it difficult if not impossible to distinguish between memory and imagination.

Five-year-old Harold spent a very happy day with little Jack, whose mother had so tamed a squirrel that it came to the window and ate from the children's hands. "Wouldn't it be fun if it would come into the room and play with us?" "Yes, and get into the doll's bed and sit in a chair and eat from a table." Each child made his contribution to the delightful romance. Two or three weeks later something was said in Harold's presence about squirrels, and immediately there came to his mind all the memories of Jack's squirrel. Memory and imagination became confused so that the little lad thought he was telling the truth when he told of the squirrel which had eaten from his hand, slept in a doll's bed and sat in a chair, and he naturally resented as an injustice the punishment which followed.

"What is truth?" four-year-old Margaret asked earnestly of a loving friend who rebuked her for not telling the truth. The friend, by definite illustration, helped her to understand the difference between fact and imagination, and for several weeks the child's stories were followed by the question, "Was I telling the truth that time?" Finally she was able to distinguish the difference and her imaginative stories were introduced, "This isn't true, but—" "Once upon a time, etc." So she lived in her make-believe world joyously increasing a very valuable mental power, yet being saved the reproof and punishment too often meted out to children who are not understood.

Miss Elizabeth Harrison, in her book, "Misunderstood Children," tells of a little girl who prayed in her own simple, childlike way that the wonderful gift of Imagination might be taken from her because of the scorn and ridicule with which the teacher of geography treated her attempt to picture Arabia, about which she was studying, instead of merely bounding the country. "Please, God, help me not to see people and animals in Arabia instead of an old map on the wall," she prayed.

Fortunately that little girl's prayer was not answered, and her imagination developed and was so guided and controlled by a wise and understanding mother that when the child grew to womanhood she was able to use that imagination to write stories which have brought joy to thousands of little children.

The world of imagination is really the kingdom of the little child in which he lives with the companions we adults choose for him. Let us help him by telling him of the great heroes of history and literature, and cease to acquaint him with the cruel villains and coarse buffoons of the movies and the newspaper headlines. During their early impressionable years, children are influenced more by their imaginary companions than by the actual children with whom they come in contact.

"Let's pretend," the imaginative child says over and over again. "Yes, let's pretend," the wise mother answers, and jokingly may add, "Let's pretend that we are fairies and that all the specks of dust are wild animals for us to chase."

Let us pretend and pretend with the children, and be thankful with reverent, humble gratitude when we as grown men and women are allowed to re-enter the wonderland of childhood, living with the little people and guiding them in their use of this very great gift of Imagination.—By Anne Goodwin Williams, National Kindergarten and Elementary College.

THE HORSE AND THE OYSTERS.

An amusing story is told about Benjamin Franklin, that good and clever man of whom America is justly proud. He had been journeying all day on horseback, and was half dead with cold and fatigue, for it was in the depth of winter, the wind was bitingly cold and the snow was falling. When the shades of the evening began to fall he realized that it would be impossible for him to reach his destination, for it was still many miles away. The wind had turned to a hurricane, and snow was blinding him, and in the fast-coming darkness he was liable to perish in a snowdrift. He therefore began to look out for a shelter for himself and his steed, and great was his joy when he came upon an humble little wayside inn. However poor its accommodation might be, he felt sure it must have some sort of a fire at which he could warm his stiffened and almost frozen limbs, so he hastily dismounted, gave his horse in charge of the stable boy, with many injunctions as to taking good care of it, and hurried into the living room of the little inn, which did duty as parlor, dining-room and kitchen. In its great open chimney was the only fire in the house, and Franklin's disappointment was intense when he found that the landlord and all the guests previously arrived had seated themselves around it so closely that there was not an inch of space for him to squeeze through to get to it.

In vain he spoke of the bitter cold and storm he had been beating his way through; in vain he told of his intense fatigue and chafed his benumbed hands; the selfish occupants of the seats only hugged the fire all the closer, as if afraid of being asked to give up some of its warmth to this new arrival. As usual, Franklin kept his temper, and when, after a little while, the stable boy came in, he turned to him quite eagerly, saying:

"Did you give my horse a good rub-down, as I told you to?"

"Yes, sir; he's good and dry now."

"And did you give him that warm mash I ordered for him?"

"Sure, sir; and you bet he's enjoying it, too."

"And did I remember to tell you to give him his oysters? We mustn't forget to give him his oysters this cold day."

"Oysters! Why, bless your heart, sir, no hoss ever eats oysters!"

"You think not? Well, just try mine. Take him a dozen on a plate and you'll see what will happen!" answered Franklin.

The astonished hostler went out with the plateful, as ordered, and a few minutes later every one else had rushed after him to see the wonderful horse that ate oysters, leaving Franklin the sole occupant of the room. With a quiet smile he seized one of the chairs, settled himself in the very best place before the fire, and comfortably warmed himself.

A few minutes later they all returned with the stable boy, who exclaimed indignantly:

"Didn't I tell yer so—hosses never eats oysters! And your hoss wouldn't so much as look at these yer!"

"Wouldn't he? The silly fellow," answered Franklin complacently, as he warmed his hands before the blaze. "Well, then, just give them to me here. I'll eat them for him."—Selected.

SAME OLD HOSS.

A son of old Colonel Seelye was educated at Hanover and went off preaching. He came back with an old rack-a-bone horse, and the old man met him on the piazza.

"Hello, Dan," said he. "Where did you get that old horse?"

"That is as good a horse as our Savior rode into Jerusalem."

The old man came down from the piazza, examined the animal's mouth carefully, and then, standing back, remarked quietly: "Dan, I'll be hanged if it ain't the same old hoss."—Hilton's "Funny Side of Politics."

Irving Bacheller was introduced one day to a Western mountaineer. "Mr. Bacheller," said his friend, "is an author of repute in the East." "Oh, yes," drawled the mountaineer. "I know of him. I was locked up in my cabin here by the snow two winters ago, and I had only two books to read the whole five months—your book, sir," he said, turning to Mr. Bacheller, "and the Bible, and I read them often." "Indeed!" said the author, with satisfaction. "Yes, sir," continued the old mountaineer, "and I never knew before how interesting the Bible was."—St. Paul Despatch.

As the celebrated soprano began to sing little Johnnie became greatly excited over the gesticulations of the orchestra conductor.

"What's that man shaking his stick at her for?" he demanded indignantly.

"Sh-h! He's not shaking his stick at her."

But Johnnie was not convinced. "Then what is she hollerin' for?"

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FOR SALE — Holt 65 H. P. Caterpillar Tractor. Machine is in fair order. As need for same has passed will sell cheap. This machine with minor repairs will do a great deal of work. For further particulars, N. M. Storer, Box 393, San Rafael, Cal.

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COOL SUMMER DRINKS.

Sunset Lemonade.—This is a sharp, cool drink that will be relished on a hot day. Two cupfuls of sugar, the juice of four lemons and the grated rind of two oranges are boiled with one quart of water for five minutes and set aside to cool. Add sufficient water to suit taste. The lemonade is then served in tall glasses with cracked ice and half slices of orange, and a candied cherry floating on top of each glass.

Lemon Frost.—Squeeze the juice of half a lemon over three teaspoonfuls of sugar, and add cracked ice and water to fill the glass. Beat the white of one egg until stiff and light, and "frost" the top of each glass with a heaping spoonful slightly sweetened and flavored with lemon juice.

Shadow Lemonade. — Wash and sugar fresh blackberries, allowing them to set a little while to draw out the juice. Press through a bag carefully so that juice is clear. Half fill each glass with the blackberry juice; add the juice of half a lemon, and ice to fill the glass. It is best not to serve this drink too sweet. It is much better tart.

Strawberry Shrub. — Pick over, wash and sugar one quart of ripe strawberries. Over them squeeze the juice of two lemons and allow them to stand. Half fill the glasses with ice, crush the berries, and fill up the glasses with the crushed fruit and juice. Serve with several whole berries unstemmed on the serving plate accompanied by little sweet wafers or sponge cake.

Spiced Lemonade.—Make a lemon sirup as follows: Squeeze the juice from four lemons and chip the rind from one. Add one cupful of sugar, one cupful and a half of water, three whole cloves and half a teaspoonful of cinnamon. Cook until the sugar is well dissolved and the spices mixed, adding more water if necessary to keep the sirup thin. Cool and use one-quarter of a glassful for each one, filling the glasses with very fine chopped ice.

Mint Ice.—Squeeze the juice of one lemon over a handful of mint leaves in the bottom of a tall glass. Crush well; add four teaspoonfuls of sugar and sufficient ice and water to fill the glass.

Lemon Crystals.—To two teaspoonfuls of sugar add the juice of half a lemon and two tablespoonfuls of pineapple juice. Fill up the glass with cracked ice. Over the top of each glass grate crystallized ginger and serve a generous piece on the edge of the glass itself.

Raspberry Lemonade.—To two tablespoonfuls of raspberry juice—either of the fresh fruit or canned—add the juice of one lemon, two teaspoonfuls of sugar and ice to fill up the glass. A most refreshing drink!

Apple Lemonade.—Cook until tender, diced apples, including the skin and core, in enough water to cover. Strain through a jelly-bag, add a cupful of sugar to each cupful of juice, bring to a boil; then cool. For each glassful of apple lemonade use half a cupful of the apple sirup, the juice of half a lemon, and water and ice to fill the glass. Serve with a candied cherry floating on top.

Pink of Perfection.—Cook together one cupful of sugar and one quart of currants until the berries are soft. Add one cupful of water to the juice, and cool. Into each glass squeeze half a lemon, and add half a cupful of cool juice. Ice, and serve with very thin sweet crackers.

PROVIDING.

"Father, I've decided to become an artist. Have you any objection?"

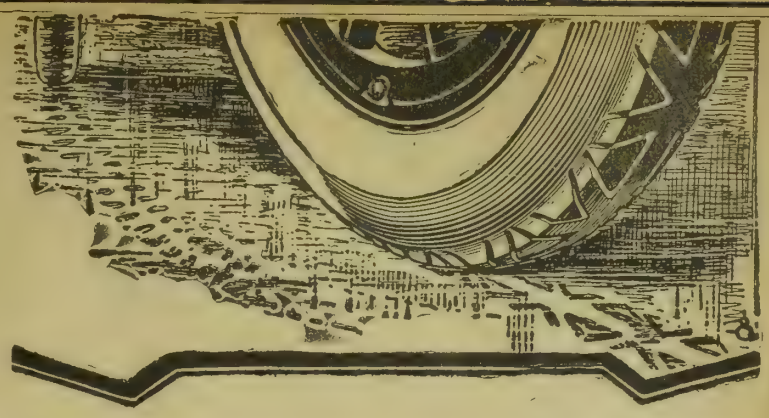
"No—providing you don't draw on me."

HIS WISH.

"Gee, I wish I had a little sister."

"Why?"

"'Cause I'm tired of teasing the cat."



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THE

OF ANT EXTERMINATION -IS SOLVED BY KELLOGG'S ANT PASTE

-Makes Ants Disappear

All Druggists 25¢

THE MARKET REPORTS

Compiled from Independent Sources.

SAN FRANCISCO

San Francisco, June 30, 1920.

WHEAT.

There is no movement of wheat in this market and no quotations. Information comes from Portland of recent shipments of wheat to Great Britain since the middle of the month aggregating 342,628 bushels, which was valued at $1,012,050, or $2.95 per bushel. This, of course, is old crop wheat.

BARLEY.

Barley is somewhat lower on slack demand, although the amount in stock here is reported to be very small.

Feed ..... $3.15@$3.20
Shipping ..... Nominal

OATS.

While oats reflected the weakness in barley there were no changes made in quotations.

Red Feed, ctl. .....$3.50@3.60
Red for seed .....Nominal
Black for seed ..... Nominal
Recleaned Red or Black for seed....Nominal

CORN.

Corn is scarce, with no demand. Quotations are nominally unchanged.

Egyptian, white .....$4.75@4.90
do, brown .....$3.65@3.80
California .....$3.80@3.90

HAY.

Receipts of hay for the past week were 1688 tons, compared with 1598 the previous week. In San Francisco the market is much lower and continues in what is the dullest condition for many months. Consumers and dealers refused to pay the range of prices that have been asked in the country and only purchase for immediate requirements. Shipping conditions are better with the light tonnage moving and the service seems almost normal.

No. 1 Wheat, or Wheat & Oat $35.00@38.00
No. 2 Wheat, or Wheat & Oat $32.00@35.00
Choice Tame Oat Hay .....$33.00@38.00
Wheat Hay, new .....$26.00@28.00
Tame Oat Hay, new .....$26.00@28.00
Wild Oat Hay, new .....$20.00@22.00
Barley Hay, new .....$20.00@22.00
Alfalfa, new .....$20.00@25.00
do, 2nd cutting .....$24.00@28.00
Stock Hay .....$20.00@25.00
Barley Straw, bale.....70c@$1.00

FEEDSTUFFS.

The demand for feedstuffs in this market is light, and with the exception of rolled barley quotations are nominally unchanged. Rolled barley sold off a dollar in response to lower quotations in the whole grain.

Rolled Barley .....$69.00@70.00
Rolled Oats .....$70.00@71.00
Alfalfa Products .....$45.00@50.00
Cracked Corn .....$82.00@83.00

POTATOES, ONIONS, ETC.

(Wholesale prices paid by commission houses.)

The lack of demand for onions at this season has caused a decided drop in prices. The weakness is expected to continue for some time. Potatoes are reported to be in fair demand, but all prices were lowered this week on account of the increasing supply. Summer squash is coming in larger boxes now, but sells by the pound at about the same as last week. Asparagus is about over, although there are still some odd arrivals on hand. Beans and cucumbers sold at lower prices this week.

Peas, Bay, lb. .....2@5c
Beans, wax, lb. .....4@7c
do, green, lb. .....4@7c
Carrots, per sack .....$1.25@1.50
Lettuce, crate .....$1.50@1.75
Cucumbers, English, doz. 75c
Tomatoes, Southern, box 30 lbs. $1.50@1.75
Rhubarb, Strawberry, box 40 lbs. $1.50@2.00
Summer Squash, box, 35-40 lbs...$2.00@2.50
Egg Plant, lb. .....12½@15c
Potatoes, New Garnets, cwt. ....$6.00@6.50
do, New River, cwt. .....$5.00@5.75
Onions, Bermuda, wax, 50 lbs. ....40@50c
do, Red, sack .....75c@$1.00
Green Onions, box, 25 lbs. $1.50
Garlic, lb. .....10@12½c

BEANS.

(Wholesale prices. Buying prices made on sample.)

Outside of limas the bean market is quiet and inclined to lower prices. Garbanzos and the large and small white beans sold at lower levels, while quotations on other descriptions were unchanged. It is reported that the stocks of lima beans is getting somewhat low and that the Southern association is about to make another advance in price. The reports place this at $12 in the south, and the San Francisco price will probably be from 25 to 50 cents higher.

Bayos .....$11.75@12.50
Blackeyes .....$ 8.50@ 8.75
Cranberry .....$ 6.75@ 7.00
Pinks .....$ 6.30@ 6.50
Red Mexican .....$ 9.00@ 9.25
Garbanzos .....$ 9.00@ 9.50
Large Whites .....$ 6.00@ 6.25
Small Whites .....$ 5.90@ 6.15
Limas, Ass'n prices, South $11.42
do, Baby, Ass'n prices, South $11.42
Limas, S. F. prices .....$11.50@11.75
do, Baby, S. F. prices ....$11.50@11.75

POULTRY.

(Wholesale prices made by commission houses.)

The approaching holiday stiffened up prices for broilers and mixed hens. Otherwise conditions show no change from those of last week. It is doubtful if hens maintain this week's prices, but it is believed that the low price for broilers has been passed and that they are likely to show an upward trend in the future.

Broilers .....30@32c
Hens, mixed color .....30@34c
do, Leghorns .....20@26c
Roosters, young .....42@45c
do, old .....15@17c
Friers, ...30@35c
Squabs .....55@60c
Geese .....28@30c
Ducks .....25@28c
do, old 18c
Belgian Hare, live .....13@16c
do, dressed .....17@20c
Jack Rabbits .....$1.50@3.50

BUTTER.

(Exchange quotations less commission.)

The advance in price last week had a tendency to make buyers cautious and the price of extra butter receded a cent on Thursday of last week. However, the market steadied after Friday and butter closed on Wednesday at the high price for the month. Using exchange quotations, extra butter averaged 58 cents during June, compared with 56½ cents in June a year ago. Both prime firsts and firsts are quoted this week. This is the first time the latter has been quoted since last September. Receipts of butter are showing a falling off, and as a consequence storage also is not increasing as rapidly as previously. Butter in storage now amounts to 1,430,099 lbs, or over 200,000 lbs. less than a year ago.

	Thu.	Fri.	Sat.	Mon.	Tu.	Wed.
Extra	55½	55½	57	57½	58	58
Prime 1sts	..	..	..	..	55	55
Firsts	..	..	..	..	..	52

EGGS.

(Exchange quotations less commission.)

Extra eggs showed strength throughout the week, closing 5½ cents above the close of last week. Twenty-two cars were shipped from this market during the week. The receipts are showing a decline and eggs to storage have but little more than equaled the outward storage movement. Balance of eggs in storage is 141,868 cases, a net increase of only 943 cases for the week.

	Thu.	Fri.	Sat.	Mon.	Tu.	Wed.
Extra	43	43½	45½	47½	48	48
Firsts	..	..	..	..	..	..
Dirties	40½	41	41	41	43	43
Ex. pullets	35½	37	38½	40	38½	38
Undersized	29½	30	30	30½	30½	30½

CHEESE.

(Exchange quotations less commission.)

There was something of a flurry in cheese this week. California fancy flats closed at the same price as last week, but during the week's trading sold three cents higher at one time. The California Y. A. fancy advanced 4½ cents and maintained its high price. At the same time Oregon Y. A. advanced 3½ cents and maintained its high price.

California Flats, fancy 28½c
do, firsts 24½c
Y. A., Fancy 31½c
Y. A. Firsts 27c
Oregon Triplets 29c
do, Y. A. 30½c

FRESH FRUITS.

The last season's apple crop is about over. There are still some Winesaps, for which the dealers are asking $4.50. Berries were down throughout the list this week, and a rush of shipments brought down the cantaloupe quotations. A continuation of arrivals of cantaloupes will again break the local market.

Apples, Winesap $4.50
Plums .....$1.25@2.00
Currants, drawer .....50@60c
Cherries, loose, lb. .....5@12½c
do, box $1.25
Apricots, lb. .....5@7c
do, box .....$1.25@1.50
Peaches, 4 baskets .....$1.25@1.50
Figs, box, 1 layer .....75c@$1.00
Strawberries, 6 12-oz. boxes.....75@90c
do, 6 8-oz. boxes, drawer .....50@70c
Blackberries, drawer, 12-oz. boxes.. 65@75c
Raspberries, drawer .....90c@$1.15
Loganberries, drawer, 12-oz. boxes...50@60c
do, 8-oz. boxes .....40@50c
Gooseberries, lb .....5@7c
Cantaloupes, Standard .....$2.25@2.50
do, Ponies .....$2.25@2.50
do, flats .....$1.25@1.50
do, Honey Dew, crate .....$2.00@$3.00
Watermelon, lb. .....3½@4c

HONEY.

Some fine amber thistle honey arrived from the northern part of the State during the week, and it is quoted at 18 cents. No arrivals of orange honey from the south are announced although it is stated that some is on the way.

DRIED FRUITS.

No other dried fruit prices have yet been named. Buyers are still far from eager and are inclined to hold off until growers' associations have named prices. It may be two or three weeks before other prices are named.

Raisins, 1920 .....18½@20c
Prunes—40-50s, 1920 crop basis 13½@14c
do, 50-60s 14c
do, 60-70s 12c
do, 70-80s 11c
do, 80-90s 10½c

WOOL.

Those who have their "ears to the ground" for news from the wool markets say reports are more encouraging. It is now thought that wool will not bring the high prices of the last year or two; but the supply of virgin wool in the world is not excessive and if shoddy can be made to take its proper place, the wool crop of the United States will bring remunerative prices.

LOS ANGELES

Los Angeles, June 29, 1920.

BUTTER.

Butter receipts for the week ending today were considerably above those of the previous one, the excess being 58,000 pounds. The Exchange reports a good demand, especially locally. The market broke 1c in the early part of our review week but regained the loss on Monday. Receipts for the week ending today were 444,100 pounds. These prices represent producer.

California extra creamery 57c
do, prime first 55c
do, first 54c

EGGS.

This market is up 1c above last week's quotations on all grades. The advance is the result of a good strong consumptive demand, felt for several days. Receipts have been good and they were slightly above those of a week ago. For the week ending today they were 2,055 cases. These prices are paid the producer.

Fresh ranch, extra 48c
do, case count 46c
do, pullets 41c

POULTRY.

Receipts have been heavy duruing the week. Llight broilers and light hens in good demand and quoted lower. There has also been a good call for friers, which are selling 1c under last week's prices. Heavy hens are selling fairly good at last week's quotations. Ducks dull and slightly lower. Turkeys are scarce and what is coming in sells readily.

Broilers, 1 to 1¼ lbs. 22c
do, 1½ to 1¾ lbs. 26c
Friers, 2 to 3 lbs? 32c
Hens .....20@28c
Roosters (soft bone), 3 lbs. and up 33c
Ducks .....17@20c
Turkeys .....40@44c
Geese 25c

VEGETABLES.

All good fresh stuff in demand today. Receipts in potatoes good and under heavier receipts there is a slight decline noted. Demand is fair. Onions dull, but price is unchanged. Lettuce steady and selling better than a week ago. Cabbage in fair demand and higher. Demand is very good for peas. Beans slow sale and little lower. Summer squash higher and in fair demand. Tomatoes sharply higher today and a splendid demand at quotations, but light in receipts.

Potatoes .....$5.00@5.50
Onions, Stockton yellow, cwt. ....$1.15@1.25
do, Bermuda, crate .....75c@1.00
do, cwt. .....$1.50@1.75
Cabbage, per 100 lbs. .....$1.50@1.75
Lettuce, crate .....50@75c
Rhubarb, per 30-lb. box .....50c@$1.00
Peas, lb. .....6@8c
Carrots, doz. bunches .....30@35c
Summer Squash, local lug .....50@60c
String beans, green, lb. .....4@5c
do, wax, lb. .....4@5c
do, Kentucky, lb. .....5@6c
Cucumbers, lug .....75@85c
Tomatoes, 4-basket, large .....$2.00@2.25
Bell peppers, lb. .....20@25c

FRUITS.

Cherries selling readily even at an advanced price over last week. Apricots, peaches and plums are also in good demand. Figs now coming in freely and a good demand prevails.

Cherries, Black Tartarians, lb. .....15@20c
do, Royal Anns, lb. .....15@20c
do, Bings, lb. .....18@24c
Apricots, lb. ..... 3@ 5c
Plums, Beauty, lb. ..... 6@ 7c
do, Santa Rosa, lb. ..... 5@ 10c
Peaches, lb. ..... 6@ 7c
do, extra, fancy clings, lb. .....15@16c
Figs, black, flats .....50@75c

MELONS.

There was a fair demand for melons all week. Cantaloupes are higher under lighter receipts. Watermelons coming in freely and under the influence of heavier receipts they are quoted lower. Honey dews are coming in, being the first to arrive for the season. The demand for them is good.

Cantaloupes, standard crates.... $3.50@3.75
do, flats, crates .....$1.00@1.25
do, pony crates .....$3.00@3.25
Honeydew melons, standard crates $2.00@2.25
Watermelons, lb. .....1¾@2c

BERRIES.

Receipts in this market have been good. The demand is also good at quotations. Canners are buying heavily in the local market, taking all they can get at these prices.

Blackberries, 30-basket crate.... $3.00@3.25
Raspberries, 30-basket crate.....$3.75@4.00
Loganberries, 30-basket crate ....$3.00@3.50
Strawberries, 30-bkt crate, fancy $3.50@3.75
do, poor to choice, 30-bkt crate $3.00@3.25

BEANS.

The bean market shows no improvement this week. There was no demand during the week for any kind. Prices are holding up, however.

Limas, per cwt $10.00
Large white, per cwt. .....$5.25@5.50
Small white, per cwt. .....$5.25@5.50
Blackeyes, per cwt. .....$6.50@7.00
Tepary, per cwt. .....$3.00@3.25
Pink, cwt. $6.75

HAY.

The hay market has been very quiet all during the last week. There was virtually no demand for anything. Prices, however, are holding up steady and unchanged since a week ago.

Barley hay, ton .....$23.00@25.00
Oat hay, ton .....$25.00@28.00
Alfalfa, Northern, ton .....$29.00@31.00
do, local, ton .....$25.00@32.00
Straw .....$14.00@16.00

ALFALFA.

(Alfalfa Growers of California, Inc., Los Angeles.)

The market for Alfalfa hay this week showed a continued active demand in all parts of the State with prices well maintained at previous levels.

Northern Prices.

No. 1 Dairy Alfalfa, ton $32.00
Standard Dairy, ton $31.00
Stock Hay, ton $27.00

Southern Prices.

Choice Alfalfa, ton $40.00
No. 1 Dairy Alfalfa,ton $36.00
Standard Dairy, ton $32.00
Stock Hay, ton $29.00

Special Livestock Market Report

San Francisco, June 30, 1920.

CATTLE—There is a distinct improvement in the cattle market this week, and quotations have been marked up noticeably. Buyers from the North and East are here, bidding against California slaughterers, and apparently with success, as several carloads of fat cattle have been shipped to market centers outside of the State.

Steers, No. 1, 1000-1200 lbs ..10 @10½c
do, 1200-1400 lbs. ..... 9½@10c
do, 2nd quality ..... 7 @ 8c
do, thin ..... 6 @ 7c
Cows and Heifers, No. 1 ..... 8 @ 9c
do, 2nd quality ..... 6 @ 7c
do, thin ..... 2 @ 4c
Bulls and Stags, good ..... 4 @ 5c
do, fair ..... 3 @ 3½c
Calves, lightweight .....10½@11½c
do, medium ..... 9 @10c
do, heavy ..... 8 @ 8½c

SHEEP—The mutton sheep market also shows a better tone, and milk lambs have been marked up a cent, also wethers. However, there is not an active trade in sheep stock. Lambs are coming forward freely, but there is a disposition to hold back mature animals. A collapsing wool market is disturbing the situation.

Lambs, milk .....11@11½c
do, yearling ..... 8@ 8½c
Sheep, wethers ..... 8@ 8½c
do, ewes ..... 6@ 6½c

HOGS—The receipts of hogs on this market the past week have been too liberal to permit of a price advance in fat hogs. However, while quotations are stationary, choice light hogs are not plentiful and bring premium prices. The export demand in the East is said to be improving.

Hard, fat, grain-fed, 100-150 lbs.....15c
do, 150-225 lbs. 15½c
do, 225-300 lbs. 15c
do, 300-400 lbs. 14c

Los Angeles, June 29, 1920.

CATTLE—Offerings of beef cattle have been exceptionally good during the week in so far as quality is concerned, but receipts were only fair. No price changes.

Per cwt. f. o. b. Los Angeles:

Beef steers, 1000@1100 lbs. ....$8.50@10.50
Prime cows and heifers .....$8.00@ 8.50
Good cows and heifers .....$7.00@ 7.50
Canners .....$4.50@ 5.00

HOGS—Receipts in this market have been slow throughout the week. Buyers have confined their operations pretty much to the dressed meat trade, which was fair. Prices unchanged from last week.

Heavy, averag'g 275@350 lbs. $12.00@12.50
do, 225@275 lbs. .....$14.00@14.50
Light ..... $15.00@16.00

Rough docked 20 lbs. piggy sows 40 lbs. and stags, 40 per cent.

SHEEP—This market is slow and weak, especially for ewes and wethers. Sheep and lambs, however, are in fair demand with good receipts. Quotatiosn unchanged.

Per cwt. f. o. b. Los Angeles:

Prime wethers .....$6.00@ 8.00
Yearlings .....$6.70@ 7.00
Prime ewes .....$8.00@ 9.00
Lambs .....$12.00@13.00
Spring lambs .....$11.00@13.00

Portland, Ore., June 28, 1920.

CATTLE—Weaker; receipts, 2592. Choice grass steers, $10.50@11.25; good to choice, $10@10.25; medium to good, $9@10; fair to good, $8@9; common to fair, $7@8; choice cows and heifers, $8.75@9.50; good to choice, $7.75@8.75; medium to good, $6.75@7.75; fair to medium, $5.50@$6.75; canners, $3.50@4.50; bulls, $6@7; prime light, calves, $13@14; medium, $9.50@12; heavy, $7@9.50.

HOGS—Firm; receipts, 980. Prime mixed, $15.25@15.75; medium, $14.75@15.25; smooth heavy, $11.25@13.75; rough, $10@11.25; pigs, $11.75@13.75.

SHEEP—Steady; receipts, 2375. Lambs, $10.50@11; culls, $8@10; ewes, $3@7; yearlings, $7@8; wethers, $6@7.50.

EASTERN.

Chicago, June 29, 1930.

CATTLE—Receipts, 14,000; beef steers slow, unevenly lower, quality unusually good; bulk, $14@16.20; few choice fat cows and heifers, steady; others slow to lower; bulk, $8@11.50; canners and cutters largely, $4.50@6.65; bulls, unevenly lower; bulk bologna, $6.75@7.50; veal calves, steady; bulk, $13@13.50; heavy calves, lower; stockers, steady.

HOGS—Receipts, 30,000; unevenly strong to 25c higher; better grades light and medium advancing most; heavies slow, top, $16.50; bulk, light and light butchers, $16@16.40; bulk, 250 pounds and over, $14.40@16; pigs, strong to 25c higher; bulk, $13.25@14.25.

SHEEP—Receipts, 12,000; lambs, steady to weak; sheep, 25c lower; choice lambs, $17; bulk, $16@17; few heavy yearlings, $13; very good Oregon wethers, $10; choice California ewes, $8.75; native ewes, $7@8; feeder yearlings, $10, and feeder wethers, $8.25.

Special Citrus Market Report

Los Angeles, June 29, 1920.

There is a decided improvement in the citrus market over last week. Navels are practically a thing of the past, being supplanted almost entirely by Valencias, and the Central California crop of Valencies is cleaned up. A few seedlings are still moving. Latest quotations are: New York—Valencias, $7.20@$9.50; Navels, $6.95@7.60. Lemons averaged $2.40. Grape Fruit, $2.75@$2.95. Boston—Valencias, $5.50@$8.30; Navels, $6.65@$7.50. Lemons, $2.40@4.00. Some marks sold as low as $1.80. That was due to poor condition on arrival, or possibly from cold storage. Grapefruit, $2.50@$3.85. Philadelphia—Valencias, $5.70@$8.00. No sales of lemons, navels or grapefruit. Other markets report sales in keeping with the above.

Foreign lemons from Mediterranean points continue to contend with the California article for popularity in the East. They are distributed as far west as the Mississippi. The latest reports are that a quarter million boxes are headed for New York.

MARKET COMMENT.

Clyman Takes Blue Ribbons.

The shipping plum has certainly occupied a front seat in the horticultural grand stand this season. We note from the daily auction sale sheets, issued by the California Fruit Distributors, that the old has-been—the undermost in the discord, the obsolete, Clyman plum—takes about as many blue ribbons as many of the more recent "high-brow" additions to the deciduous family. It was never a matter of surprise when the Clyman was given a complimentary sale on its first appearance in the eastern auction rooms, but to note prices obtained during the last week in June makes us still have confidence in the Clyman. Sale in Philadelphia June 22, size 6x6, which is 36 plums on the face of a five-pound basket, were $2.95 per crate of four baskets; New York, 6x7 plums on face, $2.25; 5x6, $3.00. Formosa plums, selling on same dates out of same cars, but somewhat larger, sold for $3.75 to $6.00; Beauty, $3.00 to $4.50; Tragedy, $5.00.

Fruit Prices Well Maintained.

With continued normal arrivals of deciduous fruits in all of the eastern auction markets, prices are being maintained that should be entirely satisfactory to the shippers. Cherries have reached the peak of arrivals, although shipments are falling off. Prices are far above the average: New York — Bings, $4@4.75; Lambert, $3.75@$4.25; Black Oregon, $3.90; Tartarian, $2.25@$4.60; Black Republican, $2.90@5.75; Royal Ann, $3@5. Santa Rosa Plums — $2.90 @ $5.70; Tragedy, $3.25@$4.70; Formosa, $4.75; Climax, $3.50@$4.15; Beauty, $3.75@$4.75. Royal Apricots, $3.50@$4.50. Alexander Peaches, $1.25@1.75. Chicago—Plums, $3.25@$4.25; peaches, $1.40@$2.15; apricots, $2.20. Minneapolis—Plums, $2.55@$3.60; peaches, $2.80. St. Louis — Cherries, $2.90@$3.15. Boston — Plums, 2.25@$3.80; peaches, $1.50@$2.40; Bing in 20-lb. lugs, $5.85; Nonpareil in lugs, $6.05.

Upward Trend of Dairy Prices.

A sharp upward movement has taken place, embracing butter, eggs and cheese. Extra butter has reached the 61-cent mark. Present prices have largely eliminated storage demand for butter, as well as outside demand, except to the southern part of the State, which depends upon the San Francisco market for supplies at this season of the year, according to the weekly review of the Bureau of Markets. Production continues to fall off rapidly. The storage increase amounted to 52,135 pounds, against an increase of 142,942 pounds the previous week. California fancy flat cheese has reached 34½ cents per pound; Young America, 35 cents. Extra eggs are 51½ cents per dozen.

First California Pear Sale.

The first California pears to be sold this season were offered at auction in New York, Friday, June 25. The fruit was of the Wilder variety. One hundred and ten half-boxes sold for $4.25 per box. This is a tip-top sale, as the Wilder is one of the early varieties, a fairly good shipper, of good color and flavor; but there is not much doing in the pear line until the Bartlett shows up. Judging from sales of all varieties of fruit we predict that there will be surprises when the Bartlett pear appears in the eastern auction room.

Rice Market Steady.

California rice market is steady, with fair domestic and export demand, light local trading. Southern rice market continues steady on fancy and choice grades, of which there are only limited quantities remaining. Medium and low grades are weak on account of large supplies with very little demand. Advices from the Orient show the cheaper prices are to be obtained from Hongkong than from Saigon. Both their markets, however, are reported steady, but will fluctuate on account of exchange.

Like Eating Money.

New crop potatoes, which have been entirely too high since the deal got under way, are finally getting down to a point where it is now like eating real money. The decline is largely due to heavy arrivals from the Delta district. Then again, the shipping trade is not so active. A four-to-six-cent market exists on the wharf, while fancy stock commands no more than six to six and a half cents a pound on the sidewalk.

Opening Apricot Prices.

The opening prices on cannery apricots has been set by the California Packing Corporation at $100 per ton, according to announcement made by offficials of the company. They report that growers are selling rapidly at that price.

FAIR DATES.

Sonoma County Fair, Santa Rosa, August 25-29.

Patterson Fair, Patterson, August 26-28.

California State Fair, Sacramento, September 4-12.

Humboldt County Fair, Ferndale, Sept. 14-18.

Tulare County Livestock Show, Tulare, September 14-18.

San Fernando Valley Fair and Market, Owensmouth, September 15-18.

Kings County Fair, Hanford, September 21-25.

Ventura County Fair, Ventura, September 22-25.

Glenn County Fair, Orland, September 27-October 2.

Fresno District Fair, Fresno, September 28-October 2.

Los Angeles Livestock Show, Los Angeles, October 2-10.

Siskiyou County Fair, Yreka, October 5-9.

Tulare County Fair, Visalia, October 9-16.

Southern California Fair, Riverside, October 13-19.

Western Royal Livestock Show, Spokane, Washington, November 1-5.

Pacific International Livestock Show, Portland, Oegon, November 15-19.

MAKING THE DAIRY PAY BIGGER PROFITS

About eighty-four billion pounds of milk are produced in the United States each year.

Of this total the butter industry consumes approximately thirty-four billion pounds.

But — approximately thirty billion pounds of the amount devoted to butter-making becomes skimmed milk—having practically no market as human food.

IF someone should come to you and say —"I have discovered a new way to convert your corn-husks into paper-pulp, or—"I can make a new fabric from your wheat-straw," or—"I have found a commercial use for the chaff from your wheat," you then would suddenly realize the value of new markets.

In such manner Hebe comes to you and says, "I have created a new and more profitable market for your by-product, skimmed milk. I have done this by restoring to the skimmed milk a fat content—the element it lacks to make it more desirable, and therefore more readily salable as human food, for certain purposes. This I have accomplished by scientifically emulsifying the fat pressed from the pure white meat of the cocoanut with the skimmed milk, creating a product that serves in the home as an auxiliary to the daily milk supply in cooking and for baking."

The utilization of by-products is a big problem in every industry. Gluten, coal-tar, gasoline and cotton-seed were valueless by-products until someone found a commercial use for them. Skimmed milk is the big by-product of the dairies—thirty billion pounds of it are produced yearly.

The greater part of this by-product, which science tells us is a highly nutritious food, is being fed to stock, when according to the Department of Agriculture it could be used to better and more profitable advantage as human food. Hebe points the way to marketing skimmed milk as human food. It is the first big effort in this direction.

You will ask the question—How is Hebe to benefit the dairy farmer who is not near enough to a Hebe condensery to sell his milk there?

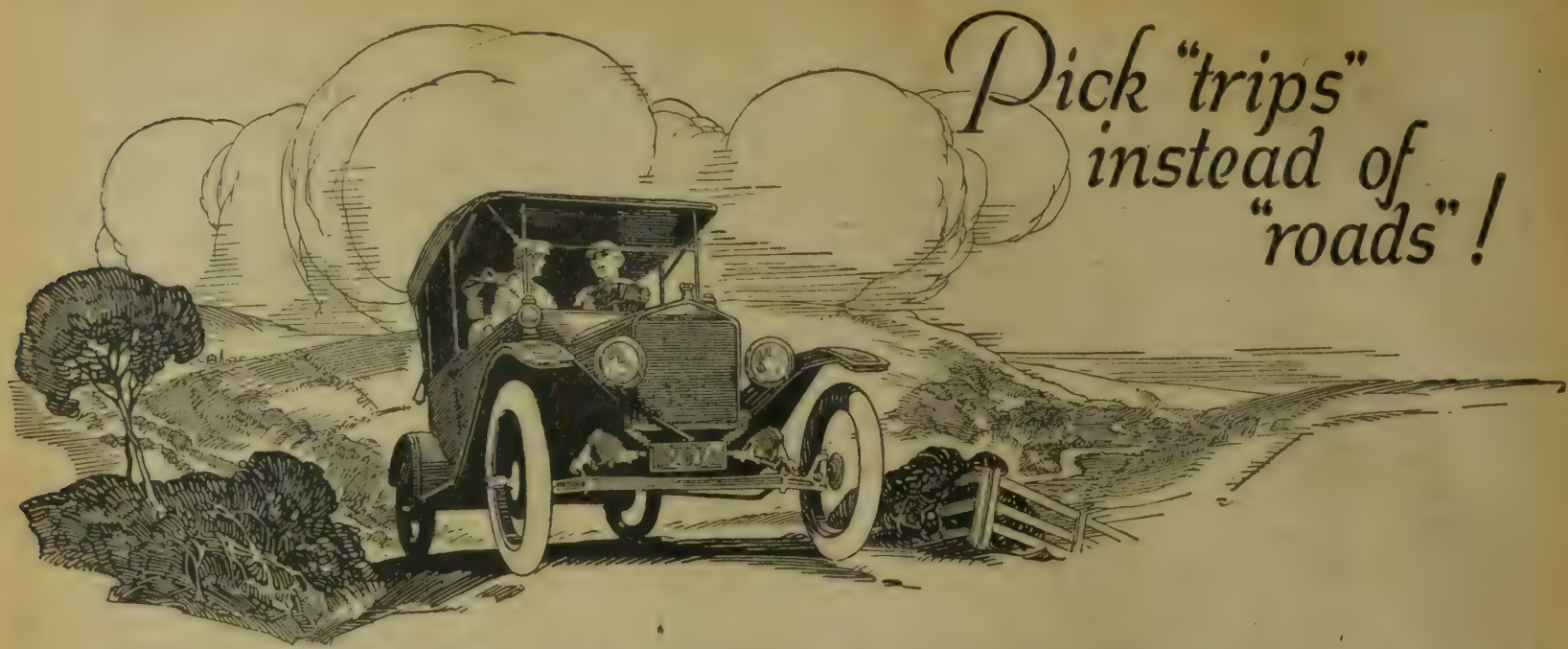
Remember, the Hebe industry is only in its infancy. It will grow with every can sold. Every bit of advertising put out by The Hebe Company will exert a beneficial influence on the dairy product market as a whole. Witness the influence on the market by the sale of nearly four billion pounds each year to the ice-cream manufacturers. While not every farmer is within shipping distance of an ice-cream factory, yet every milk-producer benefits by the demand.

There is no camouflage about Hebe. It is produced, labeled, advertised and marketed for just what it is—"A Compound of Evaporated Skimmed Milk and Vegetable Fat," for cooking purposes. It is not a substitute; it is not an imitation. It is Hebe and nothing else. Hebe creates a distinct place of its own, separate from the general class of dairy products. In seeking and finding its proper place in the market, Hebe will prove a substantial benefit to the entire dairying industry, increasing the general use of dairy products.

You will be interested in our booklet, "The Missing Third." Ask us to send you a copy. There is no charge for this. Address 2675 Consumers Building, Chicago.

THE HEBE COMPANY

CHICAGO SEATTLE



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is Twin Type r Front and ear of Ford ommercial Cars

This Twin Type for Front and Rear of Ford One-Ton Trucks

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Hasslers also protect your car from the bumps and jolts. They enable your car to travel all ordinary roads without injury. This protection means a saving of one-third of your tire and repair expense, and also lengthens the life of your car one-third.

Hasslers make your Ford ride like the highest priced cars. Bumps and jolts that ordinarily make riding unpleasant are not noticed when your Ford is equipped with Hassler Shock Absorbers.

Owners of Hassler-equipped cars drive farther with less fatigue for themselves, and less wear and tear on their cars. They pick trips instead of roads!

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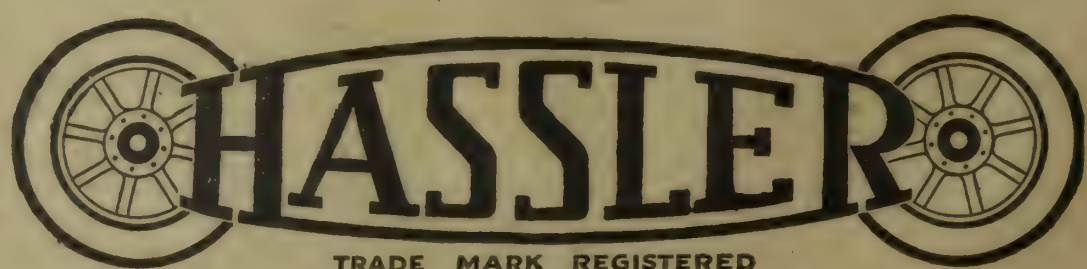

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VOL. C—No. 2 Fiftieth Year

THE PACIFIC RURAL PRESS

SAN FRANCISCO JULY 10, 1926 LOS ANGELES

California State Lib 7-1-2

As Cabbages Grow in the "Holland of America"

BETWEEN THE MOUNTAIN RANGES on the east and west and between the great valleys on the north and south, lies the Holland of California,—except that the old Holland lies beneath the level of salt waters that kill, while the new Holland has to be protected from excess of fresh waters that make alive, and which can be admitted as desired. It makes a great difference, for it renders production sure —not by subtraction alone, but by subtraction and addition. The view on this page is a delight for a dry year. In the foreground lie the rich fields of the Delta region; beyond are the embowered homestead and the ample barns: in the background the dredger is building a new levee which determines the service of the great river: deepening the river for navigation and protecting the rich lowland from overflow when not desirable, but when the occasion demands it an overflow may be systematically conducted through siphon or pump, which makes the Sacramento River the greatest asset known to agriculture and horticulture in California. This every-ready flowing mass of water and slicking inundating every nook and corner, not at so much per miner's inch, but as free as the noon-day sun, aids in the life and production of the greatest tonnage per acre annually harvested on the globe, the banks of the Nile not excepted.

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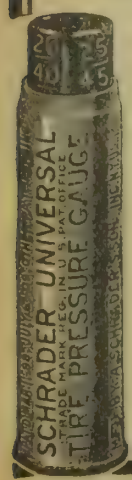

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Standard Apple Act of 1917 Elucidated

(By S. V. Christierson, Standardization Inspector, State Dept. of Agriculture.

The interpretation of a statute is frequently difficult to the average layman; and the Standard Apple Act of 1917, although written by apple growers, shippers and packers for the use and protection of the industry, has proved no exception to this rule. In order to obtain a clearer understanding of the purposes and requirements of this law by the apple interests, the Office of Standardization of the State Department of Agriculture, directly in charge of the enforcement of this act, has prepared the following for publication:

The Standard Apple Act of 1917 establishes three grades for apples packed, delivered for shipment, offered for sale, or sold in the State of California.

The California Fancy grade shall contain only nearly perfect apples. With the exception of Gravensteins, stems must be retained and the fruit must be well colored and shaped and uniform in size. Two and one-fourth inches is the minimum diameter for apples in the California Fancy grade although Winesaps and Lady apples not smaller than two inches may be packed. Apples when packed in this grade must be free from insect pests and diseases, visible rot, dry rot or Baldwin spots, insect bites, bruises and other defects. A tolerance of 3 per cent for any one defect and 10 per cent for total defects is permitted from this standard.

The B grade was established to take care of apples which in certain minor requirements were not of sufficient perfection to be placed in the California Fancy grade.

The C grade is practically a cull grade. Apples packed under this grade do not have to be well-grown, hand-picked, retain the stems, well-colored and normally shaped for variety and locality.

The Standard Apple Act of 1917, as amended in 1919, establishes the northwestern standard apple box as the California standard. Other boxes for the packing of apples may be employed, such as the old California box, pear boxes, etc., provided each packed container bears the legend "Irregular Container."

The Western Fruit Jobbers Convention, at their last meeting in San Francisco this spring, adopted a uniform schedule of the number of apples to be contained within certain markings, for instance counts 64 to 88 to be classed as 3½ tier; counts 96 to 125 to be classed as 4 tier; counts 138 to 185 to be classed as 4½ tier, etc.

A great deal of confusion and comment has been caused by the misinterpretation of section 5 with reference to apples infected with insect pests or diseases. This section provides clearly that no one must import, sell, barter, offer for sale, or have in his possession for sale any apples infected with any insect pests or the pupa or larva thereof, or any disease. It provides further for the disposition of apples of this quality, and it should be understood that nothing in the Standard Apple Act of 1917 prevents the grower from selling such infested or infected apples as part of his crop in bulk to the packer for the purpose of packing or to sell such apples to a by-products factory for the manufacture of such apple by-products as vinegar, cider, dried apples, etc. The question has been raised as to whether a housewife could purchase this fruit to make jelly or sauce, and if the retailer or peddler could sell it to her for such purpose. There is no economy in buying decayed, diseased fruit, as it would be cheaper to buy apples which can be used in entirety than to have to remove such portions as are infested or infected. On the other hand, the chief argument for permitting the sale of diseased fruit has been that the grower should be allowed to dispose of his crop and the thousands of poor families in the large cities should be permitted to buy this low grade fruit.. The enforcement of this act has been provided for by authorizing the State Director of Agriculture to cause to be printed or lithographed stamps which indicate the grade of apples packed under the provisions of this act.

"CALIFORNIA FRUITS" $4 PER COPY.

Because of the advance in cost of everything used in its manufacture we are no longer able to furnish our book, "California Fruits and How to Grow Them," at the old price of $3 per copy. We are forced to advance the price to $4 per copy. We regret this necessity, but the advance is unavoidable and at the new price the book will be sold for less than is now current among publishers for books requiring similar labor and material in its publication. We must either make the book less satisfactory and valuable or charge more for it. We trust the alternate of making the price cover the cost without sacrifice of contents or quality will be acceptable to purchasers.—P. R. P., Publishers.

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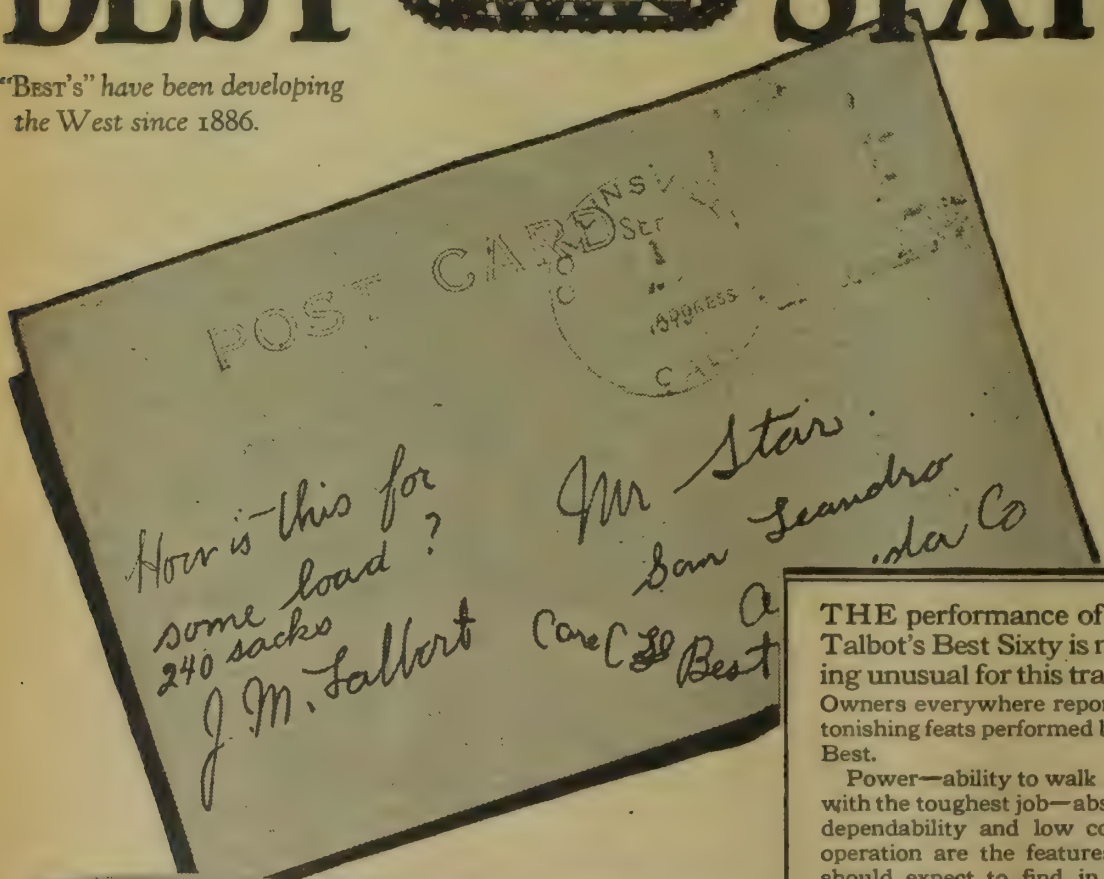

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General Agricultural and Horticultural Review

AGRICULTURAL NOTES.

To July 2 the shipment of contaloupes from Imperial Valley amounted to 7,076 cars, against 6,660 at the same date, 1919.

The cantaloupe fields of the Turlock district will be starting some express shipments by the 10th or 12th of July if all goes well.

The cantaloupe situation in the Porterville district looks well for a good crop. Growers should make a generous profit on their output.

With some crops running fifty sacks and most of it forty sacks, barley growers on the Holland Tract are said to be making money this year.

A fire burned about 2,000 acres in the Mormon Island district near Folsom last Saturday. No buildings were destroyed, but hay and fences were burned.

The production of rice in the United States has been steadily increasing, with the result that the export trade is becoming a factor in the markets of the world.

Many farmers of the Willows section of Glenn county are shipping large quantities of baled hay to San Francisco for which thev are realizing $25 to $30 per ton.

From all indications the Alameda Sugar Company will resume operations at its local sugar factory some time in August. About 25,000 tons will be handled.

First irrigation of potatoes should be made when plants begin to bloom. This allows them to take deep root. Darkening of the leaves is an indication that water is needed.

At the present time twenty-five cars of fresh fruit are going from Newcastle daily. It is expected that fifty or sixty cars will be going out daily when the season is at its height.

Arizona's cotton acreage is double that of last year, being 241,000, as against 112,000 acres in 1919. The condition of the crop July 1 was 80 per cent, compared with 93 per cent a year ago.

Provided ample water can be developed for rice culture, Northern California people recently filing on lands in the Jungo section expected to raise rice, says a dispatch from Winnemucca, Nev.

The hay crop in San Benito County has been harvested, but little has been sold. Producers do not understand why, in view of the shortage, buyers are scarce and offer only $25 per ton for good grain hay.

Wheatland hop growers are looking for a successful year as the growing vines are making good growth and sending out the long arms that mean many hops to the vine with a corresponding increase in the weight.

The hay crop in the Livermore section is about half of normal, barley making a fairly good one while wheat was poor. So far very little has been sold and prices offered range from $25 for barley to $32 to $35 for No. 1 wheat.

The barley yield this year for the entire Sutter Basin district is estimated at 1,000,000 sacks and about 75,000 sacks of the new Mariout barley will be held for seed, as it has proved to be a big dry-weather producer.

Green feed is essential to heavy protracted, economical milk flow, and the silo is essential to a year-round green-feed supply at minimum cost, and all progressive farmers finding the need of such are fast, constructing the latest types in silos.

Half a bale per acre will be the cotton yield in California this year, according to E. E. Kaufman, field agent of the Bureau of Crop Estimates of the Dept. of Agriculture. The condition of this year's crop is 83 per cent compared with 99 per cent last year at this time, and a ten-year average of 96 per cent.

Alfalfa prices are too high for grinding and shipping East, therefore California will have to use her own alfalfa with the prospect of prices being no higher.

The latest reports on the hay crop are to the effect that grain hay will be fully as plentiful as last year owing to the extra hay from grain cut for forage rather than the cereal.

Recent immigrants from Europe will not help the farmer as less than 5 per cent signified a willingness to work on farms. This is taken from official figures compiled at the port of New York.

In saving seed potatoes, it is well to select seed from hills that are above the average in production and resistant to disease. With beans and peas the pods free from discoloration makes it possible to secure strains which are not diseased.

Santa Rosa hop dealers estimate the 1920 hop crop in California at 73,000 bales, about three-quarters of which have been contracted for. Advices state that the hop crop in England is now seriously affected with vermin and that hops will be short there.

The record of $4 a bushel was obtained on the floor of the Chamber of Commerce July for the first new wheat to reach Baltimore. The first receipts came from Virginia. First arrivals last year came on June 19, also from Virginia and sold for $2.75 a bushel.

J. T. Compton, a farmer blacksmith of Tipton, Cal., has invented a one-man scraper for small tractors that he claims will do as much work as three men and twelve horses with Fresno scrapers and do a much better job. He has turned over the distribution throughout the Western States to the Woodward Company of Fresno.

The Nebraska College of Agriculture estimates rodent and insect pests cost farmers of the State $5,000,000 annually. Pocket gophers alone cost eastern Nebraska counties from $75,000 to $100,000 annually. A campaign conducted by the college last year rid 31,000 acres of prairie dogs. A million and a half pounds of bait were used in Scott's Bluff county to poison grasshoppers last year.

The new Mariout barley introduced by the State Experiment station has had a wide distribution in California in 1920. A recent census by the University Farm shows 40,000 acres to have been grown by 400 growers in 25 counties of the State. Comments received from growers in various parts of the State show that it is making new friends and that it will, in all probability, replace the common barley over large areas to which it is adapted just as it has in Yolo and Solano counties.

A cotton crop of 11,450,000 bales was forecast July 2 by the U. S. Dept of Agriculture, basing its estimate on the condition of the crop June 25, which was 70.7 per cent of a normal, and in the area under cultivation on that date, which was announced as 35,504,000 acres. California's estimate is 278,000 acres and condition 83 per cent, being a 50 per cent increase over the 1919 planting of 185,000 acres. Ten million acres of wheat were planted. The estimate of the current crop remains at 110,000,000 bushels.

Fifty per cent of the amount due farmers out of the profit made by the Canadian Wheat Board will be paid on or after July 15, according to an announcement in the House of Commons at Ottawa. It was estimated that the excess on the original price would be at least 40 cents a bushel, and that the payments to wheat growers would not be less than half that amount. The balance will be payable when the marketing of last year's crop has been completed. Several million bushels remain for disposition by the board.

HORTICULTURAL JOTTINGS.

Elberta peaches will not begin moving for three weeks yet.

The prune crop in the Campbell district is a bumper, exceeding that of last year.

It is expected that carload shipments of grapes from the Dinuba section will be moving by July 15.

It is reported that 1,000 tons of 'cots were contracted for in San Benito last week at $100 per ton.

Apricots in the Pajaro Valley are ripening slowly. Picking will begin in about a week. The crop will be small this year.

The first carload of pears from the New England orchard of Howard Reed was shipped from Marysville last week for New York.

More than 600 women are now being employed at the California Cooperative Canneries at San Jose, running on cherries and apricots.

The deadly phylloxera has been discovered in a vineyard near Newcastle, it being the second discovery of that pest in Placer County recently.

The Miller Fruit Company will erect a $200,000 dehydrating plant at Lodi, it is reported. It will be used for drying and preserving fruits, nuts, vegetables.

Representatives of Santa Clara County fruit drying plants have decided that driers should charge $12 per ton for drying prunes and $21 and pits per green ton for apricots.

Indications are for a fine crop of prunes in the Santa Clara Valey and around Hollister this season. Many of the orchards have already been propped that the trees may carry their loads.

The highest price obtained for any Napa Valley cherries this year was received by Nathan Coombs, who got $5.05 per box for the Bing cherries from his orchard that were sold in Boston in June.

Reports from various sections indicate that the recent hot weather caused considerable damage to the apricot crop in the Sacramento Valley, some of the growers putting the damage as high as 15 per cent.

Speaking of the June drop in citrus orchards this season, Dr. Boncquet said he did not think it so general as last year, and that where sulphuric acid had been used last fall the drop was very light.

The Sutter County Farm Bureau has decided on a contest which will be conducted among local peach growers. Prizes will be awarded on three points, tonnage per acre, quality and condition of the orchard after harvest.

California will have a normal walnut crop this year, according to a survey recently completed by officials of the California Walnut Growers' Association. The crop is 80 per cent of that of last year, though it is expected that the size will be much larger.

The campaign to organize the fig growers with the peach association is meeting with gratifying support. Fig growers over the entire state are becoming interested in the organization. Under consolidation each commodity will be handled independent of the other.

Yuba City Cannery has announced the cannery would handle 14,000 tons of peaches this year and will employ between 500 and 600 people. The cannery has been remodeled and equipped with new machinery to handle the large crop of cling peaches in that section.

A convention of the fruit workers of the Pacific Coast will be held in Fresno in September for the purpose of perfecting an international organization of the various locals under a single head, according to Charles P. Taylor, organizer for the American Federation of Labor.

Butte county has blossomed out as a commercial fig-producing section. Why not? It has both soil and climate well adapted to fig culture, and as the fig is becoming more popular each year there will be no mistake in planting figs wherever conditions permit of it.

The "June drop" in citrus orchards around Lindsay is at hand though overdue. Growers had hoped that the oranges were so well set there would be no drop this year, but a good many have fallen since the hot spell some time ago. However, the yield promises to be normal in spite of the drop.

Cider manufacturers say that laws forbidding alcohol in cider render it almost impossible to stay within legal limits. Within only a few days after its manufacture fermentation progresses far enough to make the alcohol content greater than the one-half of one per cent permitted by the federal law.

The apricot crop in the section around Hollister will be about 50 per cent of normal, it being very spotted. Some orchards have practically no fruit, while in others most of the trees seem to be well loaded. The season is late there, and the bulk of the harvest will not be ready till the latter part of July.

Two thousand tons or more of green apricots were purchased at $100 a ton last week by the California Packing Corporation, acording to reports of the California Prune and Apricot Growers' Association. The California Fruit Growers, Inc., have established a price of $110 per ton and are said to be booking orders at that figure.

The wage scale of $4.60 for an eight-hour day for all adult male employees of fruit and vegetable canneries and dried fruit plants of California, announced by the Industrial Welfare Commission of California, is effective from June 1, 1920, to January 1, 1921. The commission was named by Governor Stephens at the request of both employers and employees in these industries.

Fruit Growers and Shippers of Placer County last week held a meeting at Newcastle with a view to improving the production of plums in that county, which has been declining the past few years. It was decided to make an effort to induce the State Department of Agriculture to establish a subexperimental station in Placer County to determine the causes of the shortage in plums.

W. R. Wilkinson of St. Louis, vice-chairman of the Missouri State Board of Agriculture, sent a telegram to the platform committee of the Democratic National Convention urging a plank permitting farmers to make cider and light wines. Such a plank the telegram asserted would cause an exodus from the cities to the farms and thereby assist in reducing the living cost. But it wasn't "put over."

Lug boxes and picking boxes have been recently weighed at packing houses and ranches in Fresno county by Sealer F. B. Johnson. The average of a representative number is established as the tare weight of all in that lot. Picking boxes which have customarily been tared at eight pounds were frequently found taring seven to seven and one-fourth pounds. Farmers have not realized the extent of their losses, due to incorrect wights.

Shipment of California deciduous fruits for the season of 1920, up to June 28, were 1214 compared with 1346 for last season. Apricots show a shortage of 175¼ cars, due to disease and climatic conditions. Cherry shipments are little short; 172 cars against 185 last season. Plums, 621 cars against 622½ cars a year ago. Peach shipments are far ahead of last season; 201 cars against 152½. Last year neither pears nor figs had commenced to move East, while six cars of pears and three cars of figs had been shipped up to the above date.

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EDITORIAL

ASSISTED FARMERS.

DR. ELLWOOD MEAD of the University of California has written an excellent and timely book entitled, "Helping Men Own Farms," which has just been published by the Macmillan Company of New York. That it is excellent needs no proof—the authorship stands for that. That it is timely is assured by the fact that California has engendered a new plan of promoting agriculture and all the benefits which a prosperous agricultural ownership imparts to a sound and enduring national society and civilization, and is now trying to decide how far and in what ways such a plan shall be carried under State provision and patronage. Therefore, as the plan is in process of demonstration and application, it is timely that Californians should have such an exposition of the plan and its entry upon demonstration which this book presents. Furthermore, as the leadership of California in this matter is attracting attention and imitation, not only in other States, but in the Congress of the United States, it is timely that the whole American people should know the principles upon which the California demonstration is proceeding and the policies which are believed to be essential to its attainment of sound and enduring social and industrial success. It is also important that all should know and understand the basis of European thought and experience which underlies the demonstrations in Australia which Dr. Mead projected and worked out and the attitudes of the public mind, which provided for them and rejoices in the success thus far attained. For all these reasons the book is timely and will exert a beneficent influence.

HOW FAR SHOULD THE STATE ASSIST?

Dr. Mead's book gives most concrete and clear illustrations of the conviction that the State should not only protect the man upon the land from imposition by others and from mistakes due to his own ignorance and lack of agricultural judgment. His teaching of what he conceives to be public duty to the beginning farmer in the ways not only of instruction and advice, but of actually staking him with money for his undertaking (to be repaid by long-time, low-interest loans) is not abstract nor didactic, but is concrete and suggestive. The reader is lectured very little; he is invited to teach himself by object-lessons and to construct his own arguments. This plan of treatment, coupled with the clarity and apposition with which the concrete fact and its teachings are set forth, constitute the book, excellent in literary construction, and will endow it with great influence in the general discussion of the relation of the government toward promotion and protection of individual ventures in farming which should prevail in all organized efforts to promote the public welfare. In our view, Dr. Mead's positions are impregnable so far as they set forth the evils of the past in land-wasting by the Government and in land-grabbing by the last generation for speculative and not for productive purposes. They are impregnable also in exposition for impositions practiced upon land buyers by those conducting private and corporate subdivision-enterprises in the more recent past. They are impregnable also in their claim that the public owes it to its own sustenance and welfare, as well as to its convictions of morality and of fair play among its citizens, that the evils of the past must be rendered impossible in the future. He is right also in his conception that in this matter the public must protect itself. The question of the way in which such protection shall be realized, however, remains open, and it is that which we conceive it to be the duty of every citizen to carefully consider. Dr. Mead's attitude evidently is that to escape the evils of past private "promotion," in the way of "helping men own farms," the State must assume a real promotion—honest, practically wise, and humane. He clearly has the conviction that protection of people from greed and imposition cannot comprise all that is necessary in "helping men to own farms"; that blue-sky laws to safeguard individual efforts and undertakings will not be enough to build up rural prosperity and render idle lands useful; that if the State wishes this done it must do it itself. He cites with interesting detail the undertaking at Durham, showing that it is paying its way, that settlers' installments have been met as they came due, that a notable, unearned increment in land value has gone to the settlers; that they have all paid their taxes, and by their improvements, possession of high-class livestock, development of social spirit and pleasures, they have added greatly to the resources and attractiveness of the county. It certainly does seem to show that when the State buys, improves, irrigates and subdivides good land and coaches the settlers with farming wisdom and paternalizes them in all desirable ways, it can make confident and satisfied farmers out of qualified young persons who might never otherwise get to the land. Dr. Mead's book may therefore be taken as a demonstration that the line of State work which it describes and analyzes will come through to the advantage of the rising generation by its products, whether the advantage be counted to the credit of the producer or the consumer of such assisted productions. The only question then which seems to remain open is this: whose job is it to do it?

MONEY-BACK CALIFORNIA.

The local reason why we consider Dr. Mead's book concrete and timely is because California voters will be called upon this fall to vote upon whether or not they will bond the State to the extent of ten millions to continue and expand he work of the Land Settlement Board, so that the State shall proceed from its demonstration of how to help men to farms, which was the intention at the beginning, to the actually doing of the helping itself. In other words, perhaps, the people will have a chance to vote whether they will graduate from the educational phase of the subject and get down to actual work in State building, or, in other words still, shall the State, having graduated with honor from its theoretical course, marry itself to practice and settle down to raising families of assisted farmers to whatever extent the people are willing to vote millions for the "wedding portions" of the bride. Dr. Mead's book is an exposition of reasons why it should do this, because it is the best way to get good families on good land and keep them there for their own happiness and prosperity and for the incalculably vast benefit to the State from such a population and from such profitable use of land. And a secondary reason is that the demonstration has been made, as far as possible with the present lapse of time, that such settlement will not only return to the State such great indirect advantages as have been cited, but will ultimately return to the State all the money it invests in the enterprise, together with it the interest thereon. Of course, one doubt of the plan lies in the possibility that the mature people who help to pay the interest on these millions of bonds from the savings of their active lives now past may not live long enough to collect the money which will come back later to recoup them for what immediate interest and overhead may require them to put up. There are two ways of looking at that sad contingency: one is, that it may never arise, because in their financing the board may be able to charge enough added value to the land which it improves and subdivides to cover all interest accumulations, improvement costs and overhead expenditure, and thus make the cost nothing to the voting public, which in this case becomes merely the endorser for the State in its development enterprise. The Durham colony experience seems to justify just this anticipation. Another way to look at the uncovered cost, if there should be any, is that the taxes to pay appropriations or other provisions will be an investment in State development of a most desirable kind, which will give the children and grandchildren of those who pay such taxes a better place to live and a better life to live in it. Therefore, if the money does not come back by never going out, it will come back at once to all who can now enjoy the foresight of a grander California, as the film of the imagination throws it on the screen of the future.

BOOT-STRAP UPLIFT OF FARMING.

There is, however, one reservation to this league with the future which concerns us. It is this: Is it fair to make farming bear the burden of getting more farming? This is the fundamental objection to all schemes for assisting or endowing farming on the financial or business side thereof. Whether they move by appropriation or by bonding, farming has to pay something less than half the cost of them, and therefore pays a considerable amount of money to promote competition with itself. We doubt if those giving their lives and having their investments in city properties and activities would care for State promotion of competition with them. And yet it is not more reasonable to require State aid in the business of farming than it is in the business of cobbling—except, perhaps, that the body politic cannot live with its stomach empty, although it may manage to stump along barefoot. But is the fact that farming is indispensable any argument that farming must be taxed to secure more farming? Is it not rather an argument that if the State is to be taxed to secure more farming, non-farming capital and industry should bear the burden of such promotion? Taxing farming to secure more farming seems to us like trying to lift one's self by the boot-straps—the harder one pulls the more he bears down—that is, it seems so, but we are not sure that gravity notices it. At any rate, it is a fact that, by whatever amount you reduce the farmers' savings by taxation, by the same amount you reduce his capital available for improvements and investments, which increase his production and lessen the cost of it. If, then, the farmer's dislike of having his money taken to increase competition in his line of production be passed over as grouch on his part, there remains the other fact that, to accomplish the end which the non-farming public may be conceived to hold in view, the way to get more farming is to capitalize and promote it with money not taken from farming, but from the free capital, which is seeking any kind of an interest-paying investment.

THE STATE HAS SHOWN THE WAY.

It seems to us that the greatest way in which Dr. Mead's work of the last few years, leading to the Land Settlement Act of 1917 and to the successful working out of it since then, will be in the educational line—covering the conception of principles involved and the embodiment of them in concrete accomplishment. If the ten millions of bonds should be voted by the people and the work of the Board advanced to such more abundant demonstration, it will not be the achievements of the few score of farmers who are thus placed in successful action, which will measure the results of the idea and enterprise. Far more important and extended than whatever the State can directly do must be the example of the policies and methods which are shown to be sound and practicable. These are not obscure nor intricate, and the landowners and capitalists can easily get together to apply them to all the good land and water in the State. They show how the land must be made ready for the beginning farmer, how the beginning farmer must be made ready for the land and how the two can be kept in mutual operation. Evidently all parties involved are eager for it. When the Board announced its desire to buy land for a colony it had offers of 80 tracts varying in area

from 4,000 to 12,000 acres each, and when it announced that the land was ready for settlers, more than 3,000 applications were recorded. There is really no reason known to us why land-owners, capitalists and settlers cannot get together and accomplish development and settlement in a fair and righteous way if they desire to do so. And this way is not the old way in which greed, gambling and imposition were too prominent, and in which unfit land was wished upon persons whose only qualification for farmers was to make a first payment or run a good enough bluff towards it. Of course such settlement schemes not only brought misery and disappointment to misguided persons, but gave the business a very bad name with capitalists who furnished the funds to set them going. Whatever, then, may be the popular conviction as to the length the State should go in the actual operation of placing qualified people on good land, there remains the assurance that the State has shown the way, and if the Land Settlement Board should never go beyond the two colonies which it now has in operation, it has already rendered a public service of vast and lasting advantage to the State and beyond, and Dr. Mead, the leader of the movement, is justified in writing the philosophy and practice of it.

QUERIES AND REPLIES

By the Editor.

Inquirers Must Give Full Name and Address.
Answered questions also on other pages.

Fertilizing Loganberries.

To the Editor: What are the elements of which the loganberry takes most out of the soil—and could some be returned in the form of some commercial fertilizer? The soil of my patch is very rich, yet the vines look poor. My theory is that the berries take one or more elements out of the ground, and if some were replaced the vines would make a more vigorous growth and live longer.—J. L. F., Sebastopol.

If you are right in believing that your soil is very rich, the chances are that more water is what it chiefly needs to give better growth of plants. Theories of special fertilization are very abundant and the one you have conceived of is very old, but though most careful analyses of the soil and of the plant and its fruit have been made, there has never been demonstration reached that it is a sufficient rule of faith and practice—nor has it been demonstrated that particular fertilizing substances do particular things to the plant. The best thing to do is to try things comparatively on the same pieces of land because such a test includes the things and conditions which determine the service of the applications which are made—thus ruling out variables between different pieces of land which have killed so many theories. In your case, apply to one row a complete fertilizer, which any dealer will furnish you, at the rate of 500 pounds to the acre; skip two rows and to the next one apply nitrate of soda, at the rate of 200 pounds per acre; skip two rows and to the next one apply superphosphate at the rate of 300 pounds per acre. Make the applications just after growth starts in the spring. Note the crop of each of the fertilized rows as compared with the unfertilized and with the crop of the distant parts of the field, and you may find out what to do in the future.

Kinds of Peaches and Kinds of Buds.

To the Editor: Are clingstone peaches generally more profitable than drying peaches? If so, is it only advisable to plant drying peaches where one lives too far from a cannery to make hauling profitable? In budding trees, is there any danger of getting buds that will make blossoms but not wood growth.—L. A. W., Modesto.

Clingstone peaches are drying peaches; unless they can be sold profitably to canners or shippers they are dried, and they make a heavy dried fruit of high quality. Both freestone and cling peaches are canned and both are also dried. Clings are harder to pit, but not enough harder to prevent one who has a good wrist and a good tool knife, and knows how to handle them to prevent their use that way. Your reasoning about the desirability of planting drying peaches when too far to haul profitably is good, but you are dividing peaches into classes which do not exist. If, however, you prefer to handle freestones, you should plant them. There is not much danger of getting bloom buds in summer budding, for the wood buds develop first and have the lead. There is more danger of course in grafting, which is done in the winter, when the tree has both wood and bloom buds fully developed.

Spraying for Jackrabbits.

To the Editor: The jackrabbits are eating my grapevines. Is there any spray that will stop them? I have tried Paris green, 1 to 80 gallons of water. Would it hurt the vines any if I made it three or four times stronger?—H. M., Caruthers.

We have not much faith in poison spraying for jackrabbits, because it takes so much sprayed foliage to kill one. Besides the leaves are so sensitive to Paris green that we should not care to make the dose any stronger. You can use much more lead arsenate with safety to the leaves than you can Paris green, but the only really good way to get lead into a rabbit is with a rifle. The safest way to make foliage distasteful to a rabbit is to spray it with commercial aloes—one pound to five gallons of water. The beast does not like to take its bitters that way. But that is very expensive on a large scale. Rabbit drives in a district, and a greyhound and a gun on individual places, seem the best treatments for them.

Symptoms but Not Demonstrations.

To the Editor: What is the cause of my raspberry canes dying? They start to wilt at the tips and finally die; also my apricot trees. I send you small tips. I have lost about six in a small orchard. Most of the trees are doing well. Last season some died he same way. I sprayed twice with lime-sulphur.—J. E. B., Modesto.

The tips show symptoms, but do not contain demonstrations of causes. Presumably the behavior of the raspberry canes is caused by a cane-borer—a small larva which might be found below the parts you send. In such cases the cane should be cut below the wilting and burned as soon as seen. The apricot leaves are dying back from the edges and finally perishing because something in the soil does not allow adequate root action. It might be lack of moisture, or presence of alkali, or something else in the immediate spot which stops root development. The specimens do not show specific disease.

Woolly Aphis on Apple.

To the Editor: I am sending some roots from apple trees. They seem to be covered with a white mildew and the earth around them also seems to contain some of it. Is it woolly aphis or some other disease, and what is the remedy for it?—H. F. R., Dos Rios.

Yes; it is woolly aphis. The whitish material is the woolly growth the small pest carries on his back. The other indication of the pest is the knotted condition of the small roots. The summer treatment is spraying with one pound of tobacco extract (40 per cent) added to each 200 gallons of the lead arsenate you use for the codling moth to catch the insect on the top of the tree. For the root form, uncover the main roots during the winter and pour in a solution made of one pint tobacco extract and five pounds of fish oil soap to 200 gallons of water; or cover the roots with tobacco refuse, replace the soil and let the rains leach out the juice to kill the pest.

Fruits of High Water Table.

To the Editor: I have some low-lying sandy land in which the water level might possibly come within 2½ feet of the surface. Would apricots or peaches on Myrobalan roots thrive in such conditions? Is there any other fruit adapted to such conditions?—H. M., Caruthers.

Myrobalan roots are no longer used for peaches; experience with them some years ago was not satisfactory. Apricots take myrobalan much better and are considerably grown that way. Pears on French roots seem to stand high water better than other fruits, but we should not care to plant any fruits on a commercial scale on such land. If it is a matter of a home orchard, plant whatever you fancy and see what happens to it. Once in a while one gets a tip for larger planting that way, or he learns to stay out, and both things are profitable to know.

New Trees in Old Places.

To the Editor: In replanting trees in old apple orchards, where the trees have died, is it well to replant in the same holes?—R. G., Watsonville.

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If the land is to be wholly cleared and replanted it would be desirable to lay out the rows on new lines so the trees would occupy middle ground between the places of the old trees. In filling gaps in old rows which are to remain, there is no choice. To get a fair share of light and space the new tree must go in the old place. In that case a large hole should be dug, the old earth scattered, and the holes filled with new soil from a distant field, if possible, and the tree planted in it. It is also well to help the new tree by spreading manure on top of the ground after planting and by giving it some water during its first summer. It is rather hard to start new trees between old ones, and young ones must be given some advantage or they may not amount to much.

Irrigating Walnuts.

To the Editor: Will you kindly tell me how often walnut trees should be irrigated in Santa Clara county.—Subscriber, San Jose.

No one can tell you that. There are some soils in the Santa Clara valley where no irrigation at all will be necessary, except perhaps in the winter, to make up for a short rainfall. There are other soils which are gravel all the way down and where walnuts will need to be irrigated once a month nearly all the year around to keep them from dieback—and even that may not do it. On deep, retentive soils in the valley one good irrigation in July or August of about four acre-inches of water ought to be enough. Between the conditions named irrigation must be applied in times and amounts varying with the soil and the character of the season. Some note of conditions to be met by irrigation was given in answer to a question in our issue of June 26 last.

Wild or Capri Figs.

To the Editor: I send a sample of figs. What is the reason they do not mature, and what is the remedy? The tree is not very old and has never had any ripe figs on it, and now has lots of figs like the sample; also a second crop set on.—N. A. L., Mokelumne Hill.

They are wild or capri figs and are inedible. Their function is to raise blastophagas to pollinate or caprify the Smyrna, but if they are inhabited we cannot discover the inhabitants. If they are populated by the fig insects the crop of figs might be of some value to sell to Smyrna growers in the valley to carry the bugs to make their crops stay on and mature, but the tree itself cannot produce anything which will be good to eat.

San Jose Scale on Peach.

To the Editor: I send a piece of the limb of a peach tree which has some kind of a scale and acts as if it might kill the trees. What is the treatment and when the best time to use it?—A. B., Monrovia.

You are right; the tree seems on the point of being killed by the San Jose scale—if you sample represents the whole of it. All you can do now is to irrigate reasonably so as to encourage activity in the tissues. After the leaves fall next winter cut back considerably, saving the newest wood, and spray thoroughly with lime-sulphur (one to ten).

CALIFORNIA WEATHER RECORD

The following rainfall and temperature record is furnished the Pacific Rural Press by the United States Department of Agricultural Weather Bureau at San Francisco for the week ending July 5, 1920.

Stations—	Rainfall: Past Week (July 1)	Rainfall: Seasons To Date (From July 1)	Rainfall: Normal To Date	Temperature: Highest	Temperature: Lowest
Eureka	.02	.02	.03	64	50
Red Bluff	.01	.01	.00	104	58
Sacramento	.00	.00	.00	98	54
San Francisco	.00	.00	.00	68	51
San Jose	.00	.00	.00	84	52
Fresno	.00	.00	.00	100	58
San Luis Obispo	.00	.00	.01	82	48
Los Angeles	.00	.00	.00	80	56
San Diego	.00	.00	.00	72	58
Winnemucca	.40	.00	.05	92	46
Reno	1.66	.00	.02	90	46
Tonopah	.04	.00	.05	86	42

Great California Acreage to Be Reclaimed

Written for Pacific Rural Press by R. E. Hodges.

THE richest land in California has too much water on it. By the irony of human accomplishment, old ocean bears safely on her bosom the instruments by which irons are struck into her depths and part of her domain is taken from her. About 50,000 acres around Suisun Bay and 70,000 acres around San Pablo Bay have been or will be reclaimed.

Twenty-five dollars an acre is the present cost of leveeing and ditching the marsh lands bordering the salt water of Suisun, San Pablo and San Francisco bays, according to President Wm. Gottschalk of the Dutton Dredge Co., speaking of the average reclamation. Mr. Gottschalk has had experience at reclamation nearly a score of years and his company has reclaimed not only a great deal of land for other parties, but is now operating ranches of its own in Napa and Marin counties, formerly submerged at high tide and producing only tules and the salt marsh vegetation.

Wheat Grows on Salt Marsh.

On their Green Island ranch bordering the Napa river wheat is today growing so rank and heavy with grain that it has been left to harvest, though it was intended for hay. Wheat was planted this year for the first time because it was deemed likely that by this time enough of the salt had drained away to make the soil good enough for wheat. Experimental beans, potatoes, and corn are also doing well on this ranch. Red oats endure more salt; and they have been planted for hay in previous seasons, yielding as high as five tons per acre.

Fencing the Ocean Out.

This reclamation, which now includes 2,500 acres, was started in 1914. Levees were thrown up and drainage ditches dug as fast as the available dredges could get it done. Peculiarly, but very necessary to know, the foundation under this land is not strong enough to support a complete new levee. As Captain Gottschalk points out, the dredgerman who would complete a new levee while he is at it would probably ruin the foundation for all future years. One broad basic foundation layer must be laid along the line of the proposed levee and allowed to solidify and pack itself well before adding another layer. As each layer is built up, its weight is distributed over weak spots by the mat of the well-settled foundation layer; and if done judiciously there will be no squeezing outward of the underlying mud. On the Green Island ranch, the foundation layer is 50 feet wide. The levee had to be built up high enough to keep off the salt water, which rises about three feet above the land level here.

Draining the Salt Out.

No injurious wave action is noted and gophers do not enjoy operating in the levees on account of tides. No drainage ditches were dug the first two years after leveeing, as the natural sloughs served fairly well. About ten miles of drainage ditches have since been constructed for better service and to replace sloughs, which gradually fill up. The canals are 18 feet wide and six to eight feet deep. Excavations with suitable-sized clamshell dredgers costs 8 cents per cubic yard or about $1690 per mile. At the rate of four miles per 1000 acres the ditching has cost about $6.76 per acre. More ditches are being put in, so final cost will total about $10 per acre. The ditches thus far average over a third of a mile apart and if the soil were not full of vegetation, it would require lateral ditches for drainage into these canals. As it is, the water level most anywhere on the tract is four or five feet down.

Drain Gates Open at Low Tide.

Here it is not necessary to pump water over the levees for drainage nor to siphon it in for irrigation. Automatic gates are installed at the outlets of the ditches. Iron culverts three feet in diameter are laid at the level of the ditch-bottom to carry water under the levees. At low tide the water drains through these culverts by gravity. At each end of the culvert is hung a well-balanced iron gate, weighing in the neighborhood of a thousand pounds. Wooden gates proved unsatisfactory. The inner gate is left open when the ranch is to be drained. The outer one slides on rollers a short distance from the end of the culvert on projecting arms and swings freely to permit the outrush of water. When the rush is checked by rising tide, the gate rolls back to place, excluding the salt water. Rainfall furnishes most of the water drained off; and it has carried a great deal of the original salt with it.

Rain and River for Fresh Water.

Now in a normal season, there is enough water in the Napa river to dam back the salt water at high tide (or the salt water dams fresh water high enough) to permit the gates to be opened for entrance of fresh water from the river for irrigation. The canals being filled subirrigate or may even flood the land. But this season fresh water was so low that only salt water would have entered the gates. When fresh water is admitted, however, the gates at inner ends of the culverts are let down so they swing open, due to pressure of water entering the canals, but those at the lower ends of canals swing shut. Such irrigation helps wash the salt out, for it is drained off by gravity whenever desirable.

This is only one of many projects around San Francisco Bay and its tributaries and along the entire sea coast of America, where salty soil has been reclaimed from ocean's waste and has proved rich far beyond the ordinary farm land so soon as the salt is washed out.

Drained Soggy Ranch with Tile.

But there is a great deal of other land in the State not overflowed generally but receiving drainage from higher land nearby to such an extent that ordinary crops do not thrive and the soil may become sour. Certainly it is soggy and cannot warm up to the temperature required for best growth of most crops. Circulation of air in the soil due to varying barometric pressures above it is necessary for the bacterial life that makes plant foods available. Most plants which endure cold soggy ground are not much valuable to mankind; but they monopolize areas that would be exceedingly rich and productive if the excess water were drained off San Joaquin Valley tule ponds, for instance.

Since pear trees endure more moisture in soil than most fruits, we find a big pear district at the southern end of San Francisco Bay. Many of the ranchers here have learned the increased growth and production that follow tile drainage. One of these is a man who prefers his name not to be mentioned. He put tile on a 50-acre pear orchard a year ago. No remarkable transformation in tree growth is noted, but both he and a neighbor grew good melilotus cover crops last winter though they were planted dry and late on adobe soil.

Irrigation Aided by Drainage.

The most noticeable feature of this piece of drainage that has shown up within the year is connected with irrigation. The orchard is 1,340 feet long, sloping three feet from south to north. It takes six hours or more for 125 gallons per minute to cross in one furrow. Lines of four-inch tile were laid four feet deep and 96 feet between lines almost the full length of the orchard. At the end of each line is an "observation well" three feet in diameter. The observation wells are connected by a line of eight-inch tile, which empties into a nearby creek. During irrigation, the outlet is closed to hold all the water.

The irrigation head is about 500 gallons per minute. It is run through furrows the full 1340 feet—a long run during which the upper end naturally would get more than enough water before the lower end would get any. Too much water is a painful waste of pump capacity, and it discourages trees. This inequality of soaking between the upper and lower ends is neutralized on the tile-drained ranch. The surplus at the head of the orchard goes into the tile, leaving the soil as moist as the trees desire, but with plenty of air circulation to warm it and keep soil-life busy. As irrigation progresses across the orchard the excess water fills the eight-inch intersecting tile and backs up into the lower four-inch lines. It can get out of them as easily as it could get in; so within 24 hours after water is turned on at the upper corner of the orchard, its lower end is already pretty well subirrigated. This is very noticeable in the rapid spread of irrigation water at the lower end of the orchard, as compared with the upper ends of the furrows. By this system the upper end gets thoroughly irrigated without damage by the excess and the lower end is as thoroughly soaked by subirrigation.

Water Table Reduced Roots.

Drainage in this orchard has probably doubled the cubic acres in which the trees can feed. Before drainage, the water table was found at a varying depth, its upper limit being about the lower limit of root feeding. The tile will correct that condition in any year of normal rainfall; though it was not necessary for that purpose last year; for free water was not found by boring in August until the auger struck a vein of sand 4½ to 5 feet down. But this combination of irrigation and drainage to save water and to correct the inequalities of the former is a permanent improvement of unmeasured value.

Black Alkali Problem.

Draining sea-salt from the land was mentioned earlier in this article. It has proved feasible on the theory that excess water dissolves salt, and if it is then drained away through tile or open ditches, the proportion is reduced to a non-injurious point. That much has been proved on the Kearney Ranch of the University of California in Fresno county in several years' experiments carried out under the engineering direction of Prof. W. W. Weir. The so-called "white alkalies," sodium sulphate and sodium chloride, have washed out well.

But black alkali, sodium carbonate, presents a different problem. Though readily soluble, it puts the soil into such a puddled condition that water does not drain off readily. If the land is flooded, carrying the black alkali down below the root-feeding area, or distributing it through so much soil that its proportion to the total soil is harmless, the land is thus reclaimed. A great deal of such reclamation has proved only temporary. Whenever the water table gets within a few feet of the surface in summer time, say, five or six or seven feet in light sandy loam, such as characterizes the Kearney Ranch, some of it rises to the surface and evaporates, leaving the alkali concentrated at the surface. There it burns off the green plant seedlings.

Nearly 40 years ago Dr. Hilgard of the University of California warned the people in certain Fresno territory regarding their alkali problems. In 1892 the U. S. Department of Agriculture sent a man to this territory to study it. From this study the Bureau of Drainage Investigations originated; and efforts to solve the black alkali problem have cost much time and money since then. The U. S. Bureau of Soils has also experimented for a solution. When the University of California tackled the problem, they selected what was probably the worst quarter-section in the thousands of acres on the Kearney ranch. Theodore Kearney had planted grapevines here in the early days. The vines were taken out a few years later, possibly because they did not do well. Alfalfa was planted; but after a few years this was plowed out and the piece was planted to barley. It produced a little hay and pasture thereafter. The crop from 160 acres in 1912 was about 32 tons of hay, mostly weeds.

Black Alkali Resisted Washing.

That year, 24 test wells were installed at intervals of one-half mile one way and one mile the other, covering some 8,000 acres. Weekly readings were made of the depth to water table until 1916. It averaged less than six feet to water eight months of each year, the highest water table being found between June 15 and July 1 of each year at about two feet depth.

In 1913, 70 per cent of the alkali content of the soil was found to be of the white kinds and about 30 per cent of black alkali. It was entirely flooded a couple of weeks in 1914. This reduced the total alkali content 50 per cent; but 60 per cent of the remainder was black alkali. This indicated that the white salts washed out by flooding much more readily than the more injurious alkali. Another flooding in 1915 reduced the total alkali to 40 per cent of the original proportion and the remaining alkali was 62 per cent of the colored variety. That year the crop was 185 tons of barley hay on the 160 acres. This year the crop has not been weighed, but it is nearly equal to that of 1915.

Must Keep Water Table Down.

The water table in 1912 stood about two feet below the surface on this piece. In January, 1916, the water table was six feet down. In January, 1920, readings on the test wells were resumed, showing the water table ten feet down. Last week it was lower than at the same time of year since 1912, though it had been raised five feet since January by the extra early and extra heavy irrigation practiced all over this country this season.

Part of the lowering of the water table was due to the series of dry years which we hope will end this fall. It has been observable all over the big ranch; but on the quarter section where the experiments were conducted, it would have been much higher except for the system of tiling and the pump which disposes of the surplus.

Gypsum, Flooding and Drainage Hopeful.

Failure to solve the black alkali problem by all attempts heretofore has led to a restriction of the area allotted to this project. The Kearney Ranch is not an experiment farm. It must pay its expenses and a profit. Experiments are not allowed to cut too much into the profits. So only seven acres are now devoted to the alkali experiment. This area is subdivided into eighteen plots of 0.37 acre each, making a long strip two plots wide.

Down the center line of these double plots runs a twelve-inch tile, which extends entirely across the center of the field. Six-inch lateral tile lines lead into this main at intervals of 315 feet, draining the whole quarter-section. The main extends to a corner of the field where a centrifugal pump lifts the water out of a receiving pit, discharging into an irrigation ditch. The mains are about seven feet deep, the laterals slope upward slightly from that depth. We asked Mr. Weir if these tile drained the soil thoroughly at 315 feet apart. He said that the water table was only about a foot higher midway between tile lines than over them. In fact, he has designed a system of tiling a foot deeper and some farther apart for 4,000 acres of the ranch.

But with black alkali in the land, water certainly does not drain readily enough. Six of the double plots were treated late in June with gypsum at the rate of six tons per acre. Three

(Continued on page 46.)

DATE GROWING

A COMING CALIFORNIA INDUSTRY.

Written for Pacific Rural Press
by W. S. Killingsworth.

To use the vernacular of the street, some of our readers may ask, "Where did you get that stuff—growing dates in California?" Now that we have made the assertion we will prove that it is germane to the question in point. The date, as every one knows, is of foreign "extraction." As a matter of fact it is yet a question as to its nationality. Many claim it—from the Canary Islands to India. It has been cultivated and much prized throughout most of these regions from the remotest antiquity. In Arabia it is the chief source of national wealth, and its fruit forms the staple article of food in that country, the soil and climatic conditions of which compare most favorably with the great San Joaquin, Sacramento and Imperial Valleys of California.

For a number of years dates have been to a limited extent grown commercially in Imperial and Coachella Valleys, the dried product finding ready sale at $1 to $1.25 per pound. The main drawback to the industry is a lack of nursery stock to meet the demand. At present the cost of nursery stock is the highest item in establishing a date orchard. In time past the plants sold for as much as $25 each, they being offshoots of older trees. Even though this price may seem exorbitant, it will be but a short while before offshoots may be taken from the trees set out. When the life and bearing stage of a tree is taken into consideration, a few dollars more or less for young trees amounts to little. It is said that there are trees in the old country that have been producing for more than 200 years. The writer, when stationed in Spain a number of years ago, ate dates from trees known to be more than 100 years old—the trees were still heavy bearers, about 75 feet in height. The soil and climatic conditions at that point were very much the same as herein mentioned. We have secured photographs of bearing and non-bearing trees, which are here reproduced. From these and a continued description of how easily and under what conditions the date may be successfully raised, we feel that we are justified in saying that the date has a commercial future in California.

Canariensis. Dactylifera

The upper photograph was taken by W. R. Nutting, April 30, 1920, on the ranch of Nis Johnson, 1½ miles south of Reedley, where Mr. and Mrs. Austen are living. The Dactylifera has been bearing a large crop of fruit for six or eight years, all of which ripens every year. It has never been pollinated except, occasionally, a single date by bees or insects, and therefore has produced only small dates about the size of a Thompson Seedless grape, but of a dark purple or brown color. They are quite good to eat, though small, but are very attractive and useful to the chickens on the ranch, which have learned to hasten under the tree whenever anyone climbs it to pick or shake off the fruit.

The Canariensis in this view is a male tree, bearing only blossoms for pollination of its kind, and has not been used successfully to pollinate this Dactylifera, though in other places they have been successfully so used.

The lower photograph was taken in Hobart Park, Fresno, early in May, alongside the Santa Fe Railroad, a few blocks north of the Fresno depot. These palms were planted about ten years ago, but have made slow growth for their age, because of having had only the water used for sprinkling the lawn around them, while the grass absorbs most of the water. Either kind of palm will exist and grow slowly with extremely little water, and will grow rapidly with a free supply of water, but the soil must be well drained at intervals between the copious supplies of water.

Water Should Be Plentiful.

If a pool of water had been kept standing around these palms for two or three days each week during each summer, they would have grown perhaps ten times as high in the same length of time. That is, the Dactylifera would have grown very much taller, because with plenty of water, soil and warm climate, the Dactylifera palm will frequently grow a foot a year upward, but its trunk would not grow much larger in diameter. The trunk of the Dactylifera in the upper photograph is a fair representation of the usual Dactylifera trunk at about ten or twelve years old, and the trunks of the Canariensis in both the upper and lower pictures are typical representations of Canariensis trunks of that height. The Dactylifera trunk seldom grows much larger in diameter with increased age, but the Canariensis can often be seen in front of homes in any of our California cities as large around as a barrel, and sometimes as much as four or five feet in diameter. While young the Canariensis is much the more graceful and ornamental tree—as illustrated by the little palm in the center of the lower picture; but when the Canariensis trunk grows to be objectionably large, and its top spreads as wide as a house, and it obstructs the view from the house either across, up or down the street, it becomes more ponderous than graceful.

Date Bearing and Non-Bearing Palms.

A striking difference between the two trees is that the small side or pinnate leaves of the Canariensis are very much closer together on the main stem than the Dactylifera, and have a dark yellow-green color, while those of the Dactylifera are much less close together and are of a light shade of blue or gray-green. On the Dactylifera in the upper view, though a little of last year's fruit has been left hanging on the bunches, it is but a faint suggestion of the large crop that the tree has in October, November and December of each year. The suckers or offshoots at the base of this palm are being removed each year by a young farmer near Reedley (Mr. Benner), who is carefully preserving and planting them with the expectation of having in time a number of trees of this variety bearing fruit around his home. Though this is not large or choice fruit, it is a very attractive idea to have fruit-bearing palms ripening dates about one's house or garden for every-day home use.

These Dactylifera may be expected to go on growing up to 20, 40 or 75 feet high, in as many years, if plentifully watered, and to furnish an immense quantity of fruit for one's own lifetime, and then for one's children and grandchildren long afterward.

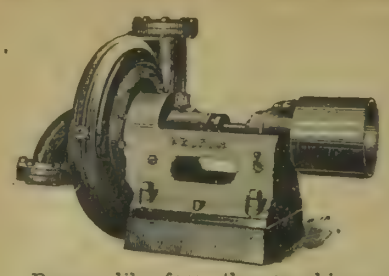
Plant More Date Palms.

Enterprising nurserymen have pushed out possibly a million ornamental palms of the Canariensis, Washingtonia (Fan Palm), and other varieties, all through California the past fifty years. Why not now plant a million or two of the Dactylifera species, and grow fruit for human beings, pigs, chickens, and other livestock, instead of only those to ornament and look pretty, raising nothing but their empty heads up in the air.

Dates are among the most valuable of all fruit-foods and these great warm valleys of central California have been called by high government authority the greatest area on earth where it is possible to grow dates.

The Rural Press first called for information on date growing in California as long ago as 1888, has published articles frequently during the 32 years since, and would now particularly like to hear from its readers throughout the Sacramento and San Joaquin Valleys and the warmer coast or foothill districts, about every Dactylifera bearing or ripening fruit, like those above illustrated and the famous old Wolfskill palms near Winters, twenty miles west of Sacramento, which has been bearing and ripening its crop for 42 years to our own knowledge.

Dactylifera. Canariensis. Canariensis.



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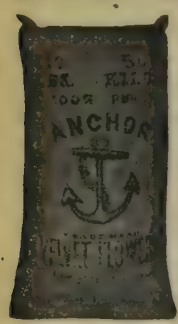

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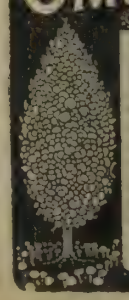

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Timely Work in the Orchard

(Written for Pacific Rural Press by W. S. Killingsworth.)

Watch for Peach Borer.

In the June 5 issue we called attention to the necessity of looking out for the peach borer, which should not be overlooked in districts where they are known to be annual visitors. Simply because the trees are carrying a healthy appearance is no evidence that the borer is not working secretly. It would be well to remove the earth from the trunk of a number of trees on each acre and make a careful investigation. Nothing may come of it but it's the old story—"An ounce of prevention," etc.

Irrigate Now, When Possible.

Now that we are "licking" up dust for the third season, it is useless to remind the grower of its disastrous effects, so wherever it is possible that water may be had for irrigation, whether a bountiful supply or not, trees that have been relieved of their crop, such as the cherry, early plums, peaches and apricots, should be irrigated at the earliest convenience, as there is still a long time to wait for moisture from a natural source. There is no disputing the fact that the ground is dry, the trees are sick, the buds for the next season's crop are developing slowly, and the foliage is dropping, hence all moisture that can be given should be applied at once, and as soon thereafter the ground should be well cultivated in order to prevent baking. This cultivation should continue as it holds the moisture.

Cutworms Demand Prompt Attention.

Cutworms are among the most troublesome insects the vineyardist and gardener have to deal with. They destroy millions of dollars' worth of crops annually. An effective poisoned bait, as a rule, has the desired effect. The following remedies have been successfully used in the garden: 1 ounce Paris green, 1¼ pounds of wheat bran, or ¼ of lemon or orange, ¼ pint syrup, 1 quart of water. For orchard, use 1 pound of Paris green, 20 pounds of wheat bran, 3 lemons or oranges, 3 pints syrup, 3½ gallons of water. Mix bran and Paris green dry, then stir in the lemon or orange and water, which has been previously mixed. Squeeze the juice from the fruit, then chop fine as in a meat chopper. Scatter along the rows or around the hills at night or early in the evenings, as the cutworms feed at night. Chickens should not be allowed where bait is distributed.

Destroy Brown Rot "Mummies."

This disease is a widespread fungous affection that attacks many of the stone fruits. It causes the fruit, or part of it, to rot before ripening. A familiar sight in the winter months in some peach orchards, as well as plums, is the "mummied" fruit, which still adheres to the branches. As the disease still hankers in this "carcass," the first step in the treatment of an orchard should be the burning of all such diseased fruit. The "mummies" should not be allowed to remain on the tree, but picked off and burned, and where there are any number on the ground they should be gathered up and burned. At least once during the winter the trees should be thoroughly sprayed with lime-sulphur solution. Soon after the blossom falls, spray again with lime-sulphur; then again with the same solution three weeks afterwards, and still again about a month before the fruit ripens. The first two spraying applications should have two pounds of arsenate of lead added to each 50 gallons of spray solution in order to control the curculio.

Cucumber Vine Target for Mildew.

The cucumber vine at the present time is a splendid target for mildew, which is a fungous affection causing the leaves to turn yellow or brown in spots. Spray with Bordeaux mixture three or four times at intervals of two weeks, making the first application when the vines are nearly half-grown.

Spray for Cabbage Aphis.

No garden, however small, escapes, at some time during the year, the cabbage aphis, or plant lice, so numerous during cool, dry weather. The best remedy is to spray with nicotine sulphate, 1 to 1000, with soap added as a spreader. Make soap suds first and then add nicotine.

Tuber Moth a Menace.

The mature insect is a moth which lays its eggs in both the tubers when in storage and the plant stems in the field, and it is fast distributing throughout the State and threatens to become one of the worst pests of all. Clean culture and the digging of all small potatoes at harvest will help eradicate the insect. Don't leave dug potatoes in the field overnight, and be careful to store in a non-infested warehouse.

Disinfection of Pruning Tools.

Where the pruning shear, saw or knife are used in connection with work in diseased portions of a tree or vine, and there is fear of inoculation, the tools should be disinfected as used. This is imperative where tools are used in the eradication of pear blight. Corrosive sublimate should be used as a disinfectant, diluted with 1,000 parts water, and don't fail to label the container, "Poison."

Table of Preparations.

Where the terms, 1 to 800 parts, 1 to 1,000 parts, and 1 to 1,200 parts are used, the following table will be found useful for converting these proportions into the fractional parts of a pint, to be used with each 100 gallons of water: 1 part mixture to 800 parts water equals 1 pint of mixture to 100 gallons of water; 1 part to 1,000 parts water equals ¾ pint of mixture to 100 gallons of water! 1 part mixture to 1,200 parts water equals ⅝ pint of mixture to 100 gallons water.

Cabbage Caterpillar.

There are several species of these limber, devouring perambulators of the commercial as well as the family cabbage patch. The most common, however, is the green worm, which hatches into a white butterfly. The best remedy for these worms is a spray of arsenate of lead. As the cabbage grows from within outward, there is no danger in the use of this poison.

Spraying on a Small Scale.

The average city resident has only a few trees or plants to spray. The following will then be useful. For all leaf-eating caterpillars or chewing insects, use two tablespoonfuls of arsenate of lead to one gallon of water. For plant diseases, use five teaspoonful of nicotine sulphate to one gallon of soapsuds. For red spider and mildew, dust the plants with dry sulphur. For all plant lice, use one tablespoonfuls Bordeaux mixture paste to a gallon of water.

Will Investigate Plum Shortage.

The fruit growers of Placer county are becoming alarmed over the shipping plum situation. There has been a shortage in production during the past three years. Prior to that Placer county stood ace high as a shipping plum producer; as a matter of fact so great was the yield that the trees required vigorous thinning. The cause for a lack of production is thought to be, faulty fertilization, irrigation and pruning. Winter injury has been suggested as a cause, it being too mild and too much sunshine during the winter months. A committee, consisting of Henry Butler, Penryn, J. E. Bergtholdt, Newcastle, and Dr. O. L. Barton, Lincoln, have been appointed to interview Director of Agriculture, G. H. Hecke, with the view of getting experts to visit Placer county this fall to ascertain the cause, and, if possible, suggest a remedy.

Sutter county's peach crop this year will be about 40,000 tons.

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Here and There in the Fruit Business

All Sections Realizing Top Prices.

The annual mid-summer dull, or break in prices of deciduous fruits has so far failed to materialize. It would be difficult for the old timers to recall a season when prices continued to rule so high. Through the kindness of the Fruit Building at Sacramento, we are advised daily as to eastern auction sales, and it is more than gratifying to note prices being realized on shipments from all deciduous sections. Plums that have long since been in the discard—simply allowed to occupy space, possibly for the good they had done before anything better came to light—are selling at fabulous prices. Vacaville, the home of the plum, both as to varieties, production and flavor, is enjoying an unprecedented boom in prices. Newcastle, Penryn, Auburn, Placerville, and other shipping sections "on the hill" have done remarkably well, with their general mixture of early tree fruits. The Sacramento River section, though not much on the early fruits, has made those sections that are, sit up and take notice of the prices appearing on their score card. Winters and her sister towns along the "Clear Lake Branch" have never enjoyed such continued prosperity. Lodi, Stockton, Acampo, Oakdale, Farmington and other shipping sections of the San Joaquin Valley have had a seat in prosperity row. Tree fruits have had their inning, although the game is young, the vine fruits are expected to follow suit. An old-timer stands with hat in hand rejoicing and congratulating the growers on the results of the present season. May the finish be even more exciting.

Fruit Shipments in Fine Swing.

The 1920 deciduous fruit shipping is in "high gear." Over our "private wire" from the Fruit Building at Sacramento comes the encouraging news that there will be no "detour" in prices; the track is clear for another record showing. The plum market has taken the skyrocket route, and the last report it was still climbing higher. Peaches are performing the same "stunt"; however, they are being aided in this spectacular movement by the almost total loss of the peach crop in many of the large-producing sections of the East and Middle West. That old standby, the Bartlett pear, thrown its hat into the horticultural ring and is now preparing to meet all tree and vine comers on the eastern auction blocks. Early apples are moving freely. The cherry and apricot have "struck camp" for the season, leaving a healthy jingle in the pockets of the producers. Taking all in all, California deciduous fruits will be a pennant winner in the 1920 season.

Dried Fruit Inactive

When we say dried fruit "inactive," it is not that the market is weak or overstocked, but to the contrary. The market was never so low in stock of practically all kinds of dried fruits; there is no weakness, as there are no offerings. Upon inquiry as to the cause of a lack of trading, we were told that it is largely due to the splendid prices being obtained for eastern shipments of fresh fruits. Growers feel that as there is such a demand for fresh fruits, that prices for the dried product should rule high and are holding back on that account. This, of course, applies more to the independent growers. The dried-fruit associations in time will establish their prices. Dried apricots will probably rule high as there has been an unprecedented demand for fresh 'cots for eastern shipment, and in some districts heretofore known to dry a great many 'cots they have played the fresh fruit market and made a winning.

Want Experiment Station.

The Directors of the Placer county Farm Bureau are making a drive to have an experimental station placed at Auburn. It will act as a branch of a Fruit Experimental Station of the State. A movement of this nature would be of great service to that section. What is known in fruit circles as the "Hill Section" is among the largest and most important deciduous growing and shipping sections in the State. Owing to soil and climatic conditions there are several nurseries in that territory that grow some of the best nursery stock produced in the State. So wide awake is this movement for a branch experimental station that the directors of the Farm Bureau and the horticultural commissioner of Placer county will meet at Loomis, July 24, to discuss matters.

Lodi Growers Form League.

The Lodi Shippers' League has been formed and made a permanent organization. This was made a fixture at a meeting of the shippers, railroad officials and growers. Geo. W. Ashley was made permanent president of the organization, and Gorden L. Bennett secretary. The league will deal principally with tonnage and the distribution of cars during the fruit season. This committee acted in the same capacity during the 1919 season, and they met with such success that it was the unanimous opinion that it should take matters in hand for the present season. The committee consists of H. E. Welch, W. E. Garrison, C. C. Woodworth, V. R. Larson, and J. T. Langford.

Pear Blight in Placer.

The Farm Advisor of Placer county reports the appearance of some pear blight, and he strikes right at the "root" of the evil by advising the growers just how this dreaded of all diseases should be handled, all of which we heartily agree with. All twigs in the orchard showing signs of infection should be removed at once. Whether the twig or limb is cut or broken back it must extend several inches beyond where the attack ceases to show up. If cut with saw or shear, the tool should be disinfected with a solution of corrosive sublimate after each cut has been made; this will prevent inoculation of any healthy part. Bi-chloride or cyanide of mercury may also be used as a disinfectant.

Modesto Discovers a New Fig.

A fig has been discovered at Modesto that surpasses anything in the fig family for size, being nine inches in circumference. A number of these monster figs have been placed on exhibition at Modesto. The fruit was grown from cuttings imported from Asia Minor some years ago, by E. Gates, a fruit grower of Stanislaus county. The trees are but three years old and are prolific bearers. The fig is white.

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GRAPE MEETING IN FRESNO.

(Written for Pacific Rural Press.)

On July 14 there will be a grape-growers' meeting in Fresno at which Prof. R. L. Nougaret and Mr. Reed of the State Department of Agriculture will be leading speakers. Prof. Nougaret will exhibit some wine-grape syrup made by recently developed inexpensive methods. As the writer can testify from personal delectation, this syrup has plenty of sharpness to give it a character that makes you want more. It also has plenty of flavor, which makes a small portion of it as satisfying as a great deal of the common syrup on the market. There are already three factories making such syrup in the northern part of the State and several in the southern part. Last year between 70,000 and 75,000 gallons of this kind were made and sold at $4 per gallon —not to Californians, but to eastern people. A 68 degree B. wine-grape syrup does not ferment; and while the chief market for it is expected to be found in soda fountains and as table syrup, Prof. Nougaret says there is no reason why it should not be used for canning, both home and commercial. Most any kind of black wine grapes make the commercial type of syrup. They may be pressed in existing wineries in a little different way than for wine. Then the juice is boiled to the desired consistency in a vacuum at 110 degrees F.

Mr. Reed will explain the rules and ways of enforcing the State Standardization law on shipping grapes. It was not satisfactorily enforced last year, and there was considerable damage to the reputation of California fresh grapes in Eastern markets. The State Department of Agriculture is responsible through the county horticultural commissioners for enforcement of the law, and there is every desire to avoid improper shipments such as were made last season. It is hoped that legal prosecution will be unnecessary.

PEAR LUG DANGEROUS MENACE.

(Written for Pacific Rural Press.)

Many pear and cherry orchards throughout the State are showing signs of attack by slug, an invader of no small consequence, and if not taken in hand during its primary stage of procedure, serious losses may result. It is unnecessary to give an anatomical description other than incidentally mention that it is an aggressive little forager. The adult is a glossy, black, four-winged insect, about 1/5 inch in length. The larvae are dark olive-green, slimy and ½ inch in length. They are a little fastidious about their meals, as there are certain portions of the foliage they attack, the upper green surface of the leaf which causes the portion attacked to turn brown. During the past week we have noticed cherry orchards that have been attacked, reminding one more of a ripe barley field in the distance, which makes it a crime that the owner of such valuable orchards should sit idly by and allow the next year's crop to be decidedly injured by the trees suffering defoliation, exposing the tender buds to the heat that will follow for the next few months. There is no excuse for not checking or preventing entirely an invasion of the slug, as they are one of the easiest pests to control. The larvae fades away under the application of ordinary soap or emulsion sprays, and may be effectually destroyed by blowing dust upon the infested leaves. A spray composed of 2 pounds of arsenate of lead to 50 gallons of water is also good in their control.

PEACH GROWERS PROMOTE CONTEST.

The Sutter county peach has run out of its coat, tied its gallouses around its waste, donned the gloves, stepped into the ring and challenged the world to produce any better peach than Sutter county. We are afraid that there will be but few comers, as the world knows Sutter's reputation, but on with the dance—it will be interesting to watch the fur fly. The Sutter County Farm Bureau is staging this bout. Prizes will be awarded on three points—tonnage per acre, quality and condition of the orchard after harvest. Sutter is famed for three varieties of clingstone peaches —Tuscan, Phillips and Midsummer Cling. We hope to be at the ring side.

CANTALOUPES IN SUTTER BASIN.

It is no longer in doubt as to Sutter Basin's adaptability to cantaloupes, for present indications are that the 500 acres planted to this tempting viand merely as an experiment will prove a real investment. The melons are selling at $5 to $6 per crate in the eastern markets, which makes it of considerable financial interest to those connected with the project, as they are figuring on 400 carloads that makes it doubly interesting.

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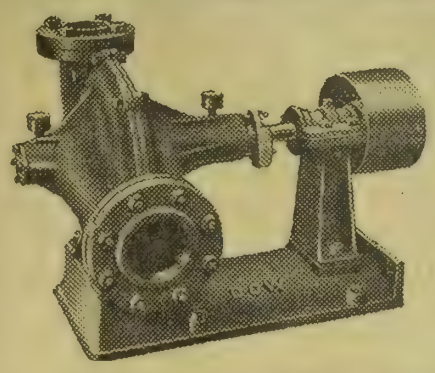

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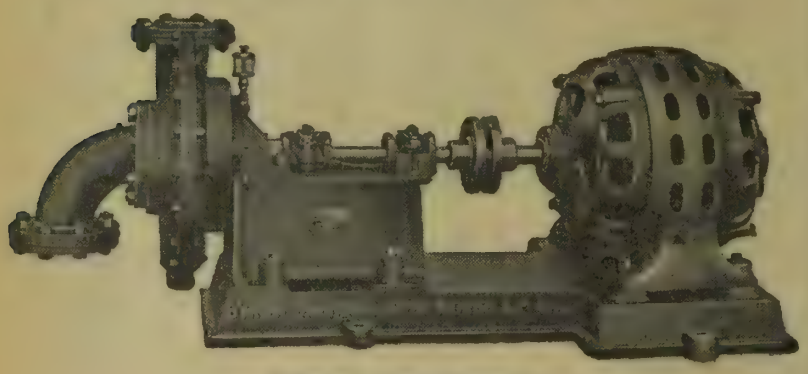

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Mariout Barley Favorably Received

(Written for Pacific Rural rPess by Prof. Geo. W. Hendry.)

Exceeds Common Barley at Marysville.

Mr. F. W. Smith of Marysville writes Farm Advisor Wm. Harrison, under date of June 23, as follows: "Now that I have finished harvesting barley crop and have weighed it into the warehouse, you will be interested to know the result. You remember that it was at your earnest recommendation that I sowed some Mariout barley and secured the seed on the approval of the authorities at the Davis Farm. Though the season for grain was rather disappointing, the comparative result has proved to me the value of Mariout barley under the conditions existing this season, and I desire to thank you very heartily at this time for your valuable advice and recommendation.

"In all, I had 245 acres, 185 of which was Mariout, 25 acres Tennessee Winter, and 35 acres common barley. This is all on about the same kind of land, all sowed between December 18 and January 2. Standing in the field, the Mariout looked inferior, because it is short, but it made a very hearty rapid growth, filled and ripened about two weeks earlier than the other varieties.

"The 185 acres of Mariout produced 3,316 sacks, total weight 300,111 lbs., or an average of 17.92 sacks per acre. The 60 acres of the other varieties yielded 818 sacks weighing 71,914 lbs., or an average of 13.63 sacks per acre." (Mariout exceeded common barley in yield by 4.2 sacks per acre and weighed more per sack.)

From Turlock.

Mr. R. E. Farthing of the Golden State Producers' Co., writes: "I procured seed from Davis for a number of parties in Stanislaus county, and the yield generally has been about 30 sacks to the acre. It ripened from 12 to 14 days earlier than common barley, had no smut, and is good generally for the soil of this district. It yielded 4 to 8 sacks more per acre."

Surprises Growers in San Diego.

Mr. B. C. Beers, president of the First National Bank at Oceanside, San Diego county, writes: "One field of something less than fifty acres has just been harvested. It was planted early and advanced so far during the long drought of winter that the late rains did not benefit it like they did the common variety that had not jointed. The party expected 500 sacks and harvested 1107, and I venture there is not less than four sacks to the acre on the ground. It is my opinion Mariout is going to greatly increase our yields here, and I am using my efforts to see that not a single sack leaves our territory for market purposes."

Mariout Liked at Pleasanton.

The Ruby Hill Vineyard Company at Pleasanton in Alameda county writes that Mariout is estimated at 25 sacks per acre, while all common barley was so badly pinched that it was cut for hay.

In the Salinas Valley.

Mr. George T. Scott, Agriculture Superintendent for the Spreckels Sugar Company, reports that with a total of only six inches of rain and extremely adverse conditions, during March and April, none of the grain under the same conditions made anything, but that "we are, however, satisfied with the showing that Mariout made under these conditions as it appeared to be fully as good as common barley in every respect and headed out about two weeks earlier."

Farm Advisor Mayhew of Salinas county writes: "The appearance of the Mariout barley at the Trescony ranch was a complete surprise to the crowd that gathered there Wednesday. The Mariout showed no signs of a dry year, while the common barley throughout the lower sections of the county is suffering from drought and probably will mature only small crops in selected areas."

In Fresno County.

The Kearney Vineyard reports a fine crop of Mariout this year, estimated at 20 sacks before cutting, and adds that it is splendidly adapted.

In San Joaquin County.

Mr. Gladstone Reed of the Balfour Guthrie Co., at Brentwood, writes: "Our irrigated grain here has done well, especially the Mariout. That portion of the Mariout barley clean enough to be cut for grain—the yield is simply astonishing."

In Yuba County.

Mr. Pete Isaacson, of Marysville, reports his Mariout to have yielded 19 sacks per acre, as compared with 13 sacks per acre for common barley under similar conditions.

In Madera County.

Mr. J. W. Schmitz, Route A, 155 Madera, obtained 7 sacks per acre from his Mariout and 5 from his common under similar conditions.

In Solano County.

There were 4781 acres of Mariout in Solano county in 1920 and the average yield of Mariout has been several sacks per acre ahead of common barley. Mr. Geo. C. Stephens, Box 382, Dixon, Cal., reports 9 sacks per acre of Mariout under adverse conditions as compared with 5 for common.

In Yolo County.

There were 18,853 acres of Mariout barley in Yolo county in 1920 distributed among 115 growers. This is the home of Mariout in California, and the center from which it has been distributed to other parts of the State.

In the words of A. G. Anderson, local merchant of Davis, "I am in close touch with the growers of this locality and after a great deal of discussion, find that Mariout is the favorite of all varieites, particularly in a dry year, such as 1920."

Tulare County.

In Tulare county, Mr. A. J. Wood of Orosi reports 15 sacks per acre for Mariout and a less amount for common barley, and states that because Mariout is at least 10 days earlier and does not make so much straw that it is an all-around better barley for that locality.

Severe Test at Chico.

Mr. V. C. Richards of Chico reports that he grew 105 acres of Mariout on a heavy clay soil, eight miles north of Chico, which will be planted to rice next season. This land yielded slightly over eight sacks per acre of light barley, while common barley under similar conditions was used for pasture or hay only.

Big Gain in Merced.

Mr. P. Bourny, Route 3, Merced, reports 10 sacks per acre on 50 acres as against 7 for common barley.

In Tehama County.

Mr. W. B. Salisbury of Los Molinos received 27 sacks per acre of Mariout weighing 115 lbs. per sack, and estimates that fully one-third was lost through shattering. He had no check of common barley to serve as a comparison, but believes that Mariout is better suited to his conditions.

Los Angeles Reports.

Severe tests of Mariout in Los Angeles county have been made as follows: Pacific Colony at Spadra; C. W. Peck Ranch, Pomona; R. Fischer Ranch, La Verne; S. E. Goodall, Owensmouth; M. D. Arnold, Los Angeles, and the Germain Seed Company. In each instance it is reported: "Mariout showed up surprisingly well."

Mariout Barley Does Well in Glenn County.

Last fall there were quite a few farmers who procured Mariout barley seed and many of these used it for direct demonstration, putting it side by side with common barley. In practically every case Farm Advisor George Gooddley notices that the Mariout has given much heavier and surer yields during the rather trying 1919-20 season. The yields have in many cases run as much as 30 or 40 per cent higher for the Mariout than for the common barley under the same conditions.

Barley and Oats Seed for Inland Valleys

To the Editor: Can you give us some information on the advantage or disadvantage, as the case may be, of buying barley and oat seed from the Coast districts, Oregon, or Northern California, for planting in our interior valleys?—Wm. D. Guthrie, Modesto.

Regarding the advisability of importing seed barley and seed oats from Oregon for growing in California, we would advise that California barley would be preferable to anything which you can bring from other localities. A great many farmers in the vicinity of Davis are specializing at the present time in the production of high-grade barley seed of standard varieties. We have found here that, in general, there is a particular kind of barley for each particular kind of soil and planting season. Mariout barley has been the most successful in dry years, and on dry oils and in spring planting. Tennessee Winter barley has been the most desirable variety for early fall sowing on heavy soils or on soils which are wet during the growing season. This variety must be planted early in the winter, however. Four Thousand barley is a pedigreed strain of common barley developed at the experiment station by selection, which is similar to common barley in all respects, but is a higher producer.

The best seed oats may be obtained from the coast districts of California, and we would sugget that you look into this question in the Halfmoon Bay district and around Pescadero. You may obtain either the North Finnish Black or the California Red in this locality. These are the only two varieties of oats cultivated extensively in California and would be more satisfactory for planting in this State than any of the late maturing varieties such as are grown in Oregon. Oats produced in the interior parts of California are generally light and of inferior quality.

We have a new variety of oats at the experiment station called the Burt oat, which has been producing well. We also have the Red and the Black, but, unfortunately, seed of these will not be available for distribution until next season.

Cutting Sudan Grass for Hay

To the Editor: Please tell me when you can cut Sudan grass—before it heads or after. It is not irrigated, and oblige, E. T. Woodward, Oroville.

(Answered by Geo. W. Hendry, Professor of Agronomy, Univ. of Calif.)

In response to your inquiry of June 15th, we beg to advise that the most satisfactory time for cutting Sudan grass hay is when the plants are in full blossom. This will not only give the best quality of hay, but you will secure a stronger second growth than if you allow it to reach a more advanced stage of maturity before cutting. By watching the heads carefully, you will observe that small feathery appendages project from the seed spikes for a period of a few days preceding the formation of the kernels. These are the anthers of the flowers and indicate that the plants are in blossom.

Sudan grass hay cut at this stage of development will provide a feed very palatable to all classes of livestock, and we have observed that our work stock on the University Farm prefer it to freshly cut, well-cured alfalfa hay. Last season a load of this was put into a corral with a number of work horses that were being fed alfalfa hay, and without exception, all of the animals left the alfalfa and ate the Sudan grass hay as long as it lasted.

If, however, you allow the seeds to develop, the stalks become rather tough and unpalatable, and there will be considerable waste in feeding. The second growth will also start more slowly and subsequent yields will be somewhat reduced. We would advise, if possible, that you irrigate immediately after the first cutting.

EASING UP THE HIGH COST OF LIVING.

When the California farmers come to the realization that it is cheapest to raise everything for home use that the farm will supply, there may not be so much said about the high cost of living. We call to mind a "side line" raised on practically every farm of our native State—sorghum. Every California farmer should plant a small patch of "long sweetening" or sorghum for syrup. Where only a small lot is raised on each farm it wouldn't pay to rig up an outfit for that alone, but there should be a community, or co-operative, mill and vats which would boil what syrup the farmers need for their own use.

With the abnormally high price of sugar, everyone is looking for a suitable substitute, and the making of sorghum syrup is not a difficult or technical operation. There is usually some one in the neighborhood who knows how and would be willing to supervise the work for the community. Good molasses contains from three to four times the sweetening properties of Karo or other syrups. It can be used both as a table syrup and for sweetening and cooking. If it is to be stored for winter use it should be boiled low. A light seeded variety of sorghum, such as Japanese Honey Drip Texas Seeded Ribbon Cane, will make a better quality of sorghum than the black seeded variety. The syrup will be a lighter amber color and not so strong in flavor. Every acre of sorghum used to make molasses "bats" the "Sugar Trust in the eye." So every farmer should get in the game.

FEEDING SUNFLOWERS IN MONTANA.

"Growing and Feeding Sunflowers in Montana" is the title of a recent bulletin recently issued by the Agricultural Experiment Station at Bozeman of that State. It gives the methods of growing, harvesting and feeding the plant with its feeding value, as demonstrated by 4 years of research work with results much in favor of its use.

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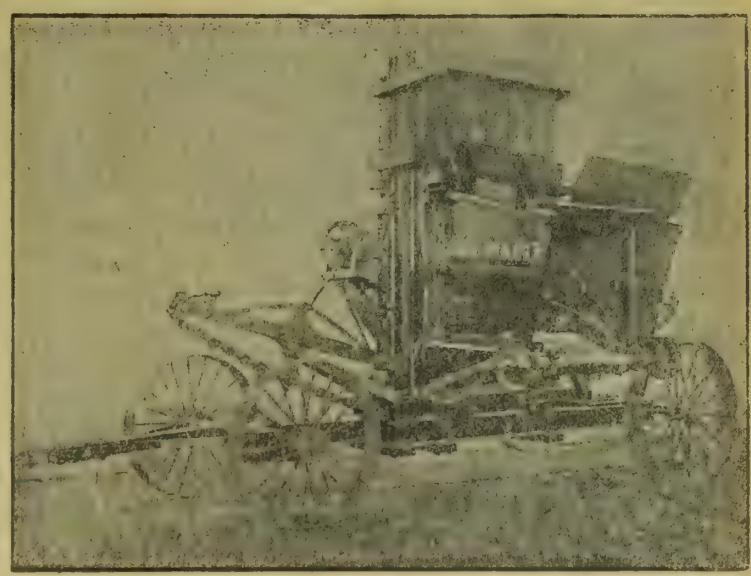

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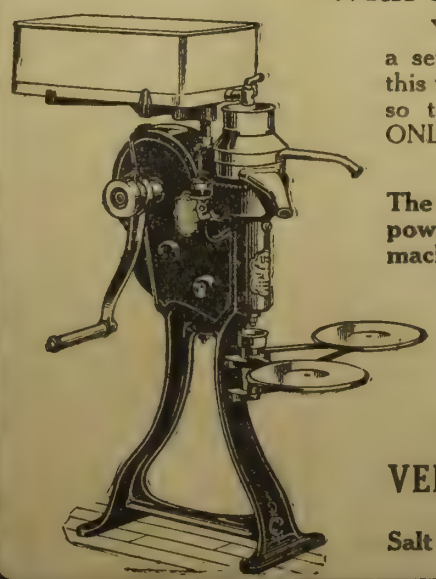

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Significant Agricultural Pointers

Stored Grain Absorbs Moisture.

Warehousemen in California are allowed to charge a certain rate for storage of grain, rice and beans. The rate is fixed by the State Railroad Commission at a figure designed to yield a reasonable profit above the costs of operation. But warehousemen in many cases have made far more profit than the Railroad Commission allows. They get it not only by sweeping up and selling grain, beans and rice spilled from torn sacks or from those punctured in taking samples, but also by keeping an amount of grain equal to the amount of moisture any given lot absorbs when held until winter or spring. Good dry grain absorbs three to five pounds of moisture per sack, according to Fresno Sealer of Weights and Measures F. B. Johnson. Thus, in a lot of 55 tons, there might be an absorption of 55 centals of moisture. The warehouse man delivers 55 tons to the owner and keeps 5500 pounds for himself besides charging the regular rate. A case such as this occurred in Fresno county recently. On being called to account for his apparent crookedness, the warehouseman paid to the owner the value of the excess weight he had retained. Some sort of punishment may be measured out to similar offenders in the future.

Grass Fire Criminally Started.

The writer recently saw a grass fire in the foot-hills of Madera county. It had undoubtedly been started by some one throwing a cigar or cigarette from a passing automobile. There was nothing in sight which might have stopped the fire from burning hundreds of acres of good pasture reserved to keep cattle from starving after they are brought from the mountain ranges in the fall. A few minutes of strenuous work on the advancing points of this fire with a dry grain sack put it out with the loss of not a great deal over an acre. It is criminal carelessness to throw any sort of fire into the roadside grass during summer time.

More Uniform Impartial Rice Grading.

Rice grading has been more or less unsatisfactory in that it lacked uniformity. Each mill did its own inspecting, and naturally the growers did more or less suspecting. Uniformity, at least, and a great deal of prestige is to be gained by the recent decision of the Rice Association of California, according to its secretary, R. C. Mason, to put all rice inspection and grading in the hands of Grain Inspector H. C. Bunker of the San Francisco Chamber of Commerce. The new system is more efficient, gives more uniform grading and costs less for inspection. It is a long step in the right direction.

Chlorine Gas Not for Squirrels.

Chlorine gas for ground squirrels is still being boosted in some parts of the State. It is a liquid which comes in drums. When the drums are opened, it gassifies into a greenish vapor with pressure which drives it far into the squirrel holes. Chlorine gas was tried several different ways in Fresno county, but seemed not to be poisonous to squirrels, according to Horticultural Commissioner F. P. Roullard.

England Trying for Rice Business.

San Francisco is an important transshipping point for rice from the Orient to Cuba, whose heavy imports were noted in last week's issue. Before the war, England financed and handled most of this rice trade; and San Francisco must fight to retain the business. English interests have been offering Rangoon rice in Cuba recently. Most of the San Francisco business is this year from Saigon.

Dry Winter Dampened Enthusiasm.

The bulk-grain elevator projected at Burrell, Fresno county, failed to materialize for lack of finances. But it is expected that elevators will be ready both at Burrell and Helm before next harvest, according to Farm Advisor J. P. Benson. Probably heavy fall or winter rains would not dampen enthusiasm for the project.

Selling Grain by Net Weight.

Selling grain by net weight exclusive of sacks is to be enforced henceforth by county sealers of weights and measures. The ruling was made since the harvest of 1919, and has caused more or less friction this season. It is still obscure just how the sacks will be returned to their owners or otherwise.

WILL HAY BRING $50?

Will you send us names of hay buyers? I have about 600 tons of barley hay, light weight, fine color. What price should we obtain? Men in position to know have predicted $50 per ton.—A. P. F., Monterey county.

The names have been sent. Fifty dollars per ton to the grower is a possible price in this year of scarcity; but we doubt its probability. Now, if it goes up to that point you will damn us, and if it doesn't, the prophet will get no credit. We hope to have full reports by the end of the week and in our next issue will give as definite information as it is possible to collect.

The outlook for potatoes in Sutter Basin is exceptionally good this year. The crop is estimated at 60,000 sacks.

GREAT CALIFORNIA ACREAGE TO BE RECLAIMED.

(Continued from page 38.)

of them entirely separated from each other were not treated. All of them were flooded as nearly alike as possible. When the writer visited the plots a few days later, the untreated ones were still out of sight under water; while those that had received gypsum were more or less completely drained away. This does not prove that the solution of the problem has been found, for seepage from the untreated checks probably kept the others wetter than they would have been, and variable hardpan conditions may have affected the apparent results. The action of gypsum, however, is known to be twofold in its advantage for this purpose. It changes part of the black alkali chemically into less injurious and more washable white alkali; and it granulates the soil which black alkali tends to puddle. The granulation or "flocculation" of soil makes water drain away more raidily, carrying alkali with it. There is still plenty of black alkali on the borders; but it remains to be seen how much is left after the whole piece shall have been flooded again, for about seven days. Certain it is that water is pessing through this soil; for just before the flooding of the experiment plots the pump was throwing about 150 gallons per minute, while a few days after the water was applied it was throwing about 375 gallons per minute constantly night and day.

The gypsum-and-drainage treatment may be rather expensive (gypsum costs $10.50 per ton at the ranch), but if it proves effective a great deal of worthless land in California may be made worth double the cost of reclamation.

Healthy Vegetables

The U.S. Department of Agriculture recommends that you rid your seeds and soil of infection before planting by using

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Think what that means to you in good hard dollars with the great demand for wheat at high prices. Many farmers in Western Canada have paid for their land from a single crop. The same success may still be yours, for you can buy on easy terms.

Farm Land at $15 to $30 an Acre

located near thriving towns, good markets, railways—land of a kind which grows **20 to 45 bushels of wheat to the acre.** Good grazing lands at low prices convenient to your grain farm enable you to reap the **profits from stock raising and dairying.**

Learn the Facts About Western Canada

—low taxation (none on improvements), healthful climate, good schools, churches, pleasant social relationships, a prosperous and industrious people.

For illustrated literature, maps, description of farm opportunities in Manitoba, Saskatchewan and Alberta, reduced railroad rates, etc., write Department of Immigration, Ottawa, Canada, or

GILBERT ROCHE,
8-5 First St., Sheldon Block,
San Francisco, Cal.
Canadian Government Agent.

Big Money Boring Wells

Have water on your own farm. In spare time make wells for your neighbors. It means $1000 extra in ordinary years, double that in dry years. No risk—no experience needed.

Outfits for Getting Water Anywhere

Earth augers, rock drills and combined machines. Engine or horse power. *Write for easy terms and free catalog.*

LISTER MFG. COMPANY
Box 712 Clarinda, Iowa

RHUBARB Wagner's GIANT

PLANT NOW—July is one of the best months to plant. Growers who planted last July and August have already harvested over 15 tons per acre, netting $1000 eleven months from planting. For further information, write J. B. Wagner, Rhubarb Specialist, 1550 East Villa St., Pasadena, Cal.

Level Your Land for Less Money with a Compton scraper

Operated by the tractor driver from the tractor seat—one man does it all. Moves more dirt with less power. The 5-foot size does the work of 3 or 4 four-horse scraper teams. Saves enough time, horse-feed and labor to pay for itself in a few days. A size for every tractor. Prices from $215.00 to $335.00. Send for descriptive circular and price list.

THE WOODWARD COMPANY FRESNO, CALIF. Box 706 A

Agricultural and Mechanical Service

When Hay Baling Is Economical.

Why is hay baled? Is there a growing demand for baled hay? Will baling pay the individual farmer?—Cleveland, Ohio.

Hay is baled for storage or for shipment. Since the operation of baling adds no feed value to hay it will not pay the individual farmer to bale for his own or his neighbor's use as long as he has enough land to stack it on. But if he expects to haul considerable distances, the extra $3 to $5 per ton which baling now costs may be justified; and if he ships by rail, it is strictly necessary. This season will probably see a great demand for baled hay for wintering range cattle unless good warm rains come early. Cattlemen are notoriously improvident, though the more businesslike of them are regarding a big haystack as cheap insurance. The dairy districts also are especially short of hay this season and will have to ship in all the baled hay they can get. Baling will pay the individual farmer who has enough hay for shipment so that the cost of hiring it baled would equal interest on investment in a machine plus depreciation plus the cost of operating it. Running one's own machine will pay because it can be used when it is wanted. But any owner of a hay-baler may make back the cost of it by baling for others when his own work is not pressing; and such precedure would help him keep help busy when work might be slack at home and when the help will be needed for other work soon to be ready.

Figuring Manure Spreader Economy.

What kind of a farm can use a manure spreader to advantage? How large must the farm be? Can spreading be done every day as a practical proposition?

Any farmer that can get any considerable quantity of manure will find that interest on investment in a manure spreader plus reasonable depreciation will be less than the extra labor that would be required to handle manure by hand. The advantage of the spreader is that it does not quit when it has earned a day's wages; it stays on the job and is not touchy about what you say to it. Size of farm counts but little; for there are few farms too small to use all of the manure produced on them. We know a man with ten acres who owns a manure spreader and is enthusiastic about it. The better measure of economy is the amount of manure produced on the farm or obtainable within reasonable distance. Many farmers haul every day; but if they don't get a full load every day they wait until the loader is filled and then haul. This involves only one handling of the manure if fields are ready to receive it.

Sandburs in Young Alfalfa.

An acre of my ground two years ago was covered with sandburs. I plowed them under and sowed oats. None of the burs showed in the oats. I then irrigated, plowed and second-cropped to casabas. The burs came as thick as they could grow, but I kept fighting them until frost, and not one of the 1919 crop went to seed. Last February I sowed alfalfa and got a beautiful stand. Now since I clipped the alfalfa, sandburs are coming as thick as they can stand. Are they from 1918 seed and how can I exterminate them without injuring the young alfalfa?—W. R. J., Stanislaus county.

The 1920 crop is from seed grown in 1918 or previously; and the only way to avoid future trouble is to get all seed sprouts this year. Since there may be many old seed still dormant, our temptation would be to plow and irrigate the acre repeatedly during hot weather, giving burs enough time between operations to sprout all that are in the right moisture and temperature conditions. Cultivating young alfalfa as vigorously as you would have to do would break its spirit too.

Protect Potatoes from Worms.

The season is here when tuber moths work on our potatoes while we sleep. Carelessness at digging time results in the wormy potatoes, which cut prices severely and waste a large proportion of all infested potatoes. Pick up all potatoes before nightfall and cover them with burlap or with a thick layer of straw to keep the moths from laying eggs on them until they are safely sacked or shipped.

J. T. Compton, a former blacksmith of Tipton, Cal., has invented a one-man scraper for small tractors that he claims will do as much work as three men and twelve horses with Fresno scrapers and do a much better job. He has turned over the distribution throughout the Western States to the Woodward Company of Fresno.

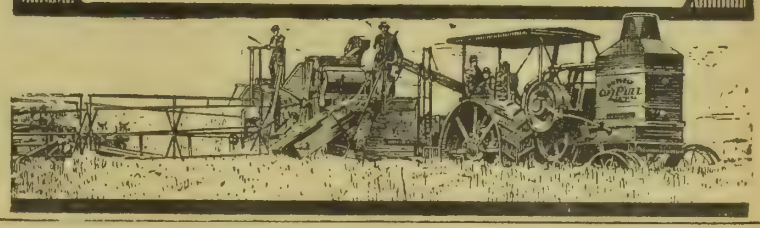
The advantage of case-hardened pinions, etc., is that the body is tough and able to stand shocks while the surface is hard and will stand wear.

There's Real Service Back of the OilPull

1. *The tractor itself* with inbuilt dependability, economy and long life.
2. *The Rumely factories* that have been building farm power machinery for over eighty years—127 buildings covering 195 acres—a perfect assurance of permanency.
3. *Twenty-nine branch offices and warehouses*—complete stocks of machines and parts—located at important railroad points to give quick service.
4. *Three thousand dealers*—most of them specially trained in the Rumely factories—and possessing the ability to give genuine service.

And your order for an OilPull gives you this four-fold service throughout the life of the tractor. Shall we send details.

ADVANCE-RUMELY THRESHER COMPANY, *Inc.*
17-19 Main St., San Francisco, Cal.



Why You Can't Overwork An E-B Plowing Outfit

NEVER mind how hard the ground, or how hot the day, an E-B plowing outfit goes right on turning land, as many hours of the day as you want to drive it.

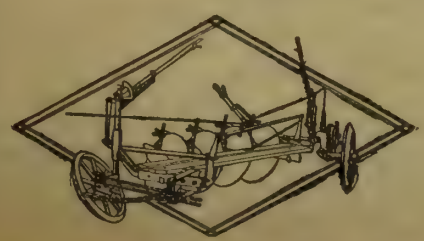
What makes a plowing outfit as dependable as this? No one feature, nor for that matter, a dozen. Only the longest experience, under the widest variety of farming conditions—and then a manufacturing organization big enough and far-sighted enough to utilize all the lessons of that experience.

Sixty-eight years of implement making have taught us what is necessary for dependable service. A manufacturing organization of vast extent builds this knowledge into E-B plowing outfits.

Ask Your Dealer

Emerson-Brantingham Implement Co., Inc.
Established 1852 Texas Branches: Dallas and Amarillo. Rockford, Ill.

A Complete Line of Farm Machinery Manufactured and Guaranteed by One Company



Cutting Labor Costs in Irrigation

(Written for Pacific Rural Press by Walter Graham.)

Cast-iron, automatic gates, draining and protecting land.

Everything the farmer has to buy, from a jute sack to a forty-horse power tractor, has gone up and up in price since the peaceful days of 1913. Feed and fertilizer, fuel and flapjacks have climbed to perches wholly out of reach of anyone not equipped with a stepladder and a grappling-hook. But perhaps the most effective change in increasing the farmer's outlay is in the increased cost and surprising scarcity of farm labor. There never was a time when labor-saving devices were so essential to success. In these days the rancher who has so equipped his place with labor-saving tools and machinery that one man can raise the crops and attend the stock that formerly required the labor of two, is reaping a deserved reward for his foresight.

It is just as practicable to reduce the labor of irrigating by the use of modern equipment as that of plowing or harvesting. Old-style wooden gates and flumes demand extensive repairs and labor once a year to keep them in working condition, and after a few seasons must be entirely rebuilt. They always leak more or less (generally more), and sometimes permit the flooding and scalding of valuable crops. Sometimes, in the dry season, they get afire, as a result of weed or brush fires creeping up about them; and hundreds of dollars' worth of lumber and labor go up in smoke.

The shrinking and warping which they undergo in dry seasons makes their water-holding qualities more like those of a basket than a pail, and the swelling which ensues after the water is turned in makes wooden slides and flash-boards stick and balk like an old-fashioned barn door over a settling sill. There is an unconfirmed rumor that one farmer was moved to use unseemly language by the behavior of a wooden check under such conditions.

Wooden gates and flumes compare with the corresponding articles made of metal about as the wooden plow of Colonial days compares with its Twentieth Century successor. Their operation calls for the use of twice as much time and strength and the results achieved are much more uncertain. Wooden irrigating devices should always be operated by careful and responsible men; whereas the opening and closing of metal gates, being easier and surer, may sometimes be left to cheaper assistants. When the owner of a small farm who has no hired help has to be away for a day or two, the working of a few metal gates, the heavier types of which are provided with handwheels, need not be especially burdensome to his wife or his half-grown son.

Cast-iron automatic drainage gates do away with all the labor connected with the drainage of lands which lie between the high and low water levels of near-by ditches, rivers or bays. Attached to sections of corrugated pipe which run through the dike or levee, they readily swing open to allow the flow of water from the land, but close tightly when the water level in the ditch or stream is raised, and permit of no back-flow. Once installed they will perform their work for many years, with little or no attention from the owner.

The farmer with small or large acreage to drain or to irrigate who makes no use of metal gates, adjustable irrigation dams and other articles which have been devised to lighten his labor, is in a similar position to one who refuses to see the advantages of a planting machine in place of hand-dropping in the furrow or of wire fencing in place of rails. The Biblical command to the worker whose tools were dull was to "put forth more strength. Strike fiercely and many times." Californians get more results by holding them for five minutes on a grindstone driven by a gasoline motor, or by junking old-style tools altogether and substituting modern devices that do the work themselves.

KEEP THRESHING MACHINES REPAIRED.

Any standard make of threshing machine is capable of doing satisfactory work if kept in good repair and operated intelligently, according to specialists of the United States Department of Agriculture. Clean grain and small losses depend more than anything else upon the skill and judgment of the operator. Here are a few rules the wheat thresher should observe carefully:

Study the instruction book sent out by the manufacturer and follow the suggestions closely. See that the separator is set level crosswise and lengthwise.

The speed of the cylinder teeth is approximately 6,000 feet a minute. This may be modified slightly up or down in different machines and with different grains. In general, the rule is correct. Greater part of the separation is done in the cylinder and immediately after the grain passes through it. Use as few concave teeth as necessary to thresh all the grain from the head. Two rows of teeth set high are better than four rows set low. Grates give the best separation when set as high as possible.

The make-up of the tailings determines the character of the work done by the sieves. An unskilled hand feeder or a reckless pitcher with a self-feeder will cause any machine to do poor work. The bundles should be fed heads first and straight. It is important that the feed be steady and in continuous stream. Do not crowd one moment and let run empty the next. Damp, tough straw cannot be fed as fast as dry straw. On a mechanical feeder see that the governor is set and working properly.

Federation of American Farmers

(Written for Pacific Rural Press.)

The farmers of California are now busy with the rush of harvest time. Consequently, the membership drive of the Federation of American Farmers, which is exclusively an actual farmers' organization, is slowing up till the crops are safely garnered. The field secretaries of the county units are still active, but they are compelled to go into the fields to talk to the farmers and frequently have to grab a fork or drive a rake to spell the farmer while he signs up his acreage in the federation.

State Chairman J. J. McDonald has gone to the springs for the benefit of his health, and will probably not return before the last of July, when he plans an active organization campaign in many counties in which the farmers are ready and anxious for affiliation with the federation. Mr. McDonald's health has been weakened by his labors and responsibilities as a farmer on his home farm at Milpitas, by his energetic activities as charman of the Santa Clara county unit and as organizer for the State Federation of American Farmers.

W. Van Dennis, chairman of the Calaveras County Unit, State Secretary-treasurer, has gone to the high mountain ranges with his cattle and will not return before about the 1st of August, when he will join State Chairman McDonald in State organization work.

These officers receive no compensation for their labors in behalf of the federation, though their actual expenses, while engaged in their duties as State officers are borne by their respective county units. There are no salaries paid to officers of this federation. That is one provision in the basic law of the federation which differentiates it from other farmers' organizations.

Where Does the Farmer Come In?

The personnel of the State Industrial Welfare Commission has aroused much adverse criticism on the part of farmers throughout the State. The commission, which has and exercises the power to set the wages which must be paid by the fruit farmers for the picking, curing and caring for their crops, is composed of a capitalist, two politicians, a labor leader and a woman. There is not one farmer on the commission, though the matters to be handled and settled are vital to the farming industry of the State.

The Santa Clara county unit of this federation, which is composed almost exclusively of fruit growers, called a meeting to consider this important matter and the injustice to the farmer in placing the power to regulate his business in the hands of people whose every material interest is opposed to the producer.

A telegram was sent to Governor Stephens, asking that two fruit farmers be appointed on the commission, and this action was backed up by telegrams from every county unit of the Federation. These telegrams were acknowledged by the governor's secretary and there the matter ended for this time.

This incident, for it is but an incident, should emphasize to farmers the value of organization and the absolute need for this federation for the farmers of the State and nation. It is through the voting strength of the labor organizations that a union representative can demand and receive membership on the commission in question, while the farmer, unorganized, receives no consideration whatever, even in a matter of such vital moment as the setting of the wages he must pay to save his crops. Here is food for thought for the farmer, in whatever line of agriculture he may be engaged.

A Useful Official.

The U. S. official inspector and grader of grains and cereals in the city of Stockton is proving of the greatest value to the grain farmers as well as a great convenience to dealers. The establishment of this office was due to the initiative and continued effort of this organization, and the official grader, Ben. R. McGee, was chosen by the trustees of the San Joaquin county unit.

The farmers were quick to grasp the advantages of knowing the grade and exact value of their crops and are patronizing the office very liberally. Many incidents might be cited of concrete benefits to the farmers through the use of this office, benefits which were shown in the form of approximately large sums of money. One farmer sold his crop at an advance of $99.00 over the price offered before he secured his certificate of grade; and a bean farmer, who had a big crop to dispose of, received fifty cents per sack more than the best previous offer, netting him nearly $800.00, after deducting the one dollar he paid for his certificate of grade.

No Extraneous Trimmings.

The organization campaign of the Federation of American Farmers, which will begin about August 1st, will be conducted very quietly. This organization has no great organization or promotion fund to draw upon for there is absolutely no money interest in the federation. There can be no brass bands, no cake and ice cream, and no great oratorical flights. Those things have led the farmer nowhere.

The organization methods of this federation consist in getting a few actual farmers together where other actual farmers explain to them the aims and objects of the federation. The talk is always farmer talk for farmers and for no one else. There is no excitement, no hurrahs, and no hifalutin. The protection of the farmer's acres and products and the gaining and maintaining of his inherent rights as an American citizen in legislation, law and business are the sole subjects of discussion, and the further fact that in order to attain these just aims the farmer must rely wholly upon himself. He must not look for aid from inimical individuals or organizations.

To the Tractor or Truck Owner--

Does the dirt get into your engines and cut things to pieces? Why let it, when an

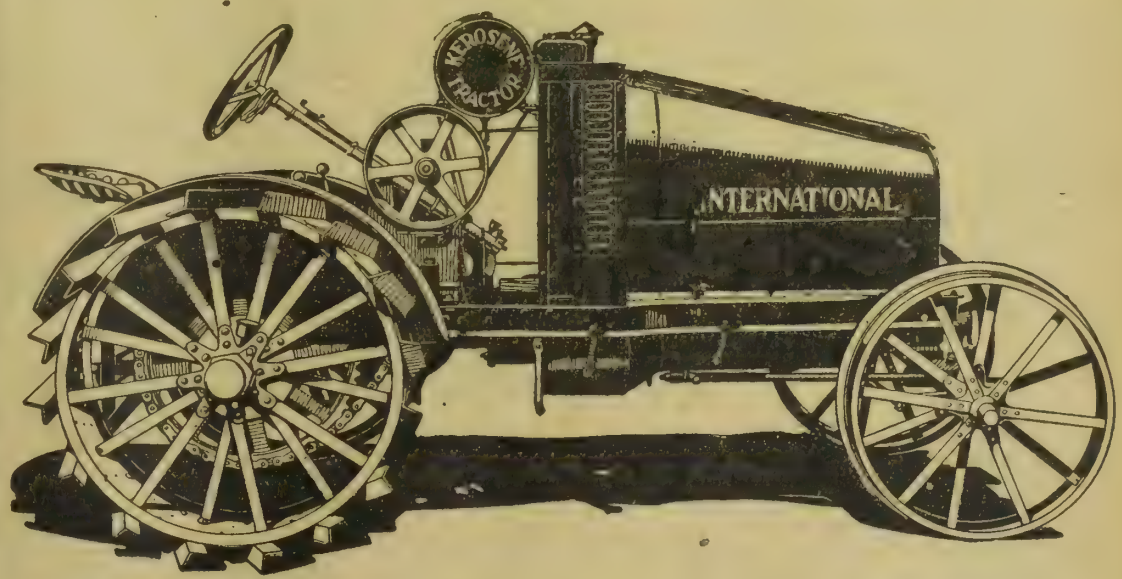
OIL-AIR-FILTER

will keep all the dirt out? Can build them to fit any engine.

FOR PARTICULARS WRITE

DAILEY BROS.

A/109, Reedley, California



A Quality Combination

THE **International 8-16 Kerosene Tractor** is a tractor of character and personality. The first note of appeal is the graceful, trim design, the general compactness and the good balance of the tractor, with just the right distribution of weight on the front trucks and drive wheels. The next thing that strikes you is the absence of exposed working parts; everything is enclosed as protection against the grinding action of dust and dirt.

And you are impressed by the flexible range of the drawbar, making it possible to pull a harrow, plow, binder or wagon with equal advantage and by the convenient pulley so placed that the tractor can be backed into the belt in a hurry, with no chance for the belt to drag on the ground or rub against any part of the tractor.

And coming down to more technical but nevertheless very important details—there is the throttle governor that regulates the fuel to the load; removable cylinder sleeves in the engine so that if a cylinder should become scored through the use of poor lubricating oil, for instance, a new lining can be put in at once, renewing the cylinder; centralized auto-type control, making this tractor as easy to handle as an automobile.

These are only a few of the desirable characteristics of the **International 8-16 Kerosene Tractor.** The catalog that we have ready to mail you will give you the rest. Or, see your International dealer and examine his sample 8-16 for yourself.

INTERNATIONAL HARVESTER COMPANY OF AMERICA (INCORPORATED)

Billings, Mont. Cheyenne, Wyo. Denver, Colo. Helena, Mon. Los Angeles, Cal. Portland, Ore. Salt Lake City, Utah San Francisco, Cal. Spokane, Wash.

Rid the Nation of the Profitless Dairy Scrub

(By J. C. McDowell, Dairy Division, U. S. Department of Agriculture.)

The scrub bull must be eliminated because he and his offspring can be supported only in those districts where there is a combination of cheap land, cheap feed and cheap labor, and I defy any man living to find any such location today. High-priced land, high-priced feed, and high-priced wages demand high-producing dairy herds; and a high-producing dairy herd must be a well-bred herd, because like produces like, and high producers cannot come from low-producing ancestry.

There are several kinds of inferior dairy cattle—the scrub purebred, the low-producing grade, and the just plain scrub. In various localities scrubs are known as native, mixed, mongrel, and piney-woods cattle; but no matter what alias they go under they are scrubs just the same, and should be treated as such.

What One Scrub Bull Did.

Why eliminate the scrub? Because the scrub cow is a low producer, and the scrub bull, if used, is certain to become the sire of a low-producing herd. For example: A scrub cow produced in one year's time, 146.8 pounds of butterfat. Her daughter, sired by a scrub bull, produced 126.3 pounds of butterfat. The granddaughter, sired by the same scrub, produced 99.7 pounds of butterfat. At that point the scrub bull was sold and a good registered bull was purchased to take his place.

What Purebred Sires Have Accomplished.

The scrub bull should be eliminated because high-grade dairy cows, if carefully selected, are large producers of butterfat, and because a good registered bull increases the production of a herd, even in one generation, out of all proportion to his cost. For example, the following figures from the New Windsor, Md., cow-testing association show the splendid results that come from using good registered sires in grade dairy herds. These figures show that in nearly every case the daughter excelled the dam in production of both milk and butterfat.

Of the 17 daughters of bulls owned by co-operative bull associations, 16 excelled their dams in butterfat production. On an average, the daughters produced 1144 pounds more milk annually than their dams, and 63 pounds, or 26.7 per cent more butterfat.

The average production of the daughters for the year was 6,919 pounds of milk, and 301 pounds of butterfat. The record of the highest-producing daughter was 410 pounds of butterfat, which was 209 pounds above the record of her dam, and yet the record of the dam was 41 pounds above the estimated average production of all the dairy cows in the United States.

Competition Demands Efficient Production.

The scrub must be eliminated because the increased demand for dairy products requires an increased production per cow, and a more economical production from a given quantity of feed. There is an indication, too, that the near future will see closer competition from foreign countries. Before the beginning of the European war, the imports of butter into this country were increasing rapidly. The war interfered with this movement, but there is every indication that the dairy business of this country will soon again be confronted with serious foreign competition.

Scrub dairy cattle must be replaced with high producers because the people of this country are learning the value of milk and of all other dairy products, and the demand will increase rapidly if that demand can be met with an adequate supply at a reasonable price—though not necessarily a low or a cheap price. "The laborer is worthy of his hire," and certainly the dairyman, who works from early in the morning till late at night, is worthy of fair play for his labor. On the other hand, the city consumer has a right to demand economical production. An increased production, due to selection, feeding and breeding, increases the wealth of the world without decreasing the prosperity of anybody in it.

Higher standards of living in the cities are causing the laboring masses to demand more milk for their children. Since prohibition went into effect, the ice-cream business has grown immensely, and many of the men engaged in physical labor are drinking milk with their meals, where they formerly used beer.

Buyers Demand Good Breeding.

Scrub dairy cattle should be eliminated from every dairy farm because buyers of grade cattle demand that the cows they buy must be daughters of purebred dairy sires and bred to purebred dairy sires. This is demanded by foreign buyers, who come to this country to buy our dairy cattle. It is also demanded by those buyers who come north from southern states, and by those who come East from western states. In fact, the time is coming, if it is not already here, when it will be almost impossible to find a market for scrub dairy stock of any kind. The demand for purebred dairy stock is also on the increase.

The records of one national association show that the number of its registered purebreds sold at public sales in the United States in 1904 was only 404. By 1910 it had grown to 2,072; in 1915 it was 6,441; and in 1918, 14,537.

Scrub sires should be eliminated immediately and good registered dairy sires should take their places, because improvement through breeding takes time. Increased production, due to better breeding, will not come until the next generation of heifer calves is old enough to become milk producers. For that reason, the dairyman who desires to improve his herd through breeding must look ahead. He cannot wait until competition from foreign markets and from other sections of his own country demands that he keep a better herd. He must look ahead and see that his herd will be improved in ample time to meet such competition.

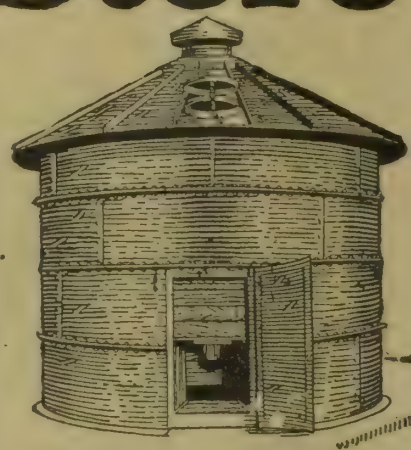
Dairy herd improvement, due to better breeding, is only a beginning of the improvements that will come on our dairy farms. Better breeding will be followed by better feeding, by intelligent selection, by proper raising of young stock, and by more attention to the marketing of dairy products and dairy animals.

Scrub dairy bulls should be eliminated because the bull association makes it possible for every dairyman to own a share in a good registered dairy sire. This has removed all excuses, if there ever were any, for using a scrub sire in a dairy herd.

Every State in the Scrub-Free Area.

A constant fight against the cattle tick has put a large portion of our Southern States into the tick-free area. A similar fight has been inaugurated all over the United States against scrub sires, against the scrub, the grade, the scrub purebred against scrub sires of every kind. Taking each State, county by county, we must eliminate the scrub and establish scrub-free areas in every State.

Store your Seed and Feed in CALCO Grain Bins



Seed and feed grain stored in Calco Metal Grain Bins is protected from fire, rain, waste and dirt.

Being constructed of rust-resisting Armco-American Ingot Iron, these bins can not burn as wooden granaries can.

They are leak-proof. No water can get to the grain. A perfect ventilating system keeps the grain sweet and clean and free from heating or mold.

Calco Bins prevent waste of grain by rats, mice and squirrels.

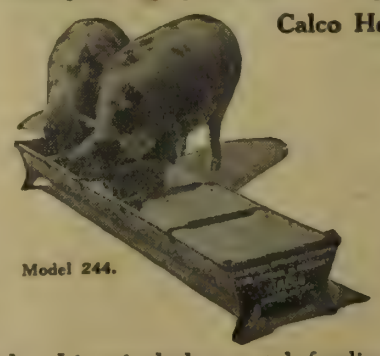
Order one of these bins at once and save your seed and feed from waste and save the cost of sacks.

Calco Self-Feeder for Hogs

This feeder gives plenty of feed to hogs without waste. Saves your time, for it holds enough to make it unnecessary to fill it often. Experiments have shown that self-feeding makes pork quicker and at less expense than hand feeding. Send for detailed description and price list.

Model 258

Calco Hog Trough

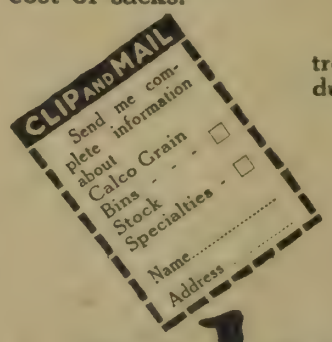


Model 244.

Replace your old, disease breeding wooden troughs with clean, sanitary Calco Hog Troughs. Calco Troughs cost less and last longer. They prevent disease and increase profits. Made in lengths from 24 inches to 120 inches. Range in price from $3.30 to $9.75. Made in smaller sizes for feeding and watering little pigs, turkeys and chickens.

The Calco Line includes metal feeding and watering tanks and troughs for hogs, cattle, horses, sheep and poultry. Made from pure and durable Armco-American Ingot Iron.

Write for description and prices.



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calco products

Up-to-Date Dairying in Humboldt.

(Written for Pacific Rural Press by Ralph Newman.)

Humboldt gets under your skin. It is different. I would like to rave about its forests, but the dairies are not there, and it is the dairy which concerns us now. These dairies, for the most part, are in the flats about Eureka, at Fortuna, Ferndale, Loleta, and Arcata, with some smaller districts.

Jerseys, Jerseys, Everywhere!

As you look down on the flats you rub your eyes. That is Holland down there—except for the cows. The cows are there, but not the right color. Jerseys, Jerseys, and then some more Jerseys, with a few Guernseys and a sprinkling of the Holland black and white. Quite a contrast to the Modesto district, in no wise like Holland, and yet with 90 per cent of the cow population black and white. Owing to the comparative isolation of the county and the predilection of the early dairymen, butterfat was the chief aim and the Jersey, the choice. One wonders with the growing consensary and milk products business, if the Holstein will nose out her daintier sister in time. Well, she will have some job doing it, and the present generation of Jersey breeders anywhere needn't spend much energy worrying about it. They do certainly grow Jerseys. Not so many purebreds, though there are some mighty fine ones, but herd after herd of remarkably high-producing grades so well bred up by the use of purebred sires that all they lack of being registered is a certificate.

The Wonderful Pastures.

The latter part of June and the cows wading in the lush native grasses and clovers! To be sure, things were at their best. A heavy rain early in June with another good one a week later had done wonders—aside from spoiling some hay. Whenever we asked a dairyman about feed, a grin cracked his face. Humboldt is the one place we have been where a fellow can indulge in a little optimism over the feed situation. Up to June there was some worrying—but that rain! It seemed to be the opinion that the pasture would hold and that the rain would insure the root crop for winter feeding. A member of the Farm Advisor's staff said he had gone "below" to contract 1000 tons of alfalfa, but the rains descended and he returned with the hope that the importation would not be necessary.

Speaking of Roots.

Many farmers were weeding and thinning—some still planting. And talk about roots! Beets, turnips and carrots galore—they are the mainstay for winter feeding. Everybody is doing it. May be they do grow to perfection up there. It is some work to grow them and feed them, to be sure, but just the same this man believes that we fellows with a straight alfalfa diet, or even with our silos, would do well to take stock of the root patches of our Humboldt brethren.

Concentrates Galore!

Humboldt in her commercial dairies feeds more concentrates than any other county in the State. More, probably, than the whole Sacramento Valley, barring purebred herds. Everybody feeds concentrates part of the time and many use them the year around. The popular thing now is a mixture of mill-run and cocoanut meal. There is a co-operative store at Fortuna now planning to bring cocoanut meal direct from the "islands" by the shipload.

Part of the popularity of concentrates may be accounted for by saying that the native hay and pasture are not as rich in protein as is alfalfa, but they are growing some alfalfa and it is not displacing the concentrates. The fact is you must "hand it" to these dairymen; they are the best feeders in the State.

The Labor Problem There, Too.

Yes, they have it, too. Once accustomed to the fawn-colored strings of cows, the thing to impress the observer from "below" (wonder if there is anything sinister in their use of that designation) is the chugging of the milking machines. Easily three out of every four dairymen visited used a machine. An attempt to save on labor and get the cows milked regularly is the answer. Milkers are getting $125 a month and board and are hard to find at any price.

A dairy up there is nothing but a dairy, so the usual practice is for a man to milk 20 cows, then work in the field six or seven hours, and then milk his string again before supper. All the men milk and all do field work. That is, they are supposed to. One man said, "I wouldn't mind the wages if I could find men who would really work." He and his young son were setting a pace as he talked because they were short of help. I doubt, though, if the situation is any more serious there than in other sections—it is bad enough everywhere.

A Land of Leases.

As the story was told, a bit here and a piece there, it seems that native Americans opened up Humboldt and were followed by the Dane and his dairy. Now the Dane is a dairyman. If the world has produced a better, the fact has escaped our notice. These men developed their feed, graded up their herds, built good barns and fences, and erected cozy, comfortable homes. There was an air of thrift and prosperity and contentment about the whole thing that made Humboldt famous in dairy animals. But for the past few years a change has been taking place. The men who made the industry by years of patient, faithful, intelligent toil, began to grow old, and feeling that they had earned the right to rest, began leaving the dairies for the quiet restfulness of the towns. (If you have ever run a dairy, you will find no sarcasm in this last remark. A dairy may look peaceful, but things are not always what they seem. I believe Carlyle somewhere referred to a place "like the sleep of a spinning top.") Some sold out but more leased for a term of years. It was becoming quite the proper thing when the war increased the demand and, to some extent, the price of dairy products, at the same time vastly aggravating the labor situation. Came the Portuguese clamoring for dairies. They began selling their cows and their land leases to the Portuguese at fancy prices. These people are not stumped by the labor problem. They marry part of it and grow the rest. "They"—these words are not mine; they are a direct quotation from a county official—"they live in shack, drive an expensive auto to the Sunday picnic, and work like h——, men, women and children." They certainly do work. Everywhere you can see them—women and little children—down on their knees in the root patches or up on the wagons pitching hay. Nor is their labor figured into the cost of production. "Why should I? They are my familee. I no hire them."

Portuguese Predominate.

These Portuguese can and do pay enormous prices for leases. Instances were given me of a 100-cow dairy with a five-year lease going to Portuguese at $40,000. And, so far, they have been making good.

It is a peculiar situation. The owner of the land, whose improvements are going to ruin as they always do under lease, is the goat. The Portuguese and the banker backing him are gambling in futures, though probably the banker is covered. The profiteer, if there is one, appears to be the fellow who sells his cows and his lease for enough to put him among the "plutes." Anyway, as the lowest estimate, 52 per cent of Humboldt dairies are leased, now largely to Portuguese, and still they come. Will the American and Danish dairymen who are left, be able successfully to compete in the production of milk with men whose "familee" does the work for board, room and an auto ride? It looks to an observer from "below" as though Humboldt has a problem as well as the rest of us. It is only a surmise, but possibly the men doing the least worrying about this phase of Humboldt's development are those in control of its great milk manufacturing plants. There are latent possibilities where the labor of women and children may be utilized without having to figure it into the cost of production.

The cattlemen of Kentucky have demonstrated the value of Sudan grass and cowpea pasture in times of drought. Clover and bluegrass were dead, but the first-named plants were growing and producing feed.

SAVE 25%

Feed Chopped Hay

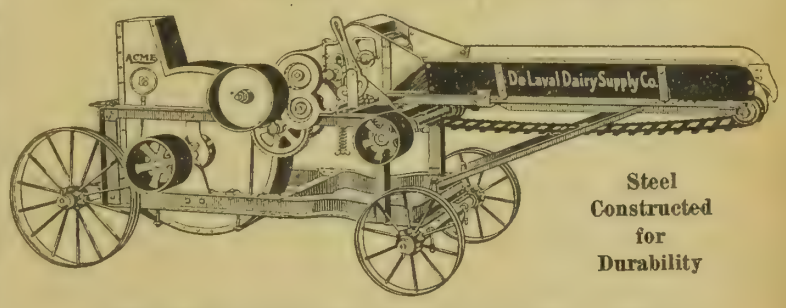
Ten feeding tests recently conducted by the University of Idaho proved that 57.5 tons of chopped alfalfa hay were equivalent in feeding value to 75 tons of long hay—a clear gain of 25 per cent. We will be glad to mail, upon request, the complete results to interested dairymen.

The results of this test were substantiated by a similar test carried out by the Oregon Agricultural College.

You can make this saving on your dairy if you chop your hay—a saving of from $4 to $6 on every ton you raise.

The ACME Cutter

WILL DO THE WORK



Steel Constructed for Durability

This machine will chop your hay and blow it into the barn, fill your silo and make alfalfa meal.

With a short hay crop in sight, this is the time to begin saving hay by chopping it.

First send for the Acme Cutter Catalog. Mailed upon request.

DE LAVAL DAIRY SUPPLY CO.

61 BEALE STREET, SAN FRANCISCO

TESTIMONIALS

"Cows increased in one week 3 per cent in milk."
A. L. McCULLOCH, Alpaugh, Cal.

"I never saw hogs do so well or grow so fast as on this molasses ration."
C. H. HARTWIG, Yuba City, Cal.

"It has enabled me to keep my stock in better condition at less expense."
J. M. HENDERSON, JR., Sacramento, Cal.

"Have one calf that refuses to drink new milk—prefers skim milk with molasses. What do you know about that?"
R. HECKLEY, Santa Rosa, Cal.

"It has been a great advantage in getting the stock to clean up the roughage."
H. H. AMES, Chowchilla, Cal.

"One cow will turn down the choicest handfuls of alfalfa hay unless it has been 'Molassed.'"
REDWOOD AYRSHIRE FARM, La Honda, Cal.

MOLASSES

cheaper than hay, but has same feeding value as corn or barley.

W. H. YOUNG COMPANY

58 Sutter Street, San Francisco, Cal.

Profiteering in Purebred Livestock

(Written for Pacific Rural Press.)

The word "profiteer" is a new one and has been heard very often in these days of H. C. L. To the most of us the term is like the proverbial "red rag to the bull" and causes much vituperative thought if not actual red-hot verbal expression. The terms "high price" and "profiteer" are perhaps more in our thoughts than anything else, unless it is the methods whereby we are going to provide the wherewithal to meet the aforesaid H. C. L.

A few weeks ago the influence of the livestock auction was severely arraigned in these columns and without question the writer had foundation for his views. A noted authority on livestock in the Pacific Northwest also expressed the view that in the not far distant future the auction method for the disposal of purebred livestock would disappear and all sales would be by private treaty.

Again, a well-known and popular breeder of swine has advocated the elimination of all sales of registered animals by any method except that of the auction, making the public sale the clearing-house for all surplus purebred livestock. This gentleman thinks that by this method gradually all inferior animals would be sent to the butcher and only those of actual merit, both individually and from the ancestral point of view, would be sold for the purpose of continuation of the species.

Abuses Will Creep In.

Now, who is right in this matter, it is hard to decide; and we cannot think the time ripe for discontinuing selling purebred animals by either method. Abuses there are in both systems without question, and it seems as though the public sale method would be the channel through which to prevent the profiteer from getting his unfair prices. However, a recent newspaper item gives $60,000 as the price paid for a boar. A few weeks ago it had the price of one at private treaty at $40,000.

These exhorbitant prices are not all confined to one kind of animal, nor to one locality. There are times, no doubt, when the individual worth of the animal is hardly considered so long as it is a reasonably good one, as the publicity is what is sought above everything else. In fact, every time the price becomes anywhere near spectacular, every effort is made to boost it to the limit.

The Spectacular Sales.

It is safe to say that hardly a murmur of dissatisfaction will be heard from the public so long as the sales are thought to be bona fide ones, but the feeling is quite general that in a majority of the spectacular cases the sales are not actual, and while animals may change hands the cash seldom does. The public cannot get away from the idea that many of such sales are made merely to lead them on and induce them to pay higher and ever hogher prices for what they buy; and to argue that such "boosting" sales never have taken place, we are not prepared to say, but we do believe that 99 per cent of the public sales of purebred livestock in California have been "on the square."

Jockeying in Private Sales.

Private sales, where the prices attain a level much above the ordinary, are also viewed with more suspicion than those made in the public sales-ring. So-called private sales have been made in the past, where the prices were higher than usual, even though the animals were exceptionally good ones, and it was discovered later that a mere exchange of animals had taken place with arbitrary prices fixed by the breeders.

It is seen, then, that both public and private sales are not above suspicion, but as a rule the majority of such exchanges are honest, and it is only when the price becomes unusual for a usual animal that people become doubtful about the transaction.

A Possible Safeguard.

It would seem that public sales of purebred livestock conducted under the auspices of a well-organized breed association should be one of the safest places for the average person to supply their needs along these lines. However, there are individual breeders who take pride in filling mail orders to the entire satisfaction of the distant buyer and selling to the uninitiated animals always "worth the money."

Some Timely Fly Repellants

Flies of various kinds, from the common housefly to the Texas horsefly, are a nuisance and a menace to health. Much has been written and spoken about "swatting the fly," but so far as killing them off by "swatting" is concerned, it is much like trying to empty the Pacific Ocean with a teaspoon, except the few that may slip past the alert keeper of the well-ordered houshold, and it always has seemed to the writer as those few were entitled to what benefits might accrue to them after having successfully passed the "keepers of the gates."

In order to reduce the fly menace as much as possible the rancher who owns livestock should keep the horse and cattle barns, pig houses and lots in as sanitary condition as possible. Stable manures should not be allowed to accumulate where flies can reach it and deposit eggs.

However, for all of the preaching and writing against the fly, with complete instructions as how to eliminate the pests, we still find them much in evidence about the farm buildings and it seems necessary to use some application on dairy cows and animals that are sick or wounded.

There are many preparations on the market that have merit but are generally quite expensive if something is needed for a large herd of cows. One that is published by the Utah Agricultural College is said to be very effective and is prepared as follows: 1 pound of common laundry soap, 4 gallons warm water (soft, if possible), 1 gallon crude petroleum and 4 ounces of powdered naphthalin. Shave the soap into the warm water and stil until dissolved. The naphthalin should be likewise treated in the petroleum. Then pour the two solutions together and agitate until a good emulsion is obtained. Apply with a brush or spray.

FUNDS FOR WOOL ASSURED.

Late advices by F. R. Marshall, Secretary National Wood Growers' Association, are to the effect that arrangements have been made with the Federal Reserve Board for financing the wool growers until a market for wool is re-established. It is the unanimous opinion of wool growers that the plan agreed upon was both practical and feasible.

A DANGEROUS PROCEDURE.

Animals that have died of disease are sometimes fed to hogs. This is a most risky practice. For intance, in one case a single drove of hogs showed lesions of tuberculosis. The owner was greatly nonplussed at first, but later remembered that some months before he had fed to his hogs the carcass of a cow which "never did very well."

The proper disposal of such carcasses is a matter of great import. They should be destroyed by burning or by burying deeply under a liberal application of quicklime. The former method is recommended by the State Department of Agriculture. The simplicity of the burning method can be obtained by writing to the Director of Agriculture, Sacramento, Cal.—State Dept. Agriculture.

LIVE OAK STOCK FARM

SHROPSHIRES
RAMBOUILLETS
and
AMERICAN MERINO
SHEEP

We have for sale this season 400 head rams, yearlings and 2-year-olds. All purebred. Will sell singly or in carload lots.

Also 15 Head Purebred Red Polled Yearling Bulls

For further particulars apply

F. A. MECHAM ESTATE
PETALUMA, CAL.

Announcement Extraordinary
FIRST REDUCTION SALE
THE THOMAS BISHOP CO. OF SAN RAMON, CALIF.
Offers for sale
700 PUREBRED (NOT REGISTERED) SHROPSHIRE EWES
with lambs of both sexes at foot

This offering is from the famous (International and Local) San Ramon Flock. They can be purchased as a whole or in lots to suit. Ewes can be seen on pasture, Sargents Ranch, near Bradley, California.

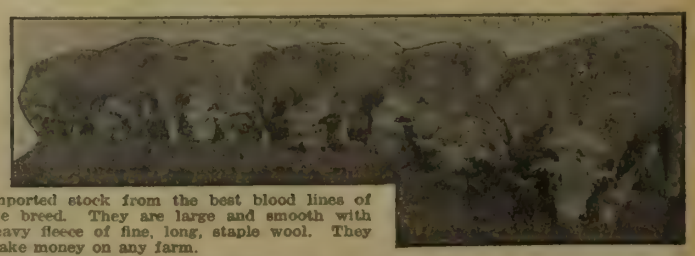
START A FLOCK AND RAISE YOUR OWN BUCKS

Intending buyers should make application for further particulars to

SUPT. FRANK RUTHERFORD —OR— THOS. BISHOP COMPANY
Phone—Bishop Ranch 166 Geary Street, S. F.
San Ramon, Calif. Phone—Kearny 4295

HILLCREST STOCK FARM
Shorthorn Cattle
Shropshire and Merino Sheep
RAMS AND BULLS FOR SALE
Single or in Carload Lots
T. S. GLIDE, Prop. Davis, California

KIMBLE RAMBOUILLETS



Imported stock from the best blood lines of the breed. They are large and smooth with heavy fleece of fine, long, staple wool. They make money on any farm.

Rams, Yearlings, and Older Breeding Ewes. Call or write for further particulars.
CHAS. A. KIMBLE, HANFORD, CAL., IMPORTER AND BREEDER

CLARK, HUNTER & CLARK
Livestock Auctioneers
915 I STREET, MODESTO, CALIF.
Registered Hog Sales a Specialty

IMMUNITY TO HOG CHOLERA LASTING.

Immunity to hog cholera has been proved to be lasting. Pigs varying in ages from one to six weeks old were simultaneously inoculated and exposed to the disease during a period of from five to nine months. Without exception they were found to be immune to hog cholera. No ill effects from the simultaneous inoculations were noted in the pigs, and no difference was evidenced in the immunity of pigs from immune and non-immune sows. One-week-old pigs received ten c.c. of anti-hog cholera serum, together with one-half c.c. virus. Those ranging from three weeks or over received from fifteen to twenty c.c. of serum and from one-half to three-fourths c.c. of virus.

In many cases, when animals experimented with had attained weights exceeding two hundred pounds, immunity was tested by the injection of five c.c. of virus. No cholera resulted. These experiments therefore prove that the simultaneous inoculation of young pigs is lasting and that immunity does not disappear at various stages of growth from weaning time until the animals have reached a weight of fifty to sixty pounds.—State Department of Agriculture.

CONEJO RANCH SALE.

Between fifty and seventy-five purebred Duroc-Jerseys and the same number of Hampshires will be included in the big two-day sale which has been announced by the Janss Investment Company on their Conejo Ranch for July 29 and July 30.

This will be one of the largest two-day sales ever held in California and arrangements are completed for the taking care of a very large crowd of visitors at the big ranch. A barbecue will be served on each day of the sale and special arrangements have been made by the company to provide transportation from their offices in Los Angeles to the ranch for out-of-town visitors.

As previously announced, the first day of the sale, July 29, will be devoted to the Duroc-Jersey breed, and July 30 to the Hampshire. The Hampshire sale will include brood sows, bred gilts and open gilts of the famous Conejo Ranch herd.

With Giant Wonder, sire Great Wonder and dam Grand Lady 6th; Big Model, sire Oakdale Model and dam Great Wonder's Lady; Pathfinder's Pride, sire Pathfinder and dam Pride of Elba, all recognized leaders, at the head of the Conejo herd, there is no doubt about the class of animals to be offered at this sale.

WYOMING WOOL GROWERS TO HOLD 1920 CROP.

Wool growers all over the country are wondering what has happened to them and what is the best way out. It is a very serious situation from any viewpoint when the price on a product is suddenly dropped from the peak to an unknown point. We do not mean to say that the price of wool became a minus quantity, but simply its actual value was unknown for a time.

Wyoming sheepmen have, according to a late report given below, decided to hold their wool for better prices: "High prices for clothing and woolen goods will continne next fall and winter, if the action of wool growers of Natrona county, Wyo., center of the largest wool-producing region in the United States, is any criterion.

"It is reported on good authority that the growers in that section have agreed to store their 1920 clip, approximately 5,000,000 pounds of wool, because of low prices prevailing in the wool market.

"At a meeting recently held here, it is understood, the woolgrowers were assured by leading banking institutions of the State that sufficient financial assistance would be forthcoming to enable the wool growers to withhold the 1920 production until higher prices were obtainable for the raw material."

AUCTION SALE

CONEJO RANCH PUREBRED

Duroc-Jerseys and Hampshires

JULY 29th and JULY 30th

The first day of this big sale will be for Durocs exclusively—the second day the Hampshires will be offered. These real big types of both breeds in the Conejo Ranch Herds make valuable foundation stock for farmers, fancy breeders and pork producers.

PRIZE WINNERS AT ALL FAIRS

This is **GIANT WONDER**, one of our leading Duroc Jersey herd boars. This big fellow's sire was Great Wonder and his dam Grand Lady 6th. This boar is an outstanding individual and his get will be seen at the Ranch. A great number of the gilts and sows in the sale are bred to him.

This is our Hampshire Boar **CONEJO PRINCE**. This boar was raised on our own Ranch and was sired by our famous champion boar Duke's Allen and his dam was Pines Pride 4th. They go back to Manley's Duke and Walkover. If you want to see a big growthy type of Hampshire, this is one of them.

Make arrangements to attend. Lunch will be served at the ranch both days. If you desire transportation from Los Angeles to the Ranch, let us know and be sure to come to 404 Metropolitan Building, 5th and Broadway, when you arrive in the city. If you want a catalogue, write us at once, and an illustrated catalogue will be mailed to you. Remember the days—July 29th for Duroc and July 30th for Hampshires—the famous pure bred stock of the Conejo Ranch.

Los Angeles Address:
JANSS INVESTMENT COMPANY
404 Metropolitan Building,
5th and Broadway

Conejo Ranch

Newbury Park, Ventura County

BIG-TYPE DUROCS

Entire Herd For Sale.
Herd Boar, "Cherry Lady's Defender."
Two fall boars coming right along. They are long, tall, with well-arched backs, good feet, and are priced to sell. Weanlings, $15, either sex. Bred sows and gilts. Will ship on approval and sell on terms.
Write for prices and terms.
ELLIS & KELLOGG, Napa, Calif.

ASK YOUR DEALER FOR

El Dorado Cocoanut Oil Cake

for Milk Cows and Chickens and Young Pigs and Hogs. Cheapest food in the market today. If your dealer doesn't carry it, address
EL DORADO OIL WORKS
433 California Street, San Francisco

DUROC JERSEY BRED SOW SALE

WINSOR'S GIANT ORION

An extremely uniform bunch of Modern, BIG-TYPE yearling and tried sows, sired by Great Orion Sensation, Orion Sensation Pathfinder, Great Model, etc.

WINSOR'S GIANT ORION

The most popular proven big-type sire in California.
The largest Duroc on the Coast.
The largest O. C. K. boar in the world.
A son of the 1916 world's grand champion.

GREAT SENSATION 3rd

A half brother of Great Orion Sensation.
The highest boar ever sold in the West.

This is the last chance to buy sows bred to him that are backed by Winsor Ranch service.. We sold him for eight thousand dollars.

LOS ANGELES--JULY 28th

WINSOR RANCH Bonita, California

Dispersal Sale of
LAMB'S DUROCS

At CERES, CALIF.
Wednesday, July 21st, 1920

80 HEAD IN THE OFFERING

Consisting of

BRED SOWS AND GILTS, HERD BOARS
OPEN GILTS AND YOUNG BOARS

Sows bred to Orion Cherry Pathfinder, a big grandson of Pathfinder and Orion Cherry King Jr., and Lord's Orion Cherry King, First Prize Senior Yearling at Sacramento, —— 1919 ——

CATALOGUES OUT IN A FEW DAYS

ELMER LAMB, Ceres, Cal.

Duroc-Jersey Hogs for Sale

BOARS AND GILTS
BRED SOWS
SOWS WITH LITTERS

DIABLO STOCK FARM,
E. F. PETERSEN, Supt., Danville, Cal.
G. W. EMMONS, Owner, Oakland.

They are the large type and the best blood strains to be had anywhere.

HERD BOARS AND SOME OF THE SOWS

Lucy Orion's Model
California's Defender
Diablo Orion Model
Defender Colonel 70th
Lucy Orion's Mayflower
Great Wonder I Am Gano
Pathfinder's Queen
Prize of Tulare Belle
Twin Oaks Attraction
Lady Defendress 70th
and 50 others

WEANLINGS, $15.00 EACH AT RANCH.—A large number always on hand to choose from. Crates, $2.50 each, refunded when returned prepaid in good condition.
MAIL ORDERS SOLICITED. SATISFACTION OR MONEY BACK.

HOME OF $1500 SOW
ORION'S CRIMSON LADY

A-1 Durocs

Best-Breeding Big Type

J. P. WALKER, VISALIA, CALIF.

Livestock and Dairy Notes

LIVESTOCK SALES DATES.

July 21.—Elmer Lamb, Ceres, Duroc-Jerseys.
July 28—Winsor Ranch, Los Angeles. Duroc-Jerseys.
July 29, 30—Conejo Ranch, Newbury Park Duroc-Jerseys and Hampshires.
August 11—Butte City Ranch, Butte City. Shorthorns, Shropshires, Berkshires and Shetland Ponies.
August 14. — Merced Co.. Poland-China Breeders' Ass'n. Merced.
August 28.—Stanislaus Holstein-Friesian Association at Patterson Fair.
Sept. 27 — McCarty-Shinn-Elliott. Tulare. Poland-Chinas.
October 6.—Kings County Poland-China Breeders' Association, Hanford.

The Dairy.

Frank Guerin bought of Walter F. Mitchell a registered Holstein cow on test milking over 90 lbs.

The total agricultural production for Tulare County in 1919 was $6,274,-672. Of this sum $2,339,709 was for butter alone.

The Ball Place Holstein herd is coming on in fine shape. Mr. Ball has 3 cows on semi-official. One of these, Trout Farm Pontiac Starin, made 4.39 lbs. butter in 2 days, 6 months after calving.

Just as a kill-joy for us who have been elated over the fine averages made at recent California Holstein sales, remember that one April sale in Minnesota averaged $2022 a head and another, with 137 head from one herd, averaged $1148.

Gist & Sons have a very fine prospect for junior herd sire in the son of Carnation King Sylvia out of granddaughter of Colantha Johanna Lad with record of 17 lbs. as a 2-year-old. Besides his great production breeding he is a fine individual.

The Escalon Holstein Breeders Association was formed recently with J. C. Campbell, President, and F. A. Darling, Secretary. There are a number of enterprising members and the objects of the association are the boosting of the breed and mutual interests of breeders.

The American Guernsey Cattle Club, Peterboro, N. H., announce that after July 1st registration fees for animals under 6 months of age shall be $3 to non-members; to members $2. For animals over 6 month of age on which birth report has not been filed within 30 days, $10. Transfers $2.50.

Frank Guerin of Visalia recently shipped to Burr Farms, Los Angeles, K. P. Tola, his 36-lb. record cow, and 2 daughters of Sir Veeman Hengerveld with records of 21 and 22 lbs. respectively as 2-year-olds. The latter are to be bred to King Pontiac 20th, the $12,000 bull, and K. P. Tola to Sir Veeman.

Every cow in the H. M. Cross herd of Holsteins is on test and milking from 50 to 90 lbs. per day under very ordinary dairy conditions. Hay only is fed. Ground is now being broken for corn and silos will be erected this fall. John D. Yates has recently taken charge of the Holsteins, leaving Mr. Stahl his entire time for the Polands.

R. L. Holmes, one of the prominent breeders of Holsteins in Stanislaus County, with headquarters at Modesto, will show 16 head at the fairs this fall. His calf herd will be an especially strong one. In order to properly care for his fast increasing herd, Mr. Holmes persuaded C. B. Walker, an eastern dairy expert, to come to California and take charge of the Holmes herd.

Grapewild Farms Guernseys are making good at the milk pail. Fourteen are on test at this time. One has just completed a record of 681 lbs. of fat in 1 year. A 2-year-old daughter of Bullion of Edgemoor, the first to be put on test, made 437 lbs. fat in 1 year. A daughter of the Gov. De Cagne made over 500 lbs. fat. This sire has now over 100 daughters in advanced registry. Mr. Humphrey greatly regrets the loss of his junior herd sire, Bullion of Edgemoor, who died recently as the result of heart trouble brought on by swallowing a nail. He has 14 of his daughters in his herd.

Swine and Swinemen.

John Bernstein sold a registered Poland China boar to J. A. Arthur of Clovis.

Berkshires in England sell for good prices, as the reports on a recent sale show an average of $575 for 62 head.

The Merced County Poland China Breeders have changed the date of their summer sale from August 21st to August 14th.

Choice light and medium hogs, 170 to 225 lbs., sold in Chicago last week at $16.25 to $16.50 with big packing sows at $13.50. Some "spread."

Lard in Chicago is considered the cheapest article of food at present. If the foreign demand should increase, it is thought the price would advance sharply.

The Ortega - Underhill Rancho breeders of Hampshire swine announce a barbecue at their ranch near Santa Barbara on Wednesday, July 14th.

A Poland China pig in the hands of an Indiana pig club boy gained 62 pounds in 23 days. The ration consisted of shelled corn, tankage, red dog flour, oil meal and skim milk.

Fred F. De Vore has published a Duroc directory which includes the names and addresses of some twenty thousand breeders of the popular red hog. It also contains much information and statistics.

W. M. Way & Son of Modesto will show Durocs at the fall fairs. They have some good pigs for the futurity classes. A litter of nine that weighed 34 lbs. at farrowing time are coming along according to promise.

The foreign demand for pork is increasing gradually, due to an improvement in foreign exchange. Great Britain still has a considerable quantity of pork products in storage in the United States, but is beginning to buy in small quantities, according to the Institute of American Packers.

A prominent breeder of Duroc Jerseys in California writes that in a recent letter received from a breeder of the red hog in Nebraska he quotes nothing under $1250 in bred sows and gilts and he has 90 to sell. The average farmer will have to continue breeding scrubs as he can't stand such prices.

Buckland & Son report a noticeably increased demand for good Poland China breeding stock. They made recent sales as follows: Three March gilts to Santa Barbara Pig Club. Boar pig to Manuel Jardine of Isleton. Boar pig to W. A. Snelson of Chowchilla, and 2 boars to local farmers and breeders.

W. L. Haag & Son, Poland China breeders of Hanford, are not discouraged with the hog situation at present. They pasture their hogs on alfalfa with the addition of one pound of grain daily until within 6 weeks of marketing time, when they are put on full grain feed. With this method a profit is returned. Of course it is necessary to have hogs of Haag feeding quality for them to show a profit at present.

Mark Bassett, pioneer Poland China breeder, has retired from the ranching and Poland-China business, having turned the ranch and stock over to his three sons. The firm henceforth will be Bassett Bros. Archie Bassett, well known by all Poland China breeders, will have charge of the great herd of Polands which he has helped his father develop. Bassett Bros. recently received from the east a service boar sired by Imperator.

"That the Berkshire hog is rapidly gaining friends and is easily maintaining its lead for supremacy as California's leading breed of swine is attested to by the fact that during the past 60 days more than 45 bred sows have been placed on farms where heretofore no hogs have been kept or, if any, some other breed."

This is the report coming from the Western Berkshire Congress as the result of their latest breed promotion sales.

Beef Cattle.

The San Jose committee of cattlemen, after a long session with the executive and marketing committees of the California Cattlemen's Association in San Francisco, voted for the adoption of resolutions endorsing the association in urging an immediate renewal of the campaign to bring the association's membership to 100 per cent. It was agreed that two menacing factors in the beef market today were the slaughter of half-fed cattle and diseased cattle.

(Continued on page 63.)

LIVESTOCK DIRECTORY.

Rate 3½ cents per word each issue.

SWINE.

Duroc-Jerseys.

HORINE'S DUROCS—A few very smooth, high-backed, straight-legged Great Orion gilts, bred to a great yearling son of Pathfinder for fall litters. I will sell these animals on a basis that any farmer can take advantage of. I guarantee satisfaction, breeding and a reasonable price. If you want to start with the best, at a figure within your means, drop me a line. Easy terms to reliable people. Geo. L. Horine, Winton, Cal.

HOGS—Duroc-Jersey, big-type, registered, Brookwater blood lines; 6 bred gilts due to farrow August—$150 each; will weigh 300 and over; also 5 brood sows, Eastern and California bred, three and four years old; will weigh 600 and over—$200 each. Must be sold at once. Apply Sells Ranch, P. O. Box 88-A, Route 2, Merced, Cal., or 1010 Claus Spreckels Bldg., S. F.

DUROCS—BIG-TYPE—HIGHEST QUALITY—popular blood lines. Herd headed by Johnson's Defender, Jr, and Western Pathfinder. Bred sows and gilts and young boars for sale at moderate prices. Greenwood Farm, Witherow & Stafford, Live Oak, Cal.

BIG-TYPE DUROCS—Herd headed by California Orion King. Am offering excellent young boars at right prices. Inquiries invited. Harvey M. Berglund, Dixon, Calif.

WINSOR RANCH DUROC BOARS—Big-type utility boars for farmer trade; priced to move. R. K. Walker, Swine Dept., Morris C. Allen, Ranch Manager, Bonita, San Diego, Co.

JACK LONDON RANCH, Glen Ellen.—Exceptionally good weanlings. Bred sows and gilts. One good yearling boar and one fall boar. Prices reasonable.

ROCSTEIN RANCH DUROCS headed by Lord's Orion Cherry King. Breeding stock for sale at all times. W. M. Way & Son, Rt. 1, Box 320, Modesto.

BARGAINS in bred sows and gilts. Pathfinder and Great Wonder I Am blood. Derryfield Farm, Capital National Bank Building, Sacramento, Cal.

DUROC-JERSEYS — Fine big-type gilts, tried sows and boars, Eastern and California bred. H. P. Slocum & Son, Willows, Calif.

REGISTERED DUROCS—Choice gilts and weanlings, either sex. Breeding and satisfaction guaranteed. H. E. Boudier, Napa.

DUROC-JERSEYS — Am offering registered pigs, April farrow, either sex. Lowell Beaver, R. "C," Box 397, Fresno, Cal.

BIG-TYPE DUROCS — Gilts and boars of Winsor's Giant Orion breeding. Falfadale Farms, Perris, Calif.

DECEMBER AND MARCH DUROC BOARS—Pathfinder breeding. Sterling Smith, Route 1, San Diego.

FOR THE BEST in Durocs, write June June Acres Stock Farm, Davis, Cal.

Poland-Chinas.

TOHOQUA POLAND-CHINAS—Strictly big type. Junior and Grand Champion sow at Glenn County Fair. Young breeding stock to sell; bred right, grown right and priced right. Ferguson & McKaig, Orland, Cal.

ELDERSLEY AND SHADY BROOK Farms big-type Poland-Chinas that make money for the Feeder, the Farmer and the Breeder. Prices reasonable. J. H. Ware, Brown's Valley, Calif.

BRED GILTS for sale. A few choice ones bred for fall farrow, to a good son of F'Big Jones, the Iowa 1920 Grand Champion. N. Hauck, Alton, Humboldt Co., Cal.

J. F. McSWAIN, Breeder of Poland-China hogs. Herd headed by Big Model Fellow, Reserve grand champion 1919 State Fair. Young stock for sale. R. 3, Merced, Cal.

REG. POLAND-CHINAS — large type. Weaned boars or gilts, $15.00; also boars ready for service. Satisfaction guaranteed. J. E. Thomas, Gilroy, Cal.

WAUKEEN HERD POLAND-CHINAS — Home of King's Big Bone Leader. A few service boars for sale. Les McCracken, Ripon.

LAKESIDE STOCK FARM—Large, smooth and big-boned Poland-Chinas. Geo. V. Beckman & Sons, Lodi, California.

REGISTERED POLAND-CHINA SWINE—Prize-winners. Finest stock in the State. M. Bassett, Hanford, California.

REG. BIG TYPE POLAND-CHINAS—Service boars and weanling pigs J. H. Cook, Paradise.

LIBERTY HERD—Service boars. July weanlings. J. W. Raymer, Soledad.

LARGE TYPE POLAND-CHINAS — Winton Poland-China Farm, Winton, Cal.

POLAND-CHINAS—Strictly large type. J. F. Lehman, Lodi, Cal.

Berkshires.

BRED GILTS.

Sired by Mayfield Rookwood 2d, a Grand Champion Boar, out of 600-700 lb. sows, and actually bred to "ACHIEVER," our English Blood Boar, the Sire that puts more bone and pork-making qualities into his pigs.

Priced reasonably and absolutely guaranteed. Castleview Ranch, Santa Rosa, Calif.

TWO SOWS and an unrelated boar for $100. These are purebred registered Berkshires, sired by Grand National boar Baron Duke 201st and Rincon's Rival 2nd; also a grand champion, Baron Duke 201st is dead and this the last opportunity to secure pigs from one of the greatest boars of the breed. The pigs are from 700 pound sows. They are guaranteed to please or your money refunded without question. Sandercock Land Co., 703 Market St., San Francisco. In charge of Natomas Land Sales.

ANCHORAGE FARM BERKSHIRES
Orland, Calif.
HERD BOARS—STAR LEADER, Junior and Reserve Grand Champion of the World. The Grand Champion carload of barrows, over all breeds, at the San Francisco Live Stock Show, was sired by a son of Star Leader, NATOMAS BARON DUKE, grand champion of California. For sale, bred gilts, open gilts, young boars and weanling pigs. Write for booklet, prices and list of sows.

BERKSHIRES — Purebred registered — 4 bred sows, beautiful animals, will farrow soon; a wonderful "Star Leader" boar—a real show animal as good as any in the State. To close out am offering this choice stock at an extremely low price. A special offer for the lot. Wm. C. Laux, Morgan Hill, Cal.

SOW PIGS and Boar Pigs sired by Ames Rival 118th, Ames Rival 70th, Ideal Royal Lee, Champion Masterpiece 8th, Escalon Majestic and Achiever, and out of prize-winning sows. A postal will bring prices. Geo. A. Stingle, Lark Meadow Ranch, El Monte, Cal.

GRAPE WILD FARMS—Berkshires—Guernseys. Big-type Berkshire Boars of serviceable age, sired by Big Leader—greatest son of Grand Leader 2nd. Panama-Pacific Grand Champion. A. B. Humphrey, Prop., Escalon.

BERKSHIRES—We are compelled to reduce our herd, owing to green feed shortage. Write us today. R. J. Merrill & Son, Morgan Hill, Cal.

QUALITY BERKSHIRES — Young stock, both sexes. Calac Orchards, Geo. P. Upham, Martinez.

REAL GOOD BERKSHIRES — Cholera immune. Frank B. Anderson, Sacramento, Cal.

CARRUTHERS FARMS' BERKSHIRES — Cholera immune. Live Oak, California.

Chester Whites.

CHESTER WHITES — E. E. Fulton, Fair Oaks, Cal.

Hampshires.

REGISTERED HAMPSHIRE HOGS—"Belted Beauties" need no apology. Pigs, young boars, gilts and sows for sale. Uneeda Hampshire Swine Farm, Gardena, Calif.

FOR IMMEDIATE SALE—A few choice registered Hampshire swine. Both sexes. J. M. Christen, Pacheco, Cal.

DAIRY CATTLE.

Holsteins.

OAKDALE HOLSTEIN FARM, Pacheco, Contra Costa Co., J. M. Christen, Prop., Breeder of registered and high-grade Holstein cattle and purebred Hampshire swine.

EL DORADO HERD OF HOLSTEINS — Alex. Whaley, Tulare, California.

TOYON FARM ASSOCIATION
UNDER STATE AND FEDERAL SUPERVISION
SMALL FOUNDATION HERDS, HEIFERS and BULLS
PERFECT IN HEALTH, RIGHT IN TYPE, PRODUCTION AND BREEDING
MILLS BLDG., SAN FRANCISCO
Farms at
BRENTWOOD and LOS ALTOS
350 HEALTHY HOLSTEINS

THE LEWIS COMPANY BAYWOOD HERD
Bulls from yearly record stock.
Health under State supervision.
Terms on purchases if desired.
Herd Sire: Ormsby Segis Marie Lad.
Martin Zgragen, Herdsman
Hollister, California
THE LEWIS COMPANY, Owners
The Lewis Building, San Jose

YOUNG BULL by grandson of Tilly Alcartra, out of dam with good record. His half sister milking 68 lbs. per day as senior yearling. Also bull calves. H. M. Cross, Merced.

THE VICTORY HERD—Registered Holstein cattle and Duroc Jersey swine. H. E. Spires, Hillcrest Farms, Caruthers, California.

PALO ALTO STOCK FARM, Palo Alto, breeders of registered Holsteins. Heifers and service bulls. Reasonable prices.

CREAMCUP HERD — Registered Holsteins. Pontiac bull calves. M. Holdridge, Rt. A, Box 437, San Jose.

REGISTERED YOUNG HOLSTEIN Bulls from high-testing dams. E. Peterpostin, Hughson, Cal.

REG. HOLSTEINS—A. W. Morris & Sons Corp., Importers and Breeders, Woodland, Cal.

REGISTERED HOLSTEIN-FRIESIANS — Both sexes choice stock; tuberculin tested. Sunnybrook Ranch, H. H. Sisson, Mgr., Willits, Cal.

REG. HOLSTEINS, both sexes. World's record backing. Kounias Reg. Stock Farms, Modesto, Cal.

F. H. STENZEL, SAN LORENZO—Breeder of Registered Holsteins. High test producers.

REGISTERED HOLSTEINS — Best blood lines of the breed. R. L. Holmes, Modesto, Cal.

CHOICE HOLSTEIN bulls for sale. No females. Millbrae Dairy, Millbrae, California.

GOTSHALL & MAGRUDER — Breeders of registered Holstein-Friesians. Ripon, Calif.

Jerseys.

SERVICE JERSEY BULL, bull calves. Financial King blood, Chester White boars, prize winners. Best blood, type, production. N. H. Locke Co., Lockeford, Cal.

SUNSHINE FARM JERSEYS—No females for sale. Bulls from high-testing cows for sale. E. E. Greenough, Merced.

JACK LONDON RANCH, Glen Ellen—Two fine Jersey bulls, one ready for service.

Milking Shorthorns.

REGISTERED MILK AND BEEF SHORTHORNS, bulls and heifers for sale; catalogue free. Thomas Harrison, Santa Rosa Stock Farm, Santa Rosa, California.

INNISFAIL HERD MILKING SHORTHORNS—Young stock for sale; both sexes. Owned by Alexander & Kellogg. Leased by J. D. Rowe & Son, Davis, Cal.

BREEDERS OF REGISTERED SHORTHORNS—Milk strain; choice young stock for sale. John Lynch Ranch, Box 321, Petaluma.

Ayrshires.

ELKHORN FARM AYRSHIRES — Choice young bulls at reasonable prices. J. H. Meyer, 440 Montgomery St., San Francisco, Calif.

STEYBRAE AYRSHIRES — Registered; all ages. E. B. McFarland, 414 Claus Spreckels Building, San Francisco, Calif.

NORABEL FARM AYRSHIRES—Le Baron Estate Co., Valley Ford, Cal.

Guernseys.

A FEW REGISTERED Guernsey cows for sale tested by the State Veterinarian and found free from tuberculosis. Address E. R. Frey, Byron, Cal.

BEEF CATTLE.

SHORTHORNS—The foremost beef breed—Have a limited number of stock for sale, both sexes. If you wish to start a small herd I can probably supply your needs. T. T. Miller, Hollister, Cal.

ALAMO HERD REGISTERED HEREFORDS (founded by Governor Sparks). Herd and range bulls. Reasonable prices. W. D. Duke, Gazelle, Siskiyou county, California.

RANCHO SAN JULIAN SHORTHORNS—Purebred range bulls, unregistered, for sale. Estate Thos. B. Dibblee, Santa Barbara, or Lompoc, Calif., John Troup, Supt.

HEREFORDS—Sierra Vista Herd, Minturn, California. Over 100 registered animals. Fairfax and Repeater bulls head the herd. On highway.

THE NEVADA HEREFORD RANCH—Jno H. Cazier & Son Co., Prop., Wells, Nevada. Reg. Hereford cattle. Breeding stock for sale.

JACK LONDON RANCH, Glen Ellen—Shorthorn bull ready for service, and some good bull calves.

ABERDEEN-ANGUS cattle of quality and breeding. Lilac Ranch, Escondido, Cal.

SIMON NEWMAN CO., breeders of Registered Herefords, Newman, California.

HEREFORDS — Mission Hereford Farm, J. A. Bunting, Prop., Mission San Jose, Cal.

REGISTERED HEREFORDS—H. H. Gable, Diamond G Ranch, Esparto, California.

GEORGE CALLAHAN—Breeders of registered Herefords. Milton, California.

GEORGE WATTERSON — Breeder Registered Herefords. Bishop, California.

REGISTERED SHORTHORNS — Fair Oaks Ranch, Willits, Calif.

SHORTHORNS — Carruthers Farms. Live Oak, California.

SHEEP AND GOATS.

F. A. MECHAM ESTATE, Petaluma, Cal.—Breeders and importers of Shropshire, Rambouillets and American Merinos, both sexes. Also Red Polled cattle. Take electric car at Petaluma or Santa Rosa for Live Oak Ranch.

FOR SALE—Rambouillet rams and ewes—purebred; the very highest grade of large smooth body; heavy shearers; the wool and mutton type. Immediate delivery of individual or carload lots. You can find none better or of higher grade. Address Glenn, Cal. Location, 8 miles south Hamilton City, 1 mile west Ordbend. Windell Orchards Co.

FOR AUGUST 15TH DELIVERY I offer 100 Rambouillet Ram Lambs and a few yearlings, all from registered rams of most noted breeders of America and from big-boned, smooth, heavy-shearing, purebred ewes. Special rates on the lot; also a 3-year-old registered Butterfield ram for sale. W. H. Guscetti, Loyalton, Cal.

WRITE ME for early Rambouillet ram lambs, ready for light use, by September 1. Also a few yearlings. Carl Lindheimer, Woodland, Cal.

HARRY L. HUSTON, Winters, Calif.—breeder and importer of Shropshire sheep. Stud and range rams. Prices on application.

J. R. BLOOM, Dixon, Calif.—Twenty-five years breeder of purebred Shropshire sheep. Rams for sale. Single or carload lots.

FOR SALE—Yearling Southdowns. Twenty-five rams, thirty-eight ewes. Mary S. Crane, Route 3, Box 353, Santa Rosa, Cal.

FOR SALE—Purebred Shropshire buck lambs and long yearlings. Address C. D. Dean, R. F. D., No. 1, Yuba City.

FOR SALE—6 Purebred Hampshire Down Yearling Rams. Elmer Byrns, Woodland, Yolo Co., Cal. Phone 58F2.

DORSETS AND ROMNEYS — Dorset ram lambs for sale. John E. Marble, South Pasadena, California.

HARVEY S. VAN VLEAR, Lodi, Cal.—Breeder and importer of Registered Hampshire sheep.

CALLA GROVE FARM, MANTECA, CAL.—Breeders and importers of Hampshire sheep.

KAUFKE BROS., WOODLAND, CALIF.—Breeders and importers of Hampshire sheep.

FOR SALE—600 two-year-old Merino ewes. Swall & Wilson, Box 742, Bishop, Cal.

CHAS. KIMBLE—Breeder and importer of Rambouillets. Hanford, California.

BULLARD BROS., Woodland, Calif.—Breeders and importers of Rambouillet sheep.

DR. A. S. ALMEIDA, Dixon, Cal. Reg. Shropshire sheep.

MISCELLANEOUS.

BUTTE CITY RANCH
SHORTHORN CATTLE, SHROPSHIRE Sheep, Berkshire Hogs, Shetland Ponies, Bronze Turkeys, White Plymouth Rocks. Stock for sale at all times. Next sale all breeds, Wednesday, August 11, 1920, at ranch. W. P. Dwyer and W. S. Guilford, Box P, Butte City, Glenn county, California.

FOR SALE—39 High Grade Holstein and 30 High Grade Jersey Milk Cows, mostly second and third calves. Both herds in A-1 shape and money makers. The reason for this sale is the farms are to be put to fruit. Farm Owners' and Operators' Association, 915 10th St., Modesto, Cal.

FEEDERS—Can furnish pigs in carload lots under 100 lbs. in weight, thin hogs to 150 lbs. or better. Segregated or mixed lots. Prices right. F. R. Donovan, 154 18th Ave., San Francisco, Cal.

SIX BORDER SCOTCH SHEEP DOG Puppies, imported from New Zealand. Highly bred stock. Dogs, $30. Females, $25. Ben Shaw, Hollister, Calif.

CHOICE STOCK EWES AND BUCKS. Also herding Collie dogs. John G. Mee, St. Helena, Calif.

CUTS CALF COSTS
AN-FO BRAND CALF MEAL
From Your Feed Dealer, or
ANIMAL FOOD CO., OAKLAND

THE MOST PROFITABLE BROOD ANIMAL ON THE FARM
THE OLD RED SOW
She Is No Slacker, but Does Her Bit and Guarantees Returns on the Investment.
SHE IS ALL THIS BECAUSE
The Duroc sow reproduces more rapidly.
The Duroc sow is a good mother.
The Duroc sow is a wonder grazer.
The Duroc sow is a prepotent breeder.
The Duroc sow is an easy feeder.
The Duroc sow is the most popular.
SHE FEEDS THE WORLD, PAYS DEBTS AND MAKES PROSPERITY.
For information relative to DUROC-JERSEY HOGS, write to
S. E. WHITING, Secretary-Treasurer
California Duroc-Jersey Breeders' Ass'n
R. R. 4, Box 810, SACRAMENTO, CALIF.

DIGESTER TANKAGE
Send for Sensible Folder on Feeding Hogs
WESTERN MEAT COMPANY
Animal Food Dept. 704 Townsend St., San Francisco

Livestock Queries and Replies

Barbed Wire Cut.—My horse was badly cut on barbed wire. The healing process promises to be a long one. What would you recommend as a healing powder and fly repellent?—G. E. J., Paso Robles.

Healing of a wound cannot really be hastened only to keep it clean. First, see that no foreign substance remains in the cut or laceration after it is made. Then see that none gets in. Trim off hair and any ragged edges. When first made wash out with corrosive sublimate (bichloride of mercury), 1 to 1000, or carbolic acid, 1 to 30 solution. It is not generally best to sew or suture the wound, as the stitches would probably tear out. Be careful that good drainage exists so that no pockets of pus can form. Keep pus and all secretions that might run out over healthy skin washed off with a solution of coal tar disinfectant such as kreso, creolin, etc. This last solution may be used in place of the bichloride of mercury or carbolic acid solution if they are not available. Now comes the healing powder (also called "dusting powder): Tannic acid, 1 part, and air-slaked lime, 11 parts. In South Dakota, thirty-five years ago, when the prairies were being fenced off with barbed wire and wire cuts were very numerous, air-slaked lime was the universal remedy. A healing powder given in "Disases of the Horse," published by the U. S. Department of Agriculture, recommends iodoform 5 parts, sugar 95 parts. Tannic acid, 1 part, idodoform, 3 parts, where the suppuration is excessive is also efficacious. Keep the animal in a cool, clean place and apply some good fly repellent, such as will be found in another column. Tie horse so it cannot bite the wound.

Molasses a Stock Feed.—I would like to know the feeding value of molasses when fed to milk cows, especially when fed on straw?—G. V. E., San Marcos.

Molasses, such as is advertised in the agricultural papers, has a high feeding value from the carbonaceous side of the question. The cane and beet molasses are about equal, but the beet molasses contains mineral salts that makes it very laxative when fed in large quantities. Cane molasses combined with straw alone would probably give fairly good results although not as much of the feeding value of the straw would be used as though it was fed by itself, but more milk would be obtained by the combination. Straw, however, is a variable proposition. Some of it carries quite a large amount of nutriment and again it is not much better than wood. Molasses fed in connection with the proper amount of roughage and some concentrate like cocoanut meal or cottonseed meal, is a very satisfactory feed in every way. It should be mentioned here, however, that molasses is generally looked upon as meat and energy-producing feed rather than as a dairy ration. A long article on this subject in the Western Breeders' Journal of recent date says practically nothing about molasses as a feed for dairy cows.—Livestock Editor.

Lessened Production.—A cow that freshened in March produced 4 gallons daily for 2½ months and then dropped to 9 quarts a day. She is fed rolled barley. Would that cause the drop in milk? What can be fed to bring her back to the greater production?—P. P., Hayward.

It is sometimes difficult to bring a cow back to full flow of milk, especially if she is of the beefy type and receiving a fattening ration. If the cow seems to be in good health, good appetite, etc., it is probable that the lessened production is simply a characteristic emphasized by lack of green feed. Soiling with green alfalfa in addition to a ration of rolled barley and cottonseed or cocoanut meal might increase the milk flow somewhat, or alfalfa (good) with some stock molasses would probably help.

Electrification vs. Pasteurization

(Written for Pacific Rural Press by Ralph Newman.)

Just before the World War started, the writer, then conducting a certified dairy, became much interested in experiments being conducted by Prof. J. Martin-Beattie of the University of Liverpool in destroying bacteria in milk by electricity. I wrote for information, but the next day war was declared and nothing came of the inquiry until last week, when a report from Alfred Nutting, of the American Consulate, came to my address.

It seems that Dr. Beattie and his co-workers have continued their experiments since 1915 and have reached the conclusion that by running certain degrees of current through milk with apparatus they have devised, the milk may be practically sterilized without raising the temperature to more than 64 degrees C. (148 degrees Fah.), and this only for a very short duration. The method, over a period of two weeks, proved 99.93 per cent efficient, killing all B. Coli and B. tuberculosis.

They say: "The taste of the milk is not altered and so far as careful chemical examination can determine, the properties of it are not in any way impaired. The milk can actually be described as "raw milk," free from pathogenic bacteria."

If this process proves a commercial success, it will doubtless supplant the present cumbersome, rather uncertain and more or less, unsatisfactory pasteurization process.

The heat necessary to pasteurization, unless applied with the utmost care, does give milk a flavor that is objectionable to many people. Most people will prefer raw milk if it is also safe milk.

"Pasteurized milk," "clarified milk," and the like have lost much of their punch through familiarity. The first few dealers to announce "Electrified Raw Milk"—what an advertising picnic they will have!"

DRYING CANS AFTER STERILIZING.

The value of clean, sterile, dry cans for milk and cream is constantly becoming of greater financial importance to the milk plants, creameries, etc., of the State. It has been estimated that a saving of from $200.00 to $500.00 per year in each plant, depending on output, could be effected by proper can drying. This loss not only results from the short life of the cans, but the quality of the product is also affected. The application of live steam for a given length of time to the inside of a can kills most of the bacteria and molds. However, to be effective this operation must be followed by hot, dry sterilized air, which prolongs the sterilization, completes the destruction of spore-forming bacteria, and thoroughly dries the can. Rust and oxidizing influences, so destructive to containers, are thus checked.

After sterilizing a can by live steam, condensation from the steam remaining in the can takes place, and unless removed by artificial drying, this moisture affords an excellent breeding

MILK COW LEADS THE PROCESSION.

In comparison with all other classes of farm animals which produce human food, the farm cow that gives milk stands first. On January 1, 1920, the good old milk "bossy" of the farms of the United States gave a total valuation of $2,022,000,000. This enormous figure excelled the total value of all other cattle.

Breeder of
REG. HOLSTEIN-FRIESIANS
and BIG-TYPE POLANDS
Best Blood Lines
H. G. BALL, Prop.
Tulare, California

LEONARD FARM
JERSEYS
Bulls for sale from Register of Merit Cows.
Write for information.
W. J. HACKETT,
CERES, CALIFORNIA

T. B. PURVINE & SONS
PETALUMA, CALIFORNIA
Breeders of
REGISTERED JERSEYS
Young bull calves for sale. Fine individuals with Register of Merit backing.

REGISTERED HOLSTEINS
Creamcup Herd offers service bulls and bull calves of 34-lb. breeding. Females offered for foundation stock.
Tuberculin tested.
M. M. Holdridge, San Jose, Cal.
R. D. "A," Box 437,
Two miles out North First Street.

ORMONDALE RANCH
SHORTHORNS
REDWOOD CITY, CAL.
HERD SIRES
BOQUHAN GUINEA STAMP, the great imported Young Broadhooks bull.
GOLDEN GOODS JR., sire of LITTLE SWEETHEART, Grand Champion International Show, Chicago, 1919.
Bulls and Heifers for sale.
Duroc-Jersey Hogs for sale.
JAMES McDONNELL, - Supt.

Lambert's
HEALTH FOR CATTLE
Remedies for
COW CLEANING,
BREEDING and ABORTION
Scouring Calves, Hog Cholera
An Insect Destroyer
A Poultry Food
LAMBERT STOCK
REMEDIES COMPANY
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FACTORY: MODESTO, CAL.
Mail Orders Promptly Filled

STANISLAUS COUNTY
HOLSTEIN BREEDERS' ASS'N
A. M. BIBENS, President
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Modesto, Calif.

"ORMSBY"
Means Quality and Production.
Get a young bull sired by
King Korndyke Hengerveld Ormsby 7th.
KOUNIAS REG. STOCK FARM
Waterford Road,
P. O. Box 296, Modesto

HOLMES STOCK FARM
Waterford Road, Modesto
REGISTERED HOLSTEIN-FRIESIANS
Prize-winners at all Shows.
Inspection invited and satisfaction guaranteed
Write for prices.
R. L. HOLMES, Prop.

BRIDGFORD HOLSTEIN CO.
Patterson
THE CHAMPION SHOW HERD
The herd of high records.
STOCK FOR SALE.
Visitors Welcome.

WALTER K. ADAMS,
Rte. 1, Box 245, Modesto
BREEDER OF REGISTERED HOLSTEINS
AND POLAND-CHINAS

A. M. BIBENS
Modesto,
BREEDER OF REGISTERED HOLSTEINS
Some fine young bulls for sale.

BULLS AND BULL CALVES
Sired by SEGIS DUTCH ORMSBY
My 32-lb. Herd Sire
Out of A. R. O. dams.
JOHN SAXER, Modesto, Cal.

H. E. CORNWELL
MODESTO, CALIFORNIA
Prescott Road, 1 mile from Highway
If you want to see some of the best Holsteins in the State, visit my herd.
YOUNG STOCK FOR SALE

YOUNG REGISTERED BULLS
From High-Testing Dams
E. PETERPOSTIN
Route 1, Box 235, Hughson, Cal.

BULLS FOR SALE
FROM 1000-LB. SIRE
Some with three nearest dams averaging 1000 lbs.; two of serviceable age; one with dam's record 30,000 lbs. milk, 1000 lbs. butter.
FREEMAN (E. E.) and EDWARDS
Route B, Box 385, Modesto

Herefords
LEADING HERD OF THE STATE.
My stock is the result of nearly 40 years of careful breeding and selection. Have for sale a carload of registered bulls and a carload of heifers—1917 calves, grandsons and granddaughters of Beau Donald 31, No. 109885, and Mr. Perfection, No. 215575.
They will go quickly. Write or call at once.
Wm. Bemmerly, Woodland, Calif.

Getting Close to the Truth
A well-known breeder of beef cattle of another breed was dispersing his herd. Talking to several intimate acquaintances when the sale was over he said, "If I ever go into business again I will breed Shorthorns." Asked why, he said, "Because there's a man on every fence post who wants 'em."
AMERICA SHORTHORN BREEDERS' ASSOCIATION
13 Dexter Park Ave., Chicago, Ill.

Can Foot-Hill Ranges Be Improved?

To the Editor:

A great many foothill cattle ranges in California contain a good proportion of arable land—some of them over 50 per cent. The high price of range land demands that these lands be cultivated; but if they can be cultivated and still furnish pasture, so much the better.

In the cattle business, while it may pay to feed calves and young steers, the breeding herd has to be maintained as cheaply as possible. This means that they have either to be wintered on the range, or, if fed at all, that their feed must consist as far as possible of straw and such things which will otherwise be waste products. Winter range always presents certain problems. For one thing, there is always less feed on a range in winter than in spring, which means that a range which is fully stocked in winter is understocked the following spring, and vice versa. Further, it is hard on a range to graze it when the feed is just starting, and is easily injured by trampling and overgrazing. A cover crop, which is to be plowed under in the spring, will naturally furnish only winter pasture; but it will furnish extra pasture just when it is most needed. Moreover, the straw from the grain crop, supplemented by a very little feed of a better quality, would serve to maintain the breeding herd for the short time after the first rains until the cover crop was up enough to be pastured. Then the cattle could have access to the straw while pasturing the cover crop.

Having outlined the situation, I wish to ask for your criticisms on several possible rotations which have occurred to me.

The first is to raise winter grain every other year, alternating with a pasture and cover crop, with a summer crop of sorghum for grain in the summer preceding the winter grain crop. The fodder from the sorghum would then be available for winter feed. Sunflowers for silage could be substituted for the sorghum, but would probably not pay as well as the cash crop, even though they would make the land carry more cattle.

Another possible rotation would be to raise a pasture and cover crop every winter, and sorghum and cowpeas in rotation in the summer. I thought that sorghum might be raised for two years and cowpeas for one.

Another plan, which I am very doubtful about, is to plant some biennial legume, such as sweet clover or hairy vetch, in the grain with a drill in the late winter or early spring. This would furnish a well-rooted plant to start growth with the first fall rains.

Another plan is the same as the first two, except for the cover crop. I should think that filaree would be excellent for this purpose. It is good feed and makes an excellent growth in cold weather; and it should be satisfactory as a cover crop if not pastured too closely.

Would any difficulty be experienced in cultivating the land after it had been trampled by stock in the wet weather? It would hardly be practical to take the stock off the land during the wet spells.

Is there any information available as to what carrying capacity can be expected from a covercrop of rye and rape? Very truly yours,

PHILIP C. STETSON.

(Answered by Geo. W. Hendry, Asst. Prof. of Agronomy, Univ. Farm, Davis.)

It is possible on good soil with 18 inches of rainfall or more to produce a crop of Sudan grass or honey sorghum on rotation with grain without irrigation. To do this successfully the grain stubble must be plowed deeply in the fall soon after the first rain and lie fallow all winter in order to absorb as much rainfall as possible. The surface should then be cultivated lightly after every shower from the first of March onward, in order to maintain a surface mulch and retain moisture. The summer crop must then be planted as soon as possible after the last spring frosts. We have produced profitable yields of milo maize grain in this manner; also Sudan grass and sweet sorghums for forage. We have found, however, that barley or wheat following a summer crop of this nature, will yield even less than grain after grain.

In answer to your second question, regarding the growing of a winter pasture crop and following this with a summer pasture crop, this practice would be absolutely impossible without the use of irrigation. Any winter crop taken off in the spring would leave the soil too dry to secure a stand to say nothing of maturing a crop of either sorghum or cowpeas.

In answer to your third question concerning the planting of a biennial legume such as white sweet clover (Hairy vetch is an annual) in the grain with a grain drill in the late winter or early spring, this has been attempted at this experiment station. In seasons of abundant rainfall, yellow sweet clover broadcasted in the standing grain about the last of February will provide some green pasturage in the barley stubble after harvest. It will make a more satisfactory growth than the biennial white sweet clover. In seasons of drouth there is not sufficient moisture to carry out this practice. On some of the dry range lands the feasibility of this practice would be even less encouraging.

In regard to your next question regarding the using of filaree (alfilaria, erodium cicutarium), this plant, as you mentioned, makes a very good winter and early spring growth, but is not drought-resistant and would not produce very much feed after the soil had begun to dry out the latter part of April and the first of May. There are other more drought-resistant perennial forage plants which would be more suitable, such as Harding grass, or San Diego grass.

I should say that it would be undesirable on soils of a heavy texture, especially where you expect to grow a summer crop to pasture the land heavily during the wet wether.

We have no exact data regarding the carrying capacity of rye and rape, but have found that this combination produces a very large amount of early spring pasturage and the exact number of stock which might be carried on an acre would depend within wide limits upon the kind of land, the seasonal rainfall, the stand obtained, etc.

A TIMELY WARNING.

A news note from the State Department of Agriculture calls the attention of the owner of livestock on the range to the necessity for clearing the ranges of such poisonous plants as poison hemlock, tree tobacco, the larkspurs and loco weeds. The shortness of range feed may tempt animals to eat of these destructive plants where under ordinary conditions they will pass them by.

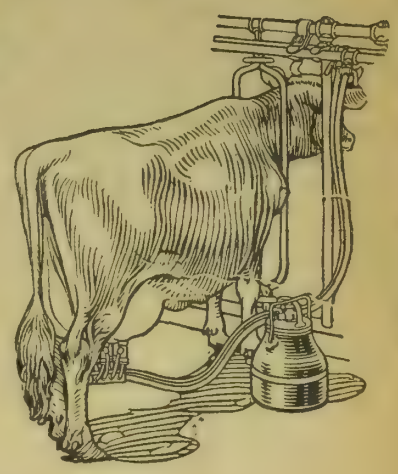
Dwarf lupin has been very abundant, owing to climatic conditions favorable to its growth. Much of this plant was harvested in volunteer hay this year, and if cattle or horses eat many of the seeds fatalities are liable to occur.

Specimens of the above-mentioned plants are on exhibition at the horticultural commissioner's office in Salinas.

In saving seed of sweet corn the best ears should be allowed to ripen on the stalk. A piece of fly-screen wrapped around the ears while ripening will protect the ears against rodents, birds, poultry, as well as prevent the laying of the egg that eventually produces the worm that is so destructive to corn, especially the late planting.

In the selection of tomato seed, the best course should be looked for. One good fruit of the tomato will produce enough seed for 100 or more plants. Well colored fruit with small seed cavities are desirable.

DE LAVAL MILKER



at Roseland Dairy

Roseland, N. J.

Messrs. Henry Becker & Son, the owners, write as follows:

The De Laval Separator Co.,
165 Broadway,
New York City.

Gentlemen:

Having now used a six unit De Laval Milker for nearly four years on more than one hundred cows, we wish to say that we are very well satisfied with the working of this machine in every detail.

The cows all take kindly to the De Laval Milker, which fact of itself proves the operating of it is very gentle. With labor conditions the way they have been for the last three or four years, we would have to dispense with part of our cows had it not been for the De Laval Milker.

And we must say that the service you render De Laval users is prompt and effective.

Henry Becker & Son, Inc.

THE De Laval Milker is a tried and tested De Laval product. It is a distinctly different type of machine—the only milker having master control of pulsation speed, uniform milking at all times, Udder Pulsator, positive alternating action, and self-adjusting teat-cups.

The De Laval is faster, more reliable, more sanitary than any other method of milking. Its action is gentle from the start—old cows that are hard to milk, heifers and high-strung pure-breds are all milked successfully.

The De Laval Milker is made and sold by the same Company which for over forty years has earned an enviable reputation for service to users. When a man buys a De Laval product, the Company considers that its obligation to him has just started.

Write to nearest De Laval office for Milker Catalog, mentioning number of cows to be milked.

DE LAVAL DAIRY SUPPLY CO.

THE LARGEST DAIRY SUPPLY HOUSE ON THE PACIFIC COAST

61 BEALE STREET SAN FRANCISCO, CAL.

Poultry for Profit

SHEEP DIP KILLED THE WRONG BIRD.

To the Editor: Kindly tell me something about killing chicken lice. I have tried lots of things—even sheep dip, which I found killed the chickens instead of the lice, and burned my arms. The lice have long bodies and are pink.—Mrs. R. I. C., Big Sur, Monterey county.

If the fowls are provided with a proper dust bath they usually keep the body lice in check, and in time practically get rid of them entirely. The dust bath should be dry in winter, and be kept slightly moist in summer. To quickly assist the fowls to destroy the lice, the fowls may be dusted with one of the various mixed lice powders that are sold quite generally, or with pyrethrum powder. A very good substitute may be made by mixing one pound of fine sulphur, two pounds air-slaked lime, and ten pounds fine dust; sifted wood or coal ashes may be used instead of fine dust. The fowls should be dusted at least three times—about a week between each dusting. Sodium fluorid is said to completely destroy all of the lice with one application. Apply one pinch on the head, one on the neck, two on the back, one on the breast, one below the vent, one on either thigh, and one scattered on the underside of each wing when spread. To dust the fowls with any of these powders, grasp the fowl with the left hand by the legs, holding the head down and just reaching the ground or table. In this position a fowl will rarely flop its wings, and all the feathers fall open to receive the powder. The powder should be thoroughly rubbed into the fluff clear to the skin with the free right hand, or dusted in with a small powder gun. It is by contact only that the powder kills. Keep the powder out of the eyes, nostrils, and lungs of the fowl. If a cloth is placed under the fowl to be dusted, the powder that would otherwise be wasted may be used again. As a rule, we do not recommend dipping fowls in a solution, but if sheep dip is used for the purpose it must be mixed in lukewarm water—one part sheep dip in fifty parts of water.

AN OBSCURE CASE.

To the Editor: I have a flock of eight-weeks-old White Leghorn pullets and roosters, and every now and then we pick up a dead fowl, usually large and well developed, but very light in weight, with light-colored comb, bill and legs. Have had a couple of post-mortems, btu can find nothing wrong inside. Diet is scratch mash, Lactein and green stuff, and we try to give them constant care. Another difficulty is picking of the tiny pinfeathers when the tails were forming, this drawing blood, and if not noticed in time there was a feast of the cannibals.—J. W., Saratoga.

Since the post-mortem examinations do not indicate to our correspondent any abnormal conditions in or about the internal organs, we are unable to state the probable cause of death. As the fowls are well fed there must be some reason, other than starvation, for the anaemic condition. The writer has probably overlooked an unhealthy state of one or more of these organs. Mites often cause chicks to become very thin, and sometimes they die simply from loss of blood, but if these chicks have been drained of blood by mites for any length of time we could not expect them to be unusually large and well developed, as described. Possibly the premises have recently become badly infested with the fowl or blue ticks mentioned in our issue of June 19. They may lack some important crude element in the feed; chicks, as well as mature fowls, should be constantly supplied with grit, shells, charcoal, and ground bone; and they require salt in the feed or water, but only a very small amount. An overdose of salt will kill them. Lack of opportunity to scratch and exercise is the chief cause of feather picking. Make fowls of all ages scratch vigorously for at least a part of their grain feed, or scatter some small seeds in the litter or soft earth to induce them to keep busy. The entire absence of salt in the feed sometimes is responsible for blood-thirstiness in growing chicks.

LOOKS LIKE BELLADONNA POISONING.

To the Editor: My chickens' legs are too weak to hold them up and when eating they fall over backwards, and then in a couple of days they have to spread their wings out to balance themselves when walking; then in a couple of days they crawl along on their sides, and in a day or two more they die.—J. M. M., Le Grand.

As these fowls look well and lay well until they first lose the use of their legs, it seems reasonable to consider that the trouble must be due to something they eat and which quickly affects them. The symptoms do not exactly tally with those indicating belladonna poisoning, as observed in cases that have formerly come under out observation, but are somewhat similar. Look about the range for night-shade. This is a small poisonous plant (Atropia belladonna) that thrives in creek beds, sheltered portions of woods, thickets, fence corners, etc. It has reddish bell-shaped flowers that resemble the bloom on potato vines, and the fruit is a shining black berry. The drug belladonna is made from the leaves and roots, but the whole plant is poisonous. In our issue of May 29, page 867, we published a remedy for the relief of the poisoned fowls.

MR. HOGAN'S EXPLANATION.

In our issue of June 26 we published an item regarding "The Call of the Hen" and the relation of this book to the "Quisenberry-Hogan method of determining layers," which was mentioned in an article published several months ago. When our recent item was prepared for publication we mailed a copy to Mr. Hogan and requested him to make any further statement if he wished to do so. We have recently received the following letter from him:

"Replying to your letter regarding the "Hogan-Quisenberry" method of poultry raising, would say that "The Call of the Hen" is entirely my own work. Mr. Quisenberry is using this book in some of the lessons in the poultry course of the American Poultry School and this may be what is referred to by the party inquiring. Sincerely yours,

"WALTER HOGAN."

CULL CLOSELY FOR PROFIT.

According to Geo. H. Croley, the veteran poultryman, there is more culling of poor layers being done by poultry breeders over the State than ever before. The recent newspaper items of high price of wheat in prospect has caused everyone to feel that the best thing to be done was to get rid of the non-laying stock. He estimates that fully 20 per cent of the hens will be sent to market as rapidly as possible. This 20 per cent loss, however, does not mean that the egg production will fall off to that extent as the hens killed will be very low producers and their loss means that the average of those retained will be much higher. The poultryman that culls closely, provides plenty of green feed and watches his flock carefully will doubtless have a fairly successful season.

Don't wash the dirty eggs. Put them in separate fillers from the clean ones and put a tag with them.

POULTRY MANURE AS FERTILIZER.

Is there a practical means of preserving droppings for use as fertilizer without losing the valuable fertilizing elements?

If poultry droppings are kept dry they will lose very little of their fertilizing value. They may be stored in small quantities in boxes, barrels, or bags. Where large numbers of fowls are kept, a special shed should be provided for this purpose. There is comparatively little demand for poultry droppings, though some green-house operators are willing to pay a fair price. The average poultry keeper will get much better returns from them if he will utilize them by growing crops as a side line in his poultry business. Rock phosphate is comparatively low in cost and is highly recommended for use as an absorbent on the droppings platform. It can be purchased from almost any fertilizer dealer, is in finely powdered form, and the phosphorus which it adds to the droppings makes a better balanced fertilizer.

POULTRY PRATTLE.

The conditions in which chickens are kept and the rations fed have a marked effect upon the development of the birds and the quality of the egg laid.

An extensive group of aviaries is under construction at the White Tavern Ranch near Hayward. It is the intention of the owner to this fall install large flocks of pigeons, pheasants, peafowl, and quail, etc.

When one has only a few chickens it is less trouble to purchase the prepared chick feeds, but where a considerable number are reared it is sometimes cheaper to buy the finely cracked grains and mix them together.

A white Wyandotte hen at the Western Washington Experiment Station at Puyallup, Wash., has just made an egg-laying record that is said to be a record breaker. This hen laid one egg every day for seventy-eight consecutive days. On the seventy-ninth days she laid a double egg of unusual size.

The back-yard poultry flock rarely will consist of over 20 to 25 hens; in many cases of not more than 8 to 10, and occasionally of only 3 or 4. For a flock of 20 to 25 hens a space of not less than 25 by 30 feet should be available for a yard. Where less space is available the size of the flock should be reduced, allowing on an average 20 to 30 square feet to each bird.

The usual estimate for large eggs is about one out of every 500 eggs laid, or two-tenths of one per cent. It is interesting to note that this ratio of double to single yolked eggs is less than twice as high as the ratio of twin to single births in the human family. Furthermore, fewer double-yolked eggs are laid as the hens grow older. It has been estimated that more than 80 per cent of all double-yolked eggs are laid by pullets less than one-year old.

In tests of a large series of insecticides conducted by entomologists of the United States Department of Agriculture, it was found that a few thorough applications of crude petroleum to the interior of poultry houses will completely destroy mites.

DUE CAUSE.

"I hear Scarletsnoot beat up his wife yesterday."

"Yes, and it was one case where he was justified. He brought home a bunch of raisins the other night and what did that woman do but go and make raisin pie out of them."

CLEAN UP THE INCUBATOR.

After the hatching season is over, clean and disinfect the incubators, empty the lamps, and carefully store the parts in the machine. Lamps containing oil which are left in their proper place on the incubator for some time after the hatching season is over, will cause trouble when it is started again, as the oil tends to work up into the hood.

The incubator should be disinfected once a year or oftener if any disease is present in the hens or chickens, say poultry specialists of the United States Dept. of Agriculture. Some operators prefer to disinfect their incubators before or after each hatch. A 5 per cent solution of a reliable coal-tar disinfectant or carbolic acid may be used to wash out the machine and to disinfect the egg traps and nursery drawer. If the burlap on the bottom of the incubator is very dirty it may be cheaper to renew than to clean it.

For an incubator of about 3 cubic feet capacity one may pour one-half ounce of formalin, which contains 40 per cent formaldehyde, on one-half ounce of permanganate of potash in a pan in the incubator, which produces a very penetrating gas and thoroughly disinfects the machine. The door of the incubator should be closed just as soon as the liquid is poured into the pan and left closed for 12 hours or longer. Incubators should be well aired before they are used after disinfecting, especially when formaldehyde or any disinfectant which produces a gas has been used.

Poultry Breeders' Directory

Rate 3½ cents per word each issue.

BARRED PLYMOUTH ROCKS —"Nothing Better in Poultry." Wonderful layers. Choice hens and pullets for sale; also fine cockerels that will improve your flock. Now booking orders for hatching eggs. I have made a specialty of Barred Rocks for over twenty-two years. That's why our birds win at all the leading shows. Catalog free. Chas. H. Vodden, Box 3, Los Gatos, Calif.

ATKINSON'S PEERLESS ANCONAS lay more and eat less than other breeds. 50 big husky cockerels, 5 and up; 200 pullets, trios, and pens for sale. Hatching eggs. Catalogue free. J. W. Atkinson, Box B, 130 Willard St., San Jose, Cal.

RHODE ISLAND REDS—Hatching eggs at half-price. Special summer sale of stock, breeding pens, heavy-egg type; cockerels, baby chicks. Buy now and save money. Wm. Larm, 3915 39th Ave., Fruitvale, Cal.

WHITE LEGHORN COCKERELS for sale from over 200-egg trapnest stock. Settings from trapnested White Orpingtons. Mabel Smith, Box 128, Rt. 2, Hollister, Cal.

BARRED ROCK, White Orpington, hatching eggs, now $1.75 and $3.50. Breeding Cocks, Cockerels, Hens, Pens. R. P. Lutzi, 1217 20th Ave., S. F. Yards at Los Altos

GOLDCROFT BUFF ORPINGTONS—Sturdy breeders and young growing stock for sale. Eggs, $3.00 per setting after April. Samuel Abrams, Los Altos, Calif.

CHICKENS, DUCKS, GEESE, GUINEAS, Pea Fowl, Pigeons. Wm. A. French, 545 W. Park St., Stockton, California. Stamps.

BUFF ORPINGTONS, BUFF DUCKS, BOURbon Red Turkeys, White Guineas. The Ferris Ranch, R. 2, 144 D. Pomona, Calif.

BABY CHICKS from selected S. C. White Leghorn hens. Write for prices. Tupman Poultry Farm, Box 7A, Ceres, Calif.

RABBITS AND PIGEONS.

WHITE KINGS — Famous squab raisers. Mated and banded pairs, $5.00. Hicklings, 553 Bancroft Ave., San Leandro.

IF NOT THE SIMPLE LIFE, THEN CO-OPERATION.

(Written for Pacific Rural Press.)

Do you ever wonder if, after all, the so-called high plane of civilization we have reached is worth while? What a fuss we must make just to live, just to be clothed and sheltered and fed. The trouble comes not so much from the fact that we must wear clothing and live in buildings and eat food, as from the manner in which we highly civilized creatures believe it must be done.

Take clothes, for example. In an attempt to differentiate man from other animals, he has been called the animal of habiliments—the only animal who must wear clothes. But who said he must, and why? It is pretty well established that man began wearing clothes, not for comfort or decency, but for armament. We have become so civilized—that is, so soft and immoral—that some degree of clothing is essential to comfort and decency, but if we would confine ourselves to these essentials and forget the barbaric ornamental urge, what a lot of worry and work we might save ourselves. As with our habiliments, so with our habitations. What shelters we do devise for ourselves! And for what? Our public buildings, many of them anyway, are for graft first, show second, and shelter last. Our private dwellings—well, they shelter us, but at what cost! The unnecessary space and fummy diddles we do insist on, and that put us to unnecessary expense and cause unnecessary work. A good housekeeper insists on a good house to keep. And the cemeteries are full of monuments to mothers who were good housekeepers—while they lasted. We needn't advocate a return to the cave, though from the standpoint of content, which is akin to happiness, we haven't so much over the cave-man. We make no plea for plainness, which is ugliness, but we would speak a word for simplicity of shelter, and we would remind you that from the artistic standpoint the primitive abode of the monkey has your elaborate domicile backed off the boards.

Some one else with a bent for differentiation (I think it was a Frenchman) has attempted to define man as a cooking animal. Originally, he was not, but he early became a cook. Beginning crudely as the Tartar, who cooked his steak by using it for a saddle, man has struggled up through an endless succession of pots and pans, until even a poet has admitted that cookery is the finest of the fine arts. We have overdone it. It is no great compliment, but doubtless a true statement, that the way to a man's heart is through his stomach. What is to blame for it? Man's gluttony or women's artistry? I don't know, but I do know that woman's culinary art and man's eagerness to absorb the product thereof have filled the kitchen with nervous prostration and the dining-room with indigestion.

We talk glibly about the simple life and go right on with our feathers and furbelows, our woman killing methods of housing, and our over-civilized menu. We are too much the creatures of convention to be simple in essentials and there is probably no use preaching about it.

But in many a household whose members would be shocked, or angered, or both, by the suggestion that they could live better by not living so well, a lot of aches and worries could be avoided and a lot of time saved if all the members of the household would only co-operate with the housekeeper upon whom civilization has thrust such a burden of monotonous toil. Co-operation, like charity, should begin at home, but too often it does not. The writer was recently in a farm home where it did, however, and "will tell the world" that if every household was organized as that one was, there would be fewer farm women burned out long before this time.

There were father and mother, two boys and three girls. They were all up and ready to go at 6 o'clock. No orders were issued, no protests registered, no questions asked. Each one knew his part and did it. Father and the older boy hike for the barn. The younger boy siezed a broom and swept the screened porch, back steps and walk. Then he started the water in the yard and changed broom for hoe. Mother and one of the girls got busy in the kitchen, while the other two girls did the chamber work and "righted" the living room. Promptly at seven breakfast was ready, and I noticed that the outside workers stopped at the back entry and exchanged shoes for slippers "so as not to track in dirt."

To make the story short, by eight-thirty, when the school bus arrived, every stroke of the morning work was done, everything was spick and span and everybody was happy.

Home Circle Department

A PLEA FOR UNDERSTANDING ANSWERED.

(Written for Pacific Rural Press.)

You may remember that some time ago a farm woman made a plea in these columns for a better understanding between city and country women, and for a spirit of co-operation instead of the recriminations that threatened to divide the women of the State into two antagonistic classes.

It is with real joy we note her prayer is being answered. As time goes on, the acute attack of hysteria that for a time threatened the society of housewives' leagues has about spent its force, the sinister power hidden behind the movement having been routed. And now comes the State Federation of Women's Clubs with a Country Life Department freighted with great promise because of the sane, sensible way in which these women are going about their task.

They want to aid in getting better rural schools, in securing for the country the same advantages enjoyed by city schools with their nurses, dentists and other specialists, and in securing for the country better social advantages.

And, be it noted, there is no hint of any patronizing attitude in this manner of going about the task. They do not come with any ready-made panacea held out to us at arms' length. They want, first of all, sympathetically to understand the problems with which farm homes are beset, and then they intend to carry the real facts of the case to all city women in an effort to secure real co-operation.

We believe the farm women will rise to this program and hope that out of the campaign may grow a co-operative movement of city and country women as beautiful as it may be powerful.

The Department of Country Life has a State chairman and seven district chairmen, whose names and addresses we append with the suggestion that farm women interested in the betterment of home conditions (and that is all of you) get in touch with the chairman in your district and help her get a fundamental grip on the situation and pile up a convincing array of facts.

The officers are: State Chairman, Mrs. Henry E. De Nyse, Riverside, Northern District; Mrs. B. F. Hartman, Grass Valley, San Francisco District; Mrs. A. F. Thomas, Mill Valley, Alameda District; Miss Mary Brown, Newark, San Joaquin District; Mrs. Sarah Bailsback, Grangeville,

Mrs. T. J. Woodworth, Stratford, Los Angeles District; Mrs. Thomas J. Walker, San Fernando, Southern District; Mrs. J. W. Newell, Fullerton.

STRAWBERRY PARFAIT.

Boil 2 cups sugar and 4 cups water for twenty minutes. When perfectly cold add 2 boxes of strawberries that have been washed, mashed and pressed through a colander, a few grains of salt and the juice of a lemon. Fold in 1 cup of whipped cream and freeze without turning.

FEDERATION OF WOMEN'S CLUBS TO THE RESCUE.

(Written for Pacific Rural Press.)

For many moons, the mention of a city women's organization among dairymen has been like the proverbial red rag waved before the herd sire. But, dairymen, a new day has dawned! The California Federation of Women's Clubs has a Department of Country Life with a State chairman and seven district chairmen. The work of these women is to speak before women's clubs and other organizations, urging interest and co-operation in farm improvements, in every way.

The State chairman, Mrs. Henry E. De Nyse of Riverside says: "We are giving special consideration in most districts to the dairy industry because of its being such a vital factor in the scheme of life. We realize that it is an essential national industry and that the safety of our homes and prosperity of our country are tied to it. Dr. Wilbur, in his president's address at the recent Social Agencies Conference, made the statement that the future of civilization depends upon the dairy herds.

We are opposed to boycotting of milk, believing the reaction will be decreased production and a consequent scarcity of a necessary product. We do not sympathize with any hysterical stuff such as "starving babies," because if the parents of these starving babies will go into the country to work or to own land, they can have milk for the babies and relieve a critical labor shortage. Nor do we believe that the dairyman should be asked to underwrite the milk supply of "starving babies," or any other class of human beings, not any more than men in the book business, or dry-goods business, or the professional men."

That is something like it! We have cried in our hearts as we have read of the doings of uninformed and misguided women, "How long, Oh, Lord, how long!" No longer, thank goodness! Here are women, with the great Federation of Women's Clubs behind them, who see clearly and speak bravely. They can do untold good at this critical time.

Mrs. De Nyse also says: "In order to promote the many phases of this work and get the actual working knowledge over to the women, we need all the help we can get in the way of information." It is up to us to see that they get the information and our hearty co-operation.

DRYING PEAS AND BEANS.

Garden peas intended for drying should be gathered when in ideal condition for immediate table use; that is, when the seeds have attained full size and before the pods have begun to turn yellow and dry up. Shell them by placing the pods in boiling water for five minutes, then spread on a wire screen having a mesh large enough to permit the shelled peas to pass through, with a box or basket placed beneath. Rub the pods vigorously over the screen with the hands. They will burst and empty out practically all the peas much more quickly than they could be shelled by hand. Dip the shelled peas one to two minutes in boiling water. Drain, spread to a depth of three-fourths to one inch on the trays of an evaporator and dry at 115 degrees to 125 degrees F. as initial temperature, raising to 140 degrees toward the completion of the drying. Raise temperature very gradually. Stir occasionally while drying. Properly dried peas will be uniform throughout, showing no moisture near the center when split open.

Wax beans, Lima beans, or mature string beans for drying should be gathered when full grown but before the pods have begun to dry. Shell and dip for three minutes in boiling water or live steam. Remove, drain, place on trays to a depth of not more than one inch. Stir frequently through the first hours of drying.

KEEP YOUR CHILD FIT.

The physical conditions which harmfully affect children of school age, causing them to fall behind in their studies and to retard the advance of others in their classes, may be classified as follows: Defective vision, defective hearing, defective teeth, defects of the air passages, heart defects, bone and joint deformities and defects of nutrition.

Among these handicaps defective vision is the most important from the standpoint of interference with class progress. This condition is responsible for one-quarter of those habitually left back.

It requires considerable observation to detect all of those with defective hearing. The children are frequently diffident about it and their parents skeptical. Much can be effected by so placing these children in the schoolroom as to minimize their hearing handicap.

Over 50 per cent of school children have unfilled cavities in their teeth, despite the campaign of education that has been carried on. The cleansing and dental care of the teeth have very definite bearings upon the physical progress of the child.

Children who have adenoids and enlarged tonsils usually attract attention through the defects in pronounciation, manner of breathing, nasal discharge, frequent colds and ear troubles.

Heart defects are comparatively rare in children. Those children who suffer from them require special care in order to insure that the demands made upon the diseased organ are within capacity.

Regarding bone and joint deformities, desks and chairs must be suitable for the particular children occupying them. Spinal curvature may be caused and any existing curvature made worse by habitually faulty positions. Insistence upon correct posture is an essential element in juvenile discipline from the hygienic standpoint.

Finally, no child can develop into a healthy and vigorous adult upon an unsuitable and insufficient diet prolonged over a considerable period. The child handicapped by malnutrition may generally be known by his appearance and lack of energy, both mental and physical. But there are many children not suitably nor sufficiently fed who cannot be easily detected.—Brice Belden, M. D.

MUST HAVE BETTER RURAL SANITATION.

Sanitation for incorporated cities and towns of California has reached the "peak" of excellence, says Guy P. Jones, assistant secretary of the State Board of Health, referring particularly to water supply and sewage disposal. Under the supervision of the Bureau of Sanitary Engineering, standards have been steadily raised until now there is no community of any size whose public health is not well guarded in these essentials. Standards, to remain excellent, he explains, must receive careful attention from day to day, and quality cannot be absolutely guaranteed, so long as the human element enters in, but generally speaking, municipal sanitation is in better condition than ever before.

A more difficult problem is presented by the unincorporated town, the rural district, the camp. Persons moving from a well-ordered city to a village where no attention is given to these primary facilities immediately notice the difference, and complaints continually reach the board of health.

The attention of the sanitation bureau is being concentrated more and more upon these rural problems, and agents are now in the field investigating small communities from which complaints have been recently received.

The necessity for cleanliness in camp is also recognized as urgent. More people are in the hills this year than ever before, and thousands of them are members of eastern motor parties attracted here by good roads and wonderful scenery.

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RECOMPENSE.

When I consider Life and its few years—
A wisp of fog betwixt us and the sun;
A call to battle, and the battle done
Ere the last echo dies within our ears;
A rose choked in the grass; an hour of fears;
The gusts that past a darkening shore do beat;
The burst of music down an unlistening street—
I wonder at the idleness of tears.
Ye old, old dead, and ye of yesternight,
Chieftains, and bards, and keepers of the sheep,
By every cup of sorrow that you had,
Loose me from tears, and make me see aright
How each hath back what once he stayed to weep:
Homer his sight, David his little lad.

—Lizette Woodworth Reese.

HOW BOBBIE CAME BACK.

A cablegram has just gone oversea to Rome announcing to a friend of George H. Mifflin glad tidings with Caesarlike brevity. It reads, "Bobbie back." That, by the way, might make an excellent title for a mystery story, if Mr. Mifflin were in the habit of publishing fiction of the type. At any rate, it marks the ending, if not the solution, of a mystery in which he and scores of his acquaintances have been interested for the past ten months.

It may be stated here at the outset that Bobbie is a Boston terrier. The pith of this relation lies in his being "back." How he came to be "back" nobody knows exactly. Where he was when he was not "back" is sufficiently puzzling for any detective. Why he should go anywhere to come "back" from probably will never be explained.

The full circumstances of the Odyssey of Bobbie cannot be learned, for Bobbie's best manner of conversation, the wagging of a stump of a tail, is not particularly lucid. Of the disappearance of Bobbie, of the tireless search for him and of his final return, a nonchalant prodigal, the details are known and are here published for the first time.

To begin with, Bobbie came to Mr. Mifflin out of the everywhere into here. In a word, he was found, a waif of the streets, taken to the Animal Rescue League, and there through his winning personality so endeared himself to Mr. Mifflin that he became a member of the latter's household in Marlboro street.

There was a certain affectionate reserve about Bobbie, coupled with a dash of the hunting spirit and a willingness to debate any question with other dogs of high or low degree and of all sizes and weights, that commanded respect and sympathy. He became well beloved in the Mifflin household and in the offices of the Houghton Mifflin Company on Park street, whither he accompanied his master every day, keeping regular business hours.

To all outward appearances he was a model of dogs. He seemed delighted with his home and with the literary atmosphere of his days. Then the Wanderlust, or something, entered the canine heart. One night, ten months ago, Mr. Mifflin opened his door at eleven o'clock to give Bobbie a whiff of air, and out went Bobbie, unmindful of all summonses. Bobbie had gone back to the everywhere.

Such behavior on the part of his pet puzzled his owner, and, although it was then late, Mr. Mifflin called up the Union Club to learn that a terrier much like Bobbie in appearance had been seen sniffing at the staid portals of that organization. Believing that Bobbie might have gone to the office again, Mr. Mifflin donned hat and coat and jouneyed to Park street There was no Bobbie.

It was then that the search began. It was then that the police, dog fanciers, possible dog thieves and all Mr. Mifflin's friends took up the hunt for Bobbie without avail. Mr. Mifflin knows the value of advertising, and he sought the services of the Herald. He offered a reward; he stated the points of his dog; he solicited co-operation.

Strange to say, there were few answers. Mr. Mifflin wondered, and finally consulted an expert. Said the expert:

"If you wish to appeal to dog thieves, you must seek a medium which appeals to dog thieves. Dog thieves do not read the Herald."

The advice seemed good, and his advertisement was placed elsewhere, where it would meet the eye of the sort of persons he wished to interest.

Letters began to flow into the office of Mr. Mifflin. His days and nights were full of futile journeys. He sought out dark places which his correspondents indicated. He entered devious byways, obscure tenements and back alleys. He saw many dogs of the Boston terrier persuasion, but no Bobbie.

One letter postmarked Taunton came to him printed as by the hand of a conspirator. It gave the address as that of a private box in the Taunton post-office. Taunton-ward Mr. Mifflin fared with a detective. They found the box, only to discover that it was the property of the Taunton insane asylum.

Odd voices called Mr. Mifflin on the telephone. One insisted that Bobbie was found. There was no doubt of it, said the owner of the voice. The markings were the same. The only doubt about it was that the foundling was distinctly feminine. Mr. Mifflin asserted the undoubted masculinity of Bobbie.

"What difference does that make?" shouted the voice. "This is your dog."

The seeker hung up the receiver disconsolately.

The reward was marked up to $50, but there were no results. Every dog fancier in the city was visited. The police were notified. Mr. Mifflin's friends became a band of amateur detectives.

Nobody was sure of escaping suspicion. One lady informed Mr. Mifflin that she was convinced that Bobbie was in the possession of a distinguished clergyman. She did not wish to reflect on anybody's reputation, but facts were facts. She whispered and others whispered, and the story only found rest when Mr. Mifflin made it plain that the dog of the divine was not Bobbie.

A Boston terrier was killed in the Fenway by an automobile. From two distinct sources Mr. Mifflin was informed of the accident. He jumped into his automobile, located the remains in the midst of a group of curious boys, after scrambling down an embankment. It wasn't Bobbie.

Thus month after month passed, and Mr. Mifflin gave up hope of ever seeing Bobbie alive. Then the miracle happened—Bobbie returned; returned as if nothing had happened; returned and took up the threads of his career where he left them without even a casual reference to aphasia.

The way of it was remarkable. For some time it has been the practice of the Houghton Mifflin Company to send one of the boys to the post-office for the firm's mail, and it chanced that one of the newer employees was chosen for the task. The bag for the mail, however, was the same that had always been used.

As the boy made his way along the

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crowded sidewalks of Washington street he noticed a little brown terrier with white markings sniffing curiously at the bag. He felt a tug at the leg of his trousers at the heel, and then another. The dog stopped, wagged his tail, and then followed. Up Bromfield street, across Tremont and into Park, went the boy, the mail bag, and the dog.

At the door of the Houghton Mifflin Company the boy paused, shooed his chance friend away, and closed the door in his face. The visitor would not be rebuffed. He stood on the steps, balanced characteristically on three legs, and waited.

Somebody else came along, opened the door again, and in darted the terrier. Up the stairs he went and waited again. The inner door opened, and again the dog went in. There may be ninety and nine or ninety times nine Boston terriers in and about the business district, but to the employees of the Houghton Mifflin Company there is only one Bobbie.

He was no stranger to them. No other dog had his pleasant manners. To be sure, he was somewhat travel-stained, but still the same. No prodigal ever received a warmer welcome as he moved sedately through the outer offices to the sanctum of Mr. Mifflin. There he paused, looked up at his master, and flourished the stump of tail. Bobbie was back,—that expresses it.

Now you may see him any day taking his ease on a cushion in front of the large fire-place in Mr. Mifflin's office, wagging his ears and looking wise. What have been his wanderings he alone knows.

There are many things that still puzzle Mr. Mifflin: Why his collar was changed; why those who had him did not return him to the address on his old collar; why he returned when he did, and a lot of other whys. It's all a mystery, no doubt; but then, there is rejoicing in the Mifflin household, and it is enough that—Bobbie's back.—Boston Herald.

OLD RIBBONS MADE LIKE NEW.

Ribbons cost two to three times what they formerly did, and the life of Alice's hair ribbon seems very short these days to her thrifty mother. No matter how fresh and dainty the dress of a little girl, if it is topped with a soiled and wrinkled hair ribbon her whole appearance is spoiled. In one of a series of thrift leaflets issued jointly by the United States Department of Agriculture and the United States Treasury, directions which will leave the fabric looking like new are given for cleaning ribbons.

Spread the ribbon flat on a smooth, hard surface, such as a table top or a marble slab. With a sponge or a soft brush go over it with lukewarm water in which a little mild soap has been dissolved. With hair ribbons, if the portion which comes in contact with the hair is greasy and the stains difficult to remove, dip brush in a little ammonia water and rub that portion of the ribbon. Rinse the ribbon by holding it stretched between the hands and passing through a bowl of clear, lukewarm water.

Do not wring or crease, but dry by spreading it out straight and flat on a smooth, hard surface. Particular care should be taken with the edges of the ribbon in order to make them as straight as when new. Draw the hand gently over the ribbon to press out air bubbles which may have formed under it, and which will make it appear "blistered" when dry.

VEGETABLE TURKEY.

A vegetarian dish, but good enough for any one: Chop 1½ cups mixed nuts and 1½ cups dry bread crumbs; add 1½ cups milk, 2 beaten eggs, salt and pepper to taste, a small piece onion, a small quantity of sweet herbs, 1 teaspoon being sufficient. Stir well and bake in a buttered pan twenty minutes. Serve with brown gravy.

Brown Gravy—Place in pan 1 tablespoon butter or shortening until tablespoon flour is browned; stir well; add small quantity of nut meats chopped fine; add milk sufficient to make it as thick as gravy; salt and pepper to taste.

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All Druggists 25¢

THE MARKET REPORTS

Compiled from Independent Sources.

SAN FRANCISCO

San Francisco, July 7, 1920.

WHEAT.

Reports of grain crops from this State indicate that the grain yield generally is light where not irrigated. Some fields intended for grain have been cut for hay and in other cases are being fed off by stock. No local price on wheat has as yet been established.

BARLEY.

Barley is unchanged this week. It might be said that both the supply and the demand is nominal.

Feed ..... $3.15@$3.20
Shipping ..... Nominal

OATS.

Oats were weaker in response to the lower prices offered for barley last week.

Red Feed, ctl. .....$3.40@3.50
Red for seed .....Nominal
Black for seed ..... Nominal
Recleaned Red or Black for seed....Nominal

CORN.

Corn is dull and very little is moving locally except small quantities for chicken feed. The demand for corn for milling seems to be better, but this corn is not bought in the local market.

Egyptian, white .....$4.75@4.90
do, brown .....$3.65@3.80
California .....$3.80@3.90

HAY.

Receipts of hay for the past week were 2,349 tons, compared with 1,688 the previous week. The local hay market continues lifeless. Although receipts are heavier the demand, if anything, is lighter. Quite a bit of last week's receipts were for Government account and did not go into trade. Practically every whisp of old hay has been cleaned up and future quotations will be confined to the new crop. Reports from the interior indicate a good-sized hay crop, which will be in excess of that of last year. Local buyers believe that present prices are too high and will not buy except for immediate necessities.

Old Hay .....Nominal
Wheat Hay, new .....$26.00@28.00
Tame Oat Hay, new .....$26.00@28.00
Wild Oat Hay, new .....$20.00@22.00
Barley Hay, new .....$20.00@23.00
Alfalfa, new .....$20.00@25.00
do, 2nd cutting .....$24.00@28.00
Stock Hay .....Nominal
Barley Straw, bale .....Nominal

FEEDSTUFFS.

The mills have advanced the price of cracked corn; and some of the alfalfa products, notably the meal, will have to be advanced if the price of alfalfa continues at its present mark. It is stated that at the present prices of alfalfa, which are about double those of a year ago, alfalfa meal cannot be manufactured and sold in competition with the Eastern product.

Rolled Barley .....$69.00@70.00
Rolled Oats .....$70.00@71.00
Alfalfa Products .....$45.00@50.00
Cracked Corn .....$85.00@86.00

POTATOES, ONIONS, ETC.

(Wholesale prices paid by commission houses.)

Potatoes are showing a decided downward trend, and this is likely to continue for some time, according to the best information on the street. Consumers have generally refused to pay the prices demanded and stocks are accumulating. Onions continue weak at last week's quotations. The general vegetable market is weaker since the holiday on a falling off in the demand.

Peas, Bay, lb. .....2@4c
Beans, wax., lb. .....2@5c
do, green, lb. .....4@6c
Carrots, per sack .....$1.25@1.50
Lettuce, crate .....$1.50@1.75
Cucumbers, English, doz. .....75c@1.00
Tomatoes, Southern, box 30 lbs. $1.00@1.75
Rhubarb, Strawberry, box 40 lbs. $1.50@2.00
Summer Squash, box, 35-40 lbs. $1.75@2.25
Egg Plant, lb. .....10@12½c
Potatoes, New Garnets, cwt. .....$4.00@5.50
do, New River, cwt. .....$4.00@5.50
Onions, Bermuda, wax, 50 lbs. .....40@50c
do, Red, sack .....75c@$1.00
Green Onions, box, 25 lbs. .....$1.25@1.50
Garlic, lb. .....9@11c

BEANS.

(Wholesale prices. Buying prices made on sample.)

The Southern Lima Bean Association decided not to make a change in its prices during the past week and limas are still quoted in this market at $11.50 to $11.75. The bean market as a whole is very quiet. The only change in the list was in Blackeyes, which sold 25 cents lower.

Bayos .....$11.75@12.50
Blackeyes .....$ 8.25@ 8.50
Cranberry .....$ 6.75@ 7.00
Pinks .....$ 6.30@ 6.50
Red Mexican .....$ 9.00@ 9.25
Garbanzoes .....$ 9.00@ 9.50
Large Whites .....$ 6.00@ 6.25
Small Whites .....$ 5.90@ 6.15
Limas, Ass'n prices, South $11.42
do, Baby, Ass'n prices, South $11.42
Limas, S. F. prices .....$11.50@11.75
do, Baby, S. F. prices .....$11.50@11.75

POULTRY.

(Wholesale prices made by commission houses.)

The receipts of poultry since Monday have been very light, and this has kept prices up to last week's level. With normal receipts prices will undoubtedly sag, except for broilers, which are not likely to go much below 30 cents.

Broilers .....30@32c
Hens, mixed color .....30@34c
do, Leghorns .....20@26c
Roosters, young .....42@45c
do, old .....15@17c
Fryers, ...30@35c
Squabs .....55@60c
Geese .....28@30c
Ducks .....25@28c
do, old 18c
Belgian Hare, live .....13@16c
do, dressed .....17@20c
Jack Rabbits .....$1.50@3.50

BUTTER.

(Exchange quotations less commission.)

The local market was featured during the week by light receipts and an active demand for the finer grades for home consumption. The Democratic convention and the increase in demand for stocks for over the holidays served to reduce trading stocks to an unusually low level. A weaker tone developed with the close of the calendar week, which developed after the holiday into a recession in price of two cents from the high of the week. More butter was withdrawn from storage than went in and the balance in storage at the end of the week showed 1,397,032 lbs., or 32,067 lbs. less than the previous week.

	Thu.	Fri.	Sat.	Mon.	Tu.	Wed.
Extra	58½	58½	57½	..	57½	56½
Prime 1sts	54½	56	56	..	56	55½
Firsts	52	52	52	..	52	52

EGGS.

(Exchange quotations less commission.)

Extra eggs were steady during the week, while the other descriptions showed considerable strength and sold at higher quotations. During the week 12 carloads were shipped to eastern points. The net gain of eggs in storage was only 143 cases for the week, the smallest gain since eggs started towards the ice houses.

	Thu.	Fri.	Sat.	Mon.	Tu.	Wed.
Extra	47	48	47½	..	47½	48½
Firsts	..	..	..	..	43½	43½
Dirties ...	43	43½	43½	..	43½	44
Ex. pullets	39½	40½	42	..	43	44
Undersized.	30	30½	30½	..	30½	31½

CHEESE.

(Exchange quotations less commission.)

The cheese market was quiet this week, and except for Y. A. firsts, which sold 2 cents lower, and California flats fancy, which sold a cent higher, prices showed no changes.

California Flats, fancy 29½c
Y. A., Fancy 31½c
Y. A. Firsts 25c
Oregon Triplets 29c
do, Y. A. 30½c

FRESH FRUITS.

(Wholesale prices made by commission houses.)

Some apples of the new crop have come in, but their quantity and quality hardly justify quotations. Prices in general are lower, especially for berries and melons. Currants are a drug, as canners refused to buy.

Plums .....$1.25@2.00
Currants, drawer .....50@55c
Cherries, loose, lb. .....5@12½c
do, box $1.25
Apricots, lb. .....5@7c
do, box .....$1.25@1.50
Peaches, 4 baskets .....$1.25@1 50
Pears $2.00
Figs, box, 1 layer .....75c@$1.00
Strawberries, 6 12-oz. boxes .....75@90c
do, 6 8-oz. boxes, drawer .....50@70c
Blackberries, drawer, 12-oz. boxes ...40@45c
Raspberries, drawer .....60@75c
Loganberries, drawer, 12-oz. boxes ..40@45c
do, 8-oz. boxes .....35@40c
Gooseberries, lb. .....5@7c
Cantaloupes, Standard .....$2.25@2.50
do, Ponies .....$2.00@2.25
do, Flats .....$1.00@1.25
do, Honeydew, crate .....$2.00@2.50
Watermelon, lb. .....2@4c

HONEY.

Some honey is selling in this market, but it is stated that the demand is far from brisk. Prices are unchanged, but local dealers say that they will have to come down if the crop is going to be handled here as the public will not pay the price asked with sugar on the decline. Most of the honey received here is coming from the northern part of the State.

DRIED FRUITS.

Prices to growers for prunes stiffened up somewhat this week, but there is not yet very active buying at these prices. It is expected that the Prune Growers' Association will announce its prices about the first of August, and until then the quotations are more or less nominal. When prices on other dried fruits will be announced is a question. According to local dealers it may come any time. The only indication as to what these prices may be is the high figures at which the canners are making contracts for apricots and other fruit.

Raisins, 1920 .....18½@20c..
Prunes—40-50s, 1920 crop basis.....16c
do, 50-60s 15c
do, 60-70s 13½c
do, 70-80s 12c
do, 80-90s 11c

Special Livestock Market Report

San Francisco, July 7, 1920.

CATTLE—There has been a heavy movement of fat cattle Eastward the past week, and owing to this Eastern competition, little prime stock is arriving in the local market. The market on the whole is dormant, and no change in quotations is noted.

Steers, No. 1, 1000-1200 lbs ..10 @10½c
do, 1200-1400 lbs. ..... 9½ @10c
do, 2nd quality ..... 7 @ 8c
do, thin ..... 6 @ 7c
Cows and Heifers, No. 1 ..... 8 @ 9c
do, 2nd quality ..... 6 @ 7c
do, thin ..... 2 @ 4c
Bulls and Stags, good ..... 3½ @ 4c
do, fair ..... 3 @ 3½c
Calves, lightweight .....10½ @11½c
do, medium ..... 9 @10c
do, heavy ..... 8 @ 8½c

SHEEP—There is quietness in the mutton sheep market, as growers are holding back, and the consumption demand is light. Good quality mutton lambs is eagerly sought, and the price market for this product is strong.

Lambs, milk .....11@11½c
do, yearling ..... 8@ 8½c
Sheep, wethers ..... 8@ 8½c
do, ewes ..... 6@ 6½c

HOGS—There has been a very fair run of live hogs lately, but receipts are not so plentiful as to weaken the quotations of the past week. In the Eastern markets well-finished hogs are showing greater strength.

Hard, fat, grain-fed, 100-150 lbs.....15c
do, 150-225 lbs. 15½c
do, 225-300 lbs. 15c
do, 300-400 lbs. 14c

Los Angeles, July 6, 1920.

CATTLE—The beef cattle market continues steady and with fair demand reported. All fleshy and fat cattle are finding ready buyers from among the packers. Also the offerings continue to be pretty good. There are no price changes to report from last week's quotations.

Per cwt. f. o. b. Los Angeles:

Beef steers, 1000@1100 lbs. ....$8.50@10.50
Prime cows and heifers .....$8.00@ 8.50
Good cows and heifers .....$7.00@ 7.50
Canners .....$4.50@ 5.00

HOGS—Offerings in this market are still very light and lightweights show an advance of 50c over last week's prices, but that is the only price change. The demand is very good for what is coming in.

Heavy, averag'g 275@350 lbs. $12.00@12.50
do, 225@275 lbs. .....$14.00@14.50
Light .....$15.50@16.50

Rough docked 20 lbs. piggy sows 40 lbs. and stags, 40 per cent.

SHEEP—Receipts in lambs as well as offerings continue good and a decline of $1.00 under last week's prices is reported. There is a good demand for lambs, but very little call for ewes and wethers which are reported dull but nevertheless steady.

Prime wethers .....$6.00@ 8.00
Yearlings .....$6.70@ 7.00
Prime ewes .....$8.00@ 9.00
Lambs .....$12.00@13.00
Spring lambs .....$10.00@12.00

Portland, Ore., July 6, 1920.

CATTLE—Weak; receipts, 1197; quotations unchanged.

HOGS—Steady; receipts, 620; quotations unchanged.

SHEEP—Steady; receipts, 1078; quotations unchanged.

EASTERN.

Chicago, July 6, 1920.

CATTLE—Receipts, 11,000; beef steers selling about 1500, mostly 25c higher, others steady to higher; top heavy, $16.75; yearlings, $16.50; bulk, all weight, $13@16.25; she stock, mostly steady, some higher; early sales bulls and calves, steady; bulk vealers, $11@12; stockers, steady to higher.

HOGS—Receipts, 30,000; light and light butchers, strong to 15c higher; others 25@50c higher than Saturday's average; top, $15.90; bulk light and light butchers, $15.25@15.80; bulk 250 pounds and over, $13.50@15.25; pigs, steady; bulk of desirable kinds, $12.50@13.

SHEEP—Receipts, 11,000; native lambs, steady to strong; spots higher; Western lambs, 50c@75c higher; sheep, steady; choice to prime Idaho lambs, $15@15.50; with light sort top, native lambs, $14.50; bulk, $13@14; Idaho yearlings, $9.25; good to choice fat ewes, $5@6.00.

Special Deciduous Market Report

As each week passes we think that the 1920 deciduous fruit prices had reached the peak, to find that the following week is going one better. Never before in the history of the business have such universal prices been obtained. Even during the poorest of seasons some variety at some time during the season would make a record, but when it comes to the entire list, from Clyman plums to Rockport cherries selling at topnotch prices, it is a surprise to the oldest of the old-timers. Mixed cars ordinarily selling around $1200 are now going at $2,500 to $4,000. We note a mixed car sold in Philadelphia July 2 for $3,950, and there was not a box of cherries in the car. The antediluvian Red June sold for $3.85, ordinarily worth four bits; Santa Rosa, $4.00; Climax, $4.00; Beauty, $4.25; Formosa, $4.50; Tragedy, $4.00. Another car, same date, sold in Detroit for $3,342—Formosa, $3.80; Climax, $3.65; Burbank, $3.45; Tragedy, $3.35; Santa Rosa, $2.80; small shipment Bing cherries, $3.15.

Same date car sold in Boston for $3,975—Climax, $4.27; Santa Rosa, $4.20. These two varieties composed the car. Same date, New York sold car of Mendocino county cherries for $5.00 per standard box. New York also sold car on same date from Sacramento river district for $4,060—½-boxes Lawson pears, $5.17. Triumph peach, $2.12; Beauty plums, $3.32; Tragedy, $4.10; Formosa, $4.00. Same day car of cherries from San Jose grossed $5,918. July 2, St. Louis sold car of San Jose cherries for $4.480; also car mixed fruit for $2,371—Tragedy, $3.00; Santa Rosa, $2.85; Royal 'Cots, $2.65. Cleveland grossed $3,601—Santa Rosa, $3.75; Clyman, $3.10; Climax, $3.90; Burbank, $3.50; Black Republican cherries, $5.00; Tragedy, $3.55. Chicago grossed, $3,242—Climax, $3.55, Burbank-$3.25; ½-box Wilder pears, $2.80; Gaviota, $3.05.

LOS ANGELES

Los Angeles, July 6, 1920.

BUTTER.

Receipts in this market continue quite heavy, but hardly up to last week's. The market is 1c higher also. Consumption is keeping up well, in fact, better than for some time past. Receipts for the week ending today were 347,900 pounds. These prices are paid the producer.

California extra creamery 58c
do, prime first 56c
do, first 55c

EGGS.

There is a splendid demand in this market for everything that is coming in, even though the market is 2c higher all around. Receipts are considerably under last week's, and for the week ending today were 1,237 cases. Prices represent those paid the producer

Fresh ranch, extra 50c
do, case count 48c
do, pullets 43c

POULTRY.

Receipts in the poultry market not quite so good. Broilers are higher and in good demand. Friers steady and selling very well. Heavy hens also in fair demand at quotations Not many light hens wanted now and they are dull and lower. Ducks very dull and weak. Turkeys reported to be in good demand and price steady.

Broilers, 1 to 1½ lbs. 24c
do, 1½ to 1¾ lbs 28c
Friers, 2 to 3 lbs. 32c
Hens .....18@28c
Roosters (soft bone), 3 lbs. and up..... 38c
Ducks .....17@20c
Turkeys .....40@44c
Geese 25c

VEGETABLES.

This market is pretty well supplied today. All choice to fancy stuff in fair demand. There is very little call for poor grade. Potatoes selling well and lower. Onions slow sale and also little lower than a week ago. Cabbage is scarce and quoted higher. String beans now coming in freely and lower and good demand for them. Summer squash steady and demand fair. Cucumbers having very light sale and priced lower. Tomatoes having good sale and higher today.

Potatoes .....$4.75@5.25
Onions, Stockton, yellow, cwt. ..$1.15@1.35
do, Coachella yellow, cwt. ....$1.40@1.50
do, crate .....60@75c
Cabbage, per 100 lbs. .....$2.50@3.00
Lettuce, crate .....50@75c
Rhubarb, per 30-lb. box .....50c@$1.00
Peas, lb. .....6@8c
Carrots, doz. bunches .....30@35c
Summer Squash, local lug .....50@60c
String beans, green, lb. .....2@3c
do, wax, lb. .....2@3c
do, Kentucky, lb. .....3@4c
Cucumbers, lug. .....40@50c
Tomatoes, 4-basket, large .....$2.50@2.75
Bell peppers, lb. .....20@25c

FRUITS.

All choice to fancy fruits in very good demand. Prices generally show a decline from a week ago, lower prices being the result of more liberal offerings, it is said. Crabapples are now making their appearance on the local market and meeting with fairly good demand.

Cherries, Black Tartarians, lb. .....15@18c
do, Royal Anns, lb. .....15@20c
do, Bings, lb. .....18@24c
Apricots, lb. .....4@ 5c
Plums, Beauty, lb. .....5@ 6c
do, Santa Rosa, lb. .....5@10c
do, Santa Rosa, lb. .....5@ 10c
Peaches, lb. .....4@ 6c
do, extra, fancy clings, lb. .....10@12c
Figs, black, lb. .....10@12c
Crabapples, lb. .....8@10c

BERRIES.

There are no changes in this market to report from a week ago. A pretty fair demand is being felt for what is coming in. Receipts only fair.

Blackberries, 30-basket crate ....$3.00@3.50
Raspberries, 30-basket crate.....$3.75@4.00
Loganberries, 30-basket crate ....$3.00@3.50
Strawberries, 30-bkt crate, fancy $3.50@3.75
do, poor to choice, 30-bkt crate $3.00@3.25

MELONS.

Melon receipts were very good all during last week and prices are a little lower than when last quoted. A good demand is being felt at the decline and both cantaloupes and watermelons are selling well under fair offerings.

Cantaloupes, standard crates.....$2.50@2.75
do, flats, crates .....75c@1.00
do, pony crates .....$2.25@2.50
Honeydew melons, standard crates $1.75
Watermelons, lb. .....1c@1½c

BEANS.

The bean market is as dull as for the past few weeks, and little or none has moved for several days. Prices, however, are holding steady and unchanged since a week ago.

Limas, per cwt. $10.00
Large white, per cwt. .....$5.25@5.50
Small white, per cwt. .....$5.25@5.50
Blackeyes, per cwt. .....$6.50@7.00
Tepary, per cwt. .....$3.00@3.25
Pink, cwt. $6.75

HAY.

Hay receipts were fairly good the past week. Alfalfa is in very good demand and prices steady. Grain hay is reported to be slow of sale and weak.

Barley hay, ton .....$23.00@25.00
Oat hay, ton .....$25.00@28.00
Alfalfa, Northern, ton .....$29.00@31.00
do, local, ton .....$25.00@32.00
Straw .....$14.00@16.00

ALFALFA.

(Alfalfa Growers of California, 408 P. E. Bldg., Los Angeles.)

The market for alfalfa hay continued active throughout the week, with a good all-round demand which promptly absorbed all offerings at the same level of prices as before. Prices in California are as follows:

Southern Prices:

Choice Alfalfa, ton $40 00
No. 1 Dairy Alfalfa, ton, ...$36 00
Standard Dairy, ton $32.00
Stock Hay, ton.....$29 00

Northern Prices:

No. 1 Dairy Alfalfa, ton $32 00
Standard Dairy, ton $31 00
Stock Hay, ton $27 00

MARKET COMMENT.

Dried Fruits Inactive.

There is little activity in the dried fruit market. The demand is not sufficient to change the situation that has ruled during the past ten days. The tone of prices, nevertheless, is firm as holders are not forcing their stuff on the market. Futures in prunes are not being traded in as buyers are waiting for association to name its opening prices, which is expected before the end of the month. Apples are quoted: Choice, in 50 pounds, 11½ cents extra choice; extra choice, in 50 pounds, 12 cents; fancy, in 50 pounds, 13 cents. Figs—White: Cooking, in 50 pounds, 7½ to 8 cents; choice, 8½ to 9 cents; extra choice, 9½ to 10 cents; fancy, 10½ to 11 cents. Blacks: in 50 pounds, 7 to 7½ cents; choice, 8½ to 9 cents; extra choice, 9½ to 10 cents; fancy, 10½ cents. Peaches—Standard, 13½ cents; choice, 16 cents; extra choice, 16½ cents; fancy, 17½ cents; extra fancy, 19 cents. Pears—Standards, 13 cents; choice, 13½ cents; extra choice, 14½ cents; fancy, 19 cents.

New Apples at Good Prices.

New apples from the early apple sections of Sonoma are arriving quite freely. Some arrivals are not fully matured; as a natural consequence prices are easy, around $2 to $2.50 per box for the best grades. Ice-house stock, old crop is a thing of the past, last sales being around $4 per box. The apple season has been "tricky." It started out as though it was going to be a "hummer"; everybody wanted to get in the game. Prices were high; as a matter of fact, the highest on record, but all at once the string broke, and down came the market before the season had fairly begun. However, as the old stock is about cleaned up along the coast, prospects are favorable for the coming season.

Cantaloupes Looking Up.

The cantaloupe market has taken a turn for the better. This is probably caused by the shippers reading the riot act to the commission houses for the ruling low prices. There was a threat of abandoning shipments unless there was a disposition to improve the market. The sudden hot spell in the meantime created a strong demand for cantaloupes and dealers began buying freely. Prices began to soar to levels around the opening prices. Standards went to $4.25 to $5 per crate; ponies, $3.50 to $4; Flats, $1.50 to $1.75 per crate, with market pretty well cleared up. With prevailing prices shipments are increasing. As a consequence prices may be expected to recede from the present level.

Wide Range in Plum Prices.

The local deciduous market is in fair shape, even though well stocked with all varieties. Plums are in demand, but are selling at wide range, prices ruling from $1.00 to $2.25 per crate on box. This range in prices is due to variety as well as condition. The heat of several days ago "cooked" a lot of fruit that has been placed on the market, hence prices have been affected by that.

Market on Nuts Nominal.

California walnuts of the budded type have begun to sell more freely, as jobbers are anticipating their full requirements on the spot market, fearing a delay of shipments from the West. Almonds are unchanged but dull.

Watermelons Are Plentiful.

Watermelons seem to be in sufficient supply to meet the demand. There is no excitement in the market, prices ruling from 3½ to 4 cents per pound.

LIVESTOCK AND DAIRY NOTES.

The supplies of frozen beef in the east were practically exhausted in June, but the trade which has been using this meat will be supplied from grass fed cattle now going to market from Texas.

Texas Agricultural College has received a donation of a Brahmin bull and two heifers from the Pierce estate of that commonwealth. These cattle are said to have thoroughly demonstrated their usefulnss as economical producers of beef on the ranges of Texas.

Testimony before the Interstate Commerce Commission recently by the president of the Corn Belt Meat Producers' Association of Iowa was to the effect that its members had lost from 25 to 75 dollars per head on cattle fed out during the past year. This evidence was given in protest of any raise in railroad rates on livestock in that region.

The Aberdeen Angus Journal notes the entrance of F. F. Peabody of Santa Barbara into the ranks of "Doddie" breeders. The gentleman secured his foundation stock from the Brookhollow Ranch, the home of the Aberlour herd of Aberdeen-Angus. Mr. Peabody is a member of the firm of Cluett, Peabody & Co., the famous collar makers.

Sheep and Goats.

Reports from all parts of the country west of Chicago show a great increase this year in the pooling method of marketing wool.

Chas. Kimble has shipped to Old Mexico and Texas this season 1800 Rambouillet ewes and 1000 rams. He shipped a carload to Stockton recently.

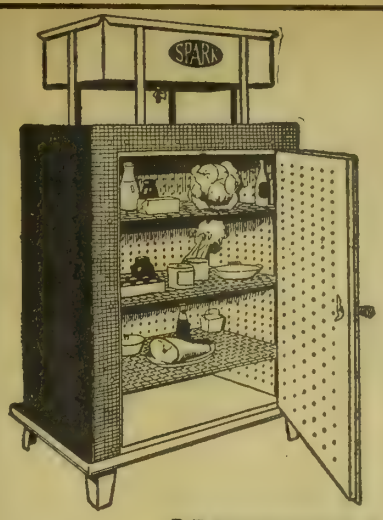
DAIRYMEN, ATTENTION!

The first annual meeting of California Dairy Council will be held in Hanford, Kings county, July 14 and 15—the most important event of the year. A wonderful program has been arranged—motion pictures, cattle exhibits, a play by Hanford school children, an auction of purebred calves, prominent speakers from Eastern States and from the California State Board of Health, State Board of Education, and the College of Agriculture, and an old-fashioned barbecue. Hanford will keep open house, and invites everyone to be there who is interested in dairying—and children.

Everyone interested in dairying in any way, either as a producer or consumer, should attend this meeting. Instruction, amusement and last, but not least, profit for those who buy the purebred calves, which will be sold at auction.

GOING! GOING!! GONE!!!

This will be heard just two weeks from next Wednesday at Los Angeles at the Winsor Ranch sale of Duroc-Jerseys. This is the herd that was good enough for Walter Dupee of Edgemoor Farm to select a gilt, High Lady Sensation, for which he paid $2,000 and the boar, Great Sensation 3rd at $8,000. Many of the sows in this sale will be bred to him and when you see the size and quality of them, you, whether you are a Duroc breeder or not, will want some of them. You will forget about its being an off year in hogs. If you, Mr. Hogman, will acquire some of this kind of swine and give them plenty of alfalfa pasture with a little, just a little, grain on the side, the H. C. L. will have no terrors, for you will have the money to meet it.



Will Pay for Itself in One Season

The high cost of living makes it imperative that left-overs be utilized—but—in order that they may be utilized with safety, they must be kept fresh, sweet and wholesome.

THE SPARK ICELESS COOLER

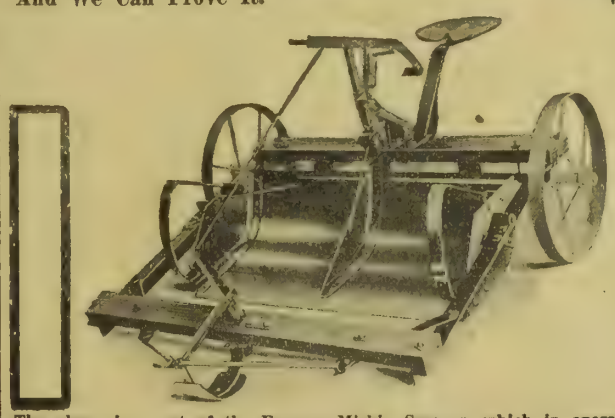
is a positive necessity for those who wish to fight the high cost of living. See it at your dealer. Write our Department A for free booklet—

"HOW TO KEEP VEGETABLES THREE WEEKS WITHOUT ICE."

MANUFACTURED BY **Hammer-Bray Co.**
Oakland California

THE MISKIN SCRAPER
IS THE BEST SCRAPER ON EARTH

And We Can Prove It. Write for Circulars.



The above is a cut of the Famous Miskin Scraper, which in operation, easy draft, greater capacity, and better work, has many advantages over common Fresno and wheel scrapers now on market.
Made in 2-horse, 3-horse, and 4-horse sizes. The four-horse size can be operated by small tractors from the tractor seat, by tractor driver.
SEND FOR DESCRIPTIVE CIRCULARS, WITH PRICES
WE PAY THE FREIGHT.

MISKIN SCRAPER WORKS, UCON, IDAHO

Special Citrus Market Report

Los Angeles, July 7, 1920.

The Eastern citrus market, especially the orange portion, has shown decided improvement during the past week, even though it has been in competition with heavy arrivals of deciduous fruits.

New York: Valencias, $6.60 to $10.10; Blood, $6.45; Homosassas, $7.40 to $7.85; Seedlings, $7.70; Lemons, $3.20. Boston: Valencias, $6.20 to $8.00; Lemons, $1.35 to $2.95. Philadelphia: Valencias, $6.80 to $8.35; St. Michael, $6.85 to $6.80; Med. Sweets, $5.55 to $6.65; Lemons, $1.50 to $4.30. Pittsburgh: Valencias, $4.85 to $6.60; Lemons, $1.45 to $2.90.

Shipments of citrus fruits to date: Oranges, 23,490; lemons, 6,030. Foreign lemon sale in New York July 1, 4,600 boxes, firsts selling at $3.35 to $4.35; seconds, $2.50 to $3.50; average, $2.70. On Wednesday, July 7, there was advertised to be sold in New York, 50,000 boxes of foreign lemons.

Classified Advertisements.

COUNTRY LANDS.

LAKE-SIDE CITRUS AND FRUIT
40 Acres, Near Town, $5,000
High-grade fruit farm, attractive home, bordering hard-surface road; 200 orange trees, 200 grapefruit, 150 peaches, other fruit; 40 acres loam soil, some rich muck land; borders large lake; good house, overlooks lake and town half-mile away; barns, other buildings; widow must sell; big bargain at $5,000; easy terms. Details page 50, Strout's New Catalog Orange Groves, Other Semi-tropical Farms. Copy free. STROUT FARM AGENCY, 503FA, Wright-Callender Bldg., Los Angeles, Cal.

80 ACRES—Honey Lake Valley, good location, near county seat, schools, banks, S. P. station. Good improvements. Good irrigation system. Raise fine alfalfa seed, hay and grain. $16,000.00 cash. A good buy. Box 280, Standish, Lassen Co., Cal.

FOR SALE—100 acres nice level land. No waste land on it, 13 miles N. W. of Chico, Cal., ¼ mile of Cana on S. P. For particulars address, Owner C. L. Vanschoiack, R. F. D. 4, Chico, Cal.

MISCELLANEOUS.

——DAIRYMEN——

40 tons of River Alfalfa and Barley Hay harvested at proper time, well cured, with lots of leaves; no weeds, no foxtail. 30 tons first class of first-class clean 2nd and 3rd cutting subirrigated river alfalfa, fine stems and all of the leaves. Balers have said this is the best hay they have seen this year. Hay grown on Natomas Ranch, 3 miles from city on highway—$30 per ton. F. L. Sandercock, Hotel Sacramento, Sacramento, Calif. Phone Main 900.

AGENTS WANTED—To sell seeds, plants, trees, spray, garden supplies, etc. Large firm, liberal commission. Be the first to apply from your town. Give age, reference, photo, etc. Fine opening for young man or lady. Boys and girls can make good money during vacation and after school. I send you the packages of seed free—you pay as sold. Write at once to Wm. E. Dart, Box 414, Santa Rosa, Cal.

WANTED—For ranch near Oakland, man who understands modern methods of raising and feeding hogs. Also man on pruning and care of California fruits. Good positions, assured men who are not afraid to work and will stick to the job. Address, Standard Gas Engine Cmpany, Dennison and King Sts., Oakland, Cal.

REMANUFACTURED PIPE.
All sizes standard pipe and wrought iron screw casing. All kinds of fittings. Guaranteed good as new. Write for prices. Weissbaum Pipe Works, 160 Eleventh street, San Francisco.

SINCE MAY 1ST Ranere Everbearing Raspberries have brought $30 to $45 per chest. Plants for fall delivery—$75 per 1000; 10c each. F. Everton, R. D. A, Box 305, Mountain View, Cal.

50,000 FLORIDA Sour Orange Seed Bed Trees; 100,000 California Sweet Seedling Orange Seed Bed Trees. Southland Nurseries, 1941 East Colorado St., Pasadena, Cal. Phone Colorado 6352.

PARTIES INTERESTED in securing plans for the best and cheapest evaporator of large capacity on the market will find it to their interest to communicate with F. C. Chapman, Modesto, Cal.

ALL SIZES OF PIPE and screw casing, both new and second-hand, dipped and undipped. Guaranteed. Prices right. Shecter Pipe Works, 304 Howard St., San Francisco.

FOR SALE—Alfalfa meal in carload lots; quality guaranteed. I raise the alfalfa and wish to deal directly with consumers. Address D. Power Boothe, Ceres, Cal.

AGENTS — Mason sold 18 Sprayers and Autowashers one Saturday; profits, $2.50 each. Square deal. Particulars free. Rusler Company, Johnstown, Ohio.

BEACH ALMOND HULLER in good condition run by 2½ horsepower. Phone or address, O. N. Featherston, Route C, Box 172, San Jose.

WEBSTER, WEBSTER & BLEWETT—Savings and Loan Bldg., Stockton, Calif. Established 54 years. Send for free book on patents.

WANTED—Married dairyman, expert feeder and calf-raiser. Experienced in A. R. O. and fitting for shows. Sunnybrook Ranch, Willits, Cal.

TRUCK HAULING wanted by contract or day; will go anywhere. Owner drives. Address W. McGrew, 1370 Eddy St., San Francisco.

CROLEY'S BALANCED HOG FEED—The cheapest feed to fatten hogs. Write Geo. H. Croley, Townsend St., San Francisco, Calif.

FOR SALE—Portable Smalley Alfalfa Cutter, 26 inch, with mealing attachment and sacker. Box 2080, Pacific Rural Press.

WANTED—Portable saw mill in good condition. State make and full particulars. C. C. White, Sheridan, Nevada.

WANTED IMMEDIATELY — Experienced budders and tiers. Address or phone, Kirkman Nurseries, Fresno.

FOR SALE—Star drilling rig, No. 4. Must sacrifice; $1200. Also tractor, $200. W. P. Vestal, Water, Cal.

PUMPKIN SEED — Mixed pumpkin seed. Good germination, 25c per lb. Aurora Seed Mill Stockton.

How it Happens

that SPERRY DRIFTED SNOW FLOUR is always the same

TO begin with, it doesn't *happen*. It's just a natural, inevitable result of marvelous accuracy in making. This scientific and practical care and skill enter into the making of Sperry Drifted Snow Flour every step of the way, from the selection and proper proportioning and thorough blending of the various wheats to the very sewing of the sack in which it comes to you.

Chemists test Sperry Drifted Snow Flour at every stage of its making. And finally when each milling is finished, repeated tests are made in the baking laboratory further to "prove perfection absolutely perfect." Then, and not till then, is Sperry Drifted Snow Flour permitted to go to your grocer for *your* service.

Ask your grocer for Sperry Drifted Snow Flour—"The Standard since 1852"—and see that you get it!

SPERRY FLOUR CO.
U. S. A.

11 mills and 48 distributing points on the Pacific Coast and in the intermountain territory.

VOL. C—No. 3 Fiftieth Year

THE PACIFIC RURAL PRESS

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SAN FRANCISCO JULY 17, 1920 LOS ANGELES

The picture here produced is a Santa Rosa plum tree, a horticultural masterpiece, the property of D. B. Harris of Madera. This tree began bearing at the age of two years, and has since outdistanced anything in the orchard. Mr. Harris thinks that if the whole orchard averaged up to this tree it would produce more than a carload of 13 tons. His first carload of plums from this orchard, the present season, sold for $2,800. It is trees of this characer that are being used for investigational work by the Nurserymen's Bud Selection Association of California, and from which they will select their stock for budding and grafting purposes.

Have You Seen That New John Deere Plow?

It's Built Especially For the Fordson Tractor

Because it is built of new-process John Deere steel, the No. 40

weighs less than the average horse-drawn sulky plow;

pulls extremely light—a real fuel saver;

stands the strains under all conditions — its beams are guaranteed not to bend or break.

Due to the self-adjusting hitch—an exclusive John Deere feature — bottoms run true and level at all depths — they neither "nose in" nor "hop out" of the ground.

Its John Deere bottoms insure good work.

YOU have been hearing for some time, no doubt, that John Deere was building a new plow especially for the Fordson tractor.

Perhaps you are one of the many farmers who asked that John Deere build such a plow.

Perhaps you are one of the many who have gone to John Deere dealers with the query: "When can I see that John Deere plow built especially for the Fordson?"

John Deere specialists took their time in building the plow. They had the John Deere reputation to consider, first of all. They knew that farmers expect especially good performance from a John Deere plow. Their task was to give the user the benefit of such performance behind his Fordson tractor—to fit a John Deere-quality plow to the Fordson as carefully as a good tailor fits a suit of clothes to a customer.

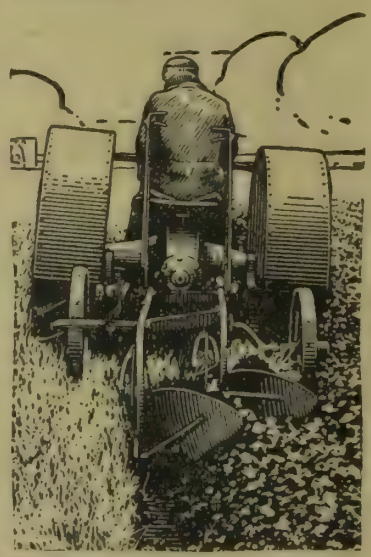
The plow is now ready. It has been branded with the famous John Deere trademark of quality. It is called the John Deere No. 40.

Here Are Features That You have been Wanting

Imagine a two-bottom tractor plow that is lighter than the average horse-drawn sulky plow—

—a tractor plow that pulls so light that it soon pays for itself in lower fuel consumption, greater acreage per day, minimum wear on the tractor—in all the factors that mean lower plowing cost per acre—

—a tractor plow that has this desirable light weight and light draft **plus** tremendous strength—**beams that are guaranteed not to bend or break;** frame construction that stands all of the strain of utilizing the tractor's power under all conditions.



The No. 40 fits the Fordson. The No. 45 is built for use with ANY "two-plow" tractor.

Those are important features of the No. 40 that you are sure to appreciate.

Beams, braces and axles are made of a **new process, John Deere steel** that combines the desired lightness with the necessary strength.

It's the Plow with the Self-adjusting Hitch

The No. 40 has a self-adjusting hitch—an important advantage in plowing with the Fordson.

When you adjust the plow for depth with the depth lever, the hitch point automatically regulates itself to the correct line of draft. That means that the bottoms run true and level at all depths, doing uniformly good work all the time.

It means that there is no undue wear on shares because of bottoms "sledding" or "running on their nose"; no worry or loss of time over hitch adjustments.

The self-adjusting hitch is exclusively a John Deere feature. Any plow for use with the Fordson needs it, but—**no other plow has it.**

John Deere Bottoms do Good Work; Wear Well

The No. 40 is equipped with genuine John Deere bottoms—the bottoms that scour, wear well and make good seed beds.

These bottoms include both steel and chilled types in a variety of shapes to meet different requirements.

The shares are quick detachable—loosen one nut to remove a share: tighten the same nut and the share is on tight.

The power lift of the No. 40 is simple, strong and positive. It works perfectly. The lifting parts move only when the plow is being raised or lowered—practically no wear.

This is the Plow the Fordson Needs

If you are planning to buy a Fordson tractor, it will pay you to investigate the No. 40.

The tractor will give you pulling power. It will be up to the plow you buy to apply that power. Remember that, no matter how well a tractor may do its part, the plowing outfit is no better than its plow—just as no knife is better than its blade. You need the best plow you can get.

The No. 40 may be on display in your town now. If it isn't it soon will be. Get acquainted with it thoroughly before you buy your tractor.

The best place to judge the No. 40 is in the field. Watch it at work and see for yourself how wonderfully light it pulls; how simple and strong the hot-riveted frame construction is; how the self-adjusting hitch keeps the bottoms running true and level at all times, and how the bottoms scour, pulverize and turn the soil in that John Deere way—the way the practical farmer wants it done.

Another Plow for ANY "Two-Plow" Tractor

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JOHN DEERE
MOLINE, ILLINOIS

AGRICULTURAL NOTES.

Thick spacing of cotton has been found to give bigger crops.

The cotton crop of Imperial Valley is said to be only 80 per cent normal.

Santa Barbara County is harvesting the heaviest hay and grain crop in many years.

The total cultivated cotton acreage of Texas this year is 8 per cent less than in 1919.

Carloads of zucchini (Italian squash) have been shipped by express locally from Merced this season.

Plenty of water for irrigation has made crop yields unusually large around Fallon, Nevada, this season.

"Winter Tennessee" barley has given considerable satisfaction this season on the west side of the San Joaquin.

Electrical storms of more than usual severity started 62 forest and brush fires in Northern California National forests on July 4 and 5.

Potato growers of the San Bernardino Valley recently perfected a marketing organization which is affiliated with the California Vegetable Union.

The way alfalfa hay stacks are being built up and multiplied in Kern and Tulare Counties some dairymen at least intend to stay in the business.

The census report shows that Kern County, California, has enjoyed an increase of 17.6 per cent in irrigated acreage of land in the last ten years.

Trading in wheat futures will be reopened in Chicago on July 15. There will be no trading in deliveries beyond March or this side of December.

Plans for a comprehensive exhibit from Siskiyou, Shasta, Trinity, Modoc and Lassen Counties at the State Fair, September 4th to 12th, now are being formulated.

The Turlock Merchants and Growers shipped their first crate of cantaloupes this season on July 8. Fifty-four of the melons went by express to New York.

Butte County for the first time since 1917 will be represented at the State Fair. County Horticultural Commissioner Earl Mills will be in charge of the exhibit.

It is estimated Missouri will this year yield 29,162,160 bushels of winter wheat, 161,000 of spring wheat, and 39,775,750 of oats, although 550,000 acres are idle.

A decided slump in peanut production and acreage occurred the past season, with only 1,251,000 acres planted, resulting in an estimated yield of 33,263,000 bushels.

Merced County Early Ana tomatoes are planted only because they usually ripen a week earlier than the main crop of Stones. Curiously they were as late as the Stones this year.

The Times Trade Supplement of May 22, 1920, reports that the German sugar-beet crop for 1919-20 is expected to yield 740,000 tons, compared with a total of 1,193,000 tons in 1918-19.

The Kansas penitentiary sells binding twine only to farmers and farmers' organizations. The price is 14¼ cents a pound in carload lots; 14½ cents a pound in smaller shipments.

A corporation embracing all sugar producers in the Philippines is being planned by planters and islanders. The organizers aim to have the corporation control the sugar output of the Philippines.

According to the Durst Brothers, who operate hop fields in the Wheatland section, the harvest of the 1920 crop is scheduled to commence about August 5. Prospects for a good yield are favorable.

Merced County had the biggest crop of onions this season that they ever had, and several early carloads were sold at $4 down to $2, but the rest are not paying costs of production and marketing.

The American Farm Bureau Federation has called a conference to meet at the LaSalle Hotel in Chicago July 23d, at which the matter of cooperative marketing of livestock and grain will be discussed.

Eight million dollars will be spent by the Federal Government in the fiscal year which started July 1 on roads in California, according to Engineer C. H. Sweetser of the Department of Agriculture.

The investment in American agriculture amounts to about 80 billion dollars and last year the value of crops and livestock aggregated 25 billion dollars, according to Secretary of Agriculture Meredith.

The first cantaloupes to be shipped out of the Turlock district this season were sent out July 6. The melons came from one of the fields that were paper-covered during the cold spell in the early part of the season.

Lewis J. Spence, director of traffic, declares that the Southern Pacific is arranging for an expected exodus of emigrants. Italians and Southern Europeans will make up the bulk but many are expected also from Russia.

For the first time practically the whole bottom of Tulare lake has yielded a wonderful crop of grain and the harvest is now on. Approximately 12,000 acres including the portion of the former lake will yield 25 sacks to the acre.

The California Oregon Power Company, operating in Siskiyou, Shasta and Trinity Counties in California and Southern Oregon, has applied to the Railroad Commission for readjustment of its rates for electrical energy in California.

Owing to the larger demand this year more than 1500 men are required to harvest the hay crop in Elko district, Nevada. Some workers are receiving as high as $5 a day. The hay harvest in the Lovelock Valley and around Winnemucca is finished.

Representatives of many industries, including farm products organizations, have asked the Interstate Commerce Commission to revoke or modify its order requiring railroads to accord preference to coal mines east of the Mississippi in the assignment of open top cars.

Attention is again being drawn by State Director of Agriculture George H. Hecke to the value of windbreaks to agriculture in the interior of California. The hot winds of the summer do a great deal of damage to crops and Hecke states that this could be reduced by windbreaks.

Several hundred acres of cotton planted in the Turlock district promise to give good returns to the planters. There are about 275 acres in the district, distributed among some scores of growers, the fields ranging from half an acre up to as high as 45 acres.

The U. S. Government's appropriation of $500,000 for continuing flood control work on the lower Sacramento River has been matched by the State of California. This places the State in a position to take full advantage of the Government's offer, which is on a fifty-fifty basis.

The laboratories of the State division of agricultural chemistry from the University of California have moved to the headquarters of the California State Department of Agriculture in Sacramento. This branch of the department investigates and devises fertilizers and analysis insecticides and sprays.

Gray Silver, representative of the American Farm Bureau Federation at Washington, D. C., is touring California to get into close touch with the local farm bureaus. It was largely through Mr. Silver's efforts that Chicago bankers were induced to finance the wool growers of the sixteen States who pooled their wool and are now holding for higher prices. This step of the Chicago bankers may wrest the wool market supremacy from Boston.

Seed men of the Eastern States and of Europe have selected California peas in preference to those of other States and the export demand for them is in excess of the supply, according to the officials of the San Francisco-Sacramento Railroad Company. The California peas are all raised on reclaimed land.

E. T. Meredith, Secretary of Agriculture, says if all the farmers in the United States should decide to go into some other business they could sell their livestock and crops for one year and with the money they receive buy all the railroads in the United States together with all the rolling stock and other equipment.

In a recent bulletin of the U. S. Department of Agriculture dealing with the waste of woman power on the farm, it is stated that women average 13.12 hours in summer and that 87 per cent have no regular vacation. Four per cent have water in the kitchen; 86 per cent must carry it from the spring or pump.

C. S. Jurgis, a prominent rice grower at Willows, has conceived the idea of saving the waste caused by opening checks with binders by cutting the first swath with old-fashioned grain cradles. He has secured a shipment of cradles from the East and is now looking for a dozen experienced cradlemen to operate them.

California cotton fields, most of which are in the Imperial Valley, but some of which are in Fresno, Kings and other San Joaquin Valley Counties and a small number in the Sacramento Valley, will yield a half bale to the acre this year, says estimate of E. E. Kaufman, field agent for United States Bureau of Crop Estimates.

"Crop failures can not be prognosticated," declared Professor J. W. Gilmore, lecturer and research worker in agriculture at the University of California, in refutation of the claims made by Sir William Beveridge of London, who predicts a world crop failure in 1923. "Meteorological cycles can no more be forecast than presidential elections."

A falling off in the coming winter wheat crop of California is indicated in the report of John Perrin, chairman of the board of the San Francisco Federal Reserve Bank, who has just completed an estimate for the Twelfth Federal Reserve District. The estimate is for 51,164,000 bushels as compared with 61,051,000 bushels for last year.

HORTICULTURAL JOTTINGS.

A number of large orchardists in Napa County have reported continued damage by gophers.

The California Prune and Apricot Growers' Association has increased its packing facilities considerably for this year's product so that expeditious and expert handling of the fruit will result.

The Associated Olive Growers, Inc., has filed suit for $12,500 return from J. C. Martin, formerly president and general manager, charged with making a secret deal with an Eastern firm which was a fictitious transaction.

The Nevada County pear crop will be considerably below normal this year, according to Horticultural Commissioner D. F. Norton. Conditions vary greatly, however, and some orchards will bear almost a full crop.

Reports come that the Mediterranean fly has invaded Greece and is practically wiping out their oranges and deciduous fruits. They report that no remedy has yet been discovered and there is little attempt to check it. California should be on the constant lookout.

Indications are that nursery stock will be as scarce for 1921 planting as during the season recently closed. The nurseries are already limiting the purchase of cling peaches and apricots to a stated number per customer, owing to the heavy buying, which began this year much earlier than usual.

Many of the owners of wineries in the Fresno section are of the opinion that the plants will begin operating in the manufacture of dry and sweet wines at no distant day.

The fruits which are arriving at the cold storage plants in Sacramento for exhibition at the State Fair have been produced by intensive methods and with the aid of labor-saving machinery.

The California Water Commission has advised Bakersfield farmers that it will conduct an investigation soon of the Inyokern Valley irrigation project, embracing 270,000 acres of land, which it is proposed to provide with water for agricultural purposes.

Construction of a dehydrating plant for the drying of fruit and grapes has begun at the plant of the National Ice and Cold Storage Company on the Northwestern Pacific Railroad near Santa Rosa. The plant will cost in the neighborhood of $175,000, and will be one of the largest in the State.

B. P. Jennings, Deputy State Sealer of Weights and Measures, working in Yuba county, recently confiscated twenty-one baskets of strawberries sold by a Japanese grower. The net contents of each basket was ten ounces, on an average. They were made to hold twelve ounces each.

Control measures are being taken all over the Sacramento Valley by orchardists and horticultural officials in an effort to check the red spider, which has made a determined attack upon prune and almond trees. It is pointed out that the fruit grower can stave off serious damage by keeping his trees well watered.

Placer county proposes that two or more trees of clingstone peaches from the Loomis district be transported bodily and set up as an actual exhibit at the State Fair. It is said that the peaches will be at their best stage for exhibition at fair time, and that the trees could be dug up and loaded upon automobile trucks without difficulty.

Apple growers, packers and shippers of the Sebastopol district, at a recent meeting, pledged themselves to bear the expense of Inspection Service similar to the one arranged for in the Watsonville district. Certificates of Inspection will be issued covering all carlot shipments moving out of the district. The date for shipping Gravensteins was tentatively fixed at July 19.

The Virden Packing Company is to ask the permission of State Commissioner of Corporations E. C. Bellows to increase its capital stock from $5,000,000 to $10,000,000. The company ultimately expects to establish several branch plants throughout the productive areas of the State, particularly the fruit and vegetable sections. The increased capital also will be used for that purpose.

R. L. Cody, horticultural commissioner of Santa Clara county, is carrying on a number of interesting experiments in San Jose in connection with the control of the mealy bug pest. Cody has just received 50 cryptolaemus montronzieri mulsant, known to scientists as the mealy bug destroyer. A number of these have been freed in affected orchards, while the remainder are being retained at the commissioner's office, an effort to breed them being made. The destroyers are similar to the "lady bug" but a trifle smaller.

The Emergency Water Conservation Conference, through its water master, Paul Bailey, has sent regulations to its members for the purpose of making the water supply of the Sacramento River go as far as possible. The Sacramento is at the lowest stage in years, and with a large rice area, it is pointed out that steps must be taken to conserve the water. In view of this, inspectors will visit each farm and reduce the water consumption to a minimum. The most stringent regulation provides that where an individual is found wasting water, the district will be penalized by allowing it less water.

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EDITORIAL

FARMERS UNDER THE WHEELS.

FROM TIME IMMEMORIAL farmers have been getting run over. History dawned upon them being pummeled by despots, mumbled by priests and tumbled by conquerors. Subsequently, for a few millenniums, they were fumbled by feudalism. Later still, the most upstanding of them fled the oppression of the eastern hemisphere and seemed to have gained manhood on the western, for the men upon the land were the chief exponents of freedom and independence, and they were the creators of the American republic. But they created also the institution of human slavery in a country designed as an exemplar of human liberty, and in punishment for this crime there came a civil war, which upset the social and industrial order, displaced the American farmer from his masterful position, while the wheels of corporations, interests, monopolies and trusts, rumbled over him. They left him no self-determination; they priced all the service and supplies they sold him at "all the traffic would bear"; they also priced everything they bought from him at as little as the farmer would bear. From this thraldom his own awakening power to fight and the God-given spirit of fair-play of the American people were fast rescuing him and were restoring agriculture to its old place as a masterful American industry. Then came the world war, which they say he won for humanity, and yet its close finds him again under domination, which destroys his independence and manhood and makes his industry well nigh impassible. One might say that there is new hope for him because his afflictions are becoming lighter. He is not so much crushed under the juggernautal cars of those counted in all past ages as "higher-ups," as he is upset from below. His helpers, who do not own even the tools they work with, aided by politicians who do not own even their own souls, are making common cause against him and are trundling their wheel-barrows over him. The farmer is always getting run over—but really it is a lighter affliction than those he has survived from antiquity. Despotism, priest-craft, trust-domination have passed away, or are in processes of removal, and that is promise of freedom and independence for him. Having achieved such victories against oppression, will he lie quietly to be run over by wheel-barrows? It is up to him. It is usually his own fault when a man is run over by a wheel-barrow!

WHAT WHEELS ARE NOW REVOLVING?

Forgetting the wheels which we have wheelwrighted in the last paragraph, it occurs to us that the wheels which now threaten to run over the farming industry are chiefly in the heads of people who have other vocations in life. These wheels seem to be revolved by two quite different forces. There are light, filmy wheels, whirled by visions of socialistic philosophy, which prescribe that nothing shall belong to anybody, no matter whether he has earned it or not; there are heavy, solid wheels, whirled by dreams of selfishness and greed, which prescribe that everything shall belong to whomever can get it, no matter whether he has earned it or not. These are the wheels which are now bringing hardship and suffering to American farmers, because their industry is capable of being destroyed by either or both sets of them, if they generate revolution enough in the public mind. The ideals upon which American farming has risen to its present high estate are these: ownership achieved by earning; working capital gathered by thrift and saving; production created by whatever measure of work is essential to it; disposition of products at prices which shall require effort and investment and which consumers can easily pay by the products of their own honorable activities; interest and wages at rates which these mutual benefits to producers and consumers can afford to pay for the services which labor and borrowed capital are called upon to render. These ideals of accomplishment and obligation have been embodied in American farming policies from the beginning. They are now assailed and endangered by individuals and classes with heads full of wheels, the whiz and whir of which they declare to be the voice of God when it is only the clatter of Deus ex-machina!

WHEELS WITHIN WHEELS.

These musings and mussings are suggested by something very concrete, and that is the question as to where the farming interest will emerge from the current conspiracy in which the railway machinery set up by the government and the laborers operating the transportation, seem to have entered against the owners of the railways and the general public, which is to be served by them. California experience has shown very clearly that railroads should be regulated by law in their charges and their attitudes toward the public, and the Inter-State Commerce Commission has demonstrated that railway service among the States should also be regulated by law and authority, but out of this State and national experience has come schemes and suggestions of policy which are wild in their theoretical foundations, greedy in their motives and unfair in the effects which they will produce upon the general public and in particular upon the agricultural industry, because it is the farming products which pay most of the freight, and it is the farming population which pays most of the freight on shipments which are not of agricultural production. The new burdens which it is now proposed to place upon those who thus chiefly have to meet transportation costs is therefore a matter of oppression and exaction from which farmers must do all that they can to release themselves. And this is coming on wheels within wheels—wheels of organization adverse to farm production revolving within wheels of politics, and both these wheels within other wheels of excessive profit to railways. It is a matter to which farmers should give diligent heed, both in their individual and in their associated actions, and should protect themselves and the general public, of which they form the greater part, both numerically and in aggregate investments. And this is a brief statement of the concrete situation based on calculations involving months of research by Clifford Thorne, representing the American Farm Bureau Federation and several middle western shippers' associations. Mr. Thorne presented his conclusions to the Interstate Commerce Commission in Washington, and the picturesque writer says that his presentation "exploded a bomb in the camp of the railway interests which bids fair to upset their plans for an easy raid on the public pocket-book." Whether the wheels within wheels, which are now whirling to grind the public welfare into a grist of advantage to organized labor, politics and railway ownership, can be so easily thrown out of gear by Mr. Thorne's showing we are not sure, but it should awaken the public to its danger. This is a brief of it:

The railroads of the United States are asking for an increase in freight rates which will produce $1,017,776,995 annually. At this moment railroad labor is demanding a billion dollar increase in wages. It is distinctly understood that the rate advance will not care for any portion of the increase that may be necessary because of wage advances; that will be followed by another freight advance, as a matter of course.

Mr. Thorne's careful statement showed: (1) that the railroad valuation on which the guaranteed 6 per cent returns are figured are tremendously overvalued—to the extent of several thousand million dollars; (2) that the present basis of income and expenditure is not a fair basis to figure future profits upon; and (3) that even on the present basis the calculations of the railroads allow for increased expenditures next year but do not allow for increased business and revenue.

Mr. Thorne showed (and supported with volumes of carefully tabulated figures) that on the basis of the figures submitted, the railroads would need an increase of only 18 per cent, instead of the proposed 27.85 per cent to pay the six per cent dividends guaranteed under the new railroad law.

It is calculated by Mr. Thorne and made public by the American Farm Bureau Federation that the difference between what the railways claim and what they are entitled to claim would save the public in freight over-charges about a million dollars a day. It would be well to save that—especially as the claim of railway laborers for increased wages at the rate of nearly three million dollars a day is still unprovided for. This is no wheelbarrow; it sounds like the distant rumble of a tandem of mountain-climbling, mogul locomotives. What are the farmers, who will be the chief sufferers in the aggregate, going to do about it?

BLUNDERS ON BONDS.

While we are reveling in the joys of such high finance it may be a matter of satisfaction to some of our readers to reflect that they are not likely to be crushed by the weight of State bond-issues, because it is so hard to get bond proceedings straight enough to pass all the requirements of the courts and of the bond-buyers. If this were not so it might be altogether too easy to roll up a great bond indebtedness. Since we commented on the subject of State land settlement last week, we have heard that the endeavor to have the people vote ten millions of bonds for this purpose this fall is likely to be abandoned, because the measure which passed the legislature last year has just been found to be technically defective, and therefore it would be idle to trouble the people to vote upon its engrafting on the constitution of the State. We are not altogether sad about this discovery, because there seemed to be some danger that the State might be involved in biting off more than it could chew in the way of wishing farms onto people not prepared to make good use of them, and therefore might be giving away farms when it should be giving away carpenter-shops or barber-shops, or soft-drink emporiums. Besides, we still have an abiding belief that subdivision and settlement of large tracts of land should be done by the owners and their agents, and the money ought to come from capitalists seeking investments, and the responsibility of the State should consist in requiring them to do it honestly, and in showing them how to do it in such ways and on such terms as would enable settlers to stay on the land and prosper while paying for them. If it is true that the proposition of doing it by the State itself is not in shape to vote on, it will be well, for it will at least make the people more wise about how to vote.

The mishap to State Highway bonds, because of two low interest limit, is being corrected this week, through a rush to resubmit the question to the people at this fall's election. Another mishap, which would have stopped all highway work at once, has been temporarily averted by a blunder by the Appellate Court in giving out a decision looking that way prematurely, and thus causing the claim to be re-heard. All these things cause satisfaction that the approach to State-bonding is not over a broad boulevard but along a straight and narrow path.

THE CONVENTION HABIT.

San Francisco has acquired the national convention habit on the basis of its first taste of the delights of such indulgence. It is not that way in staid old communities where customs and habits can only establish themselves by upsetting a lot of older beliefs and practices. In the new, free west, however, it is love at first sight and happiness forever afterwards. San Francisco and the few thousand Democrats who executed political

tangoing for ten days comfortably in the cool, summer air, fell so grandly in love with each other than though it is impossible to have Democrats always with us, because of the claims of eastern metropolitan suitors, it is quite possible to get other political lovers just as charming. And so the decision has gone forth that San Francisco lay siege to the heart and hand of the Republican National Convention of 1924, and will have the support of the Democrats who did so much for us and perhaps so little for themselves by their assembly in this city two weeks ago. It is really within the possibilities that meeting in San Francisco may make Amercans all of one party, for one Democrat from the Old Dominion State has written this:

"I want to come to every convention that is held in San Francisco, and I think it is the ideal city for the purpose. It is a long way from home for us, but, as a result of the courtesy and hospitality of your people, the excellent accommodations, complete absence of 'gouging' and reasonable prices charged for everything, it has really been the least expensive place to come to for a convention that I have ever been in. I am taking back home good money that I fully expected to have to spend here—judging by the scale of expenditure at other conventions."

It is too bad that he got away with that money. It seems to be new proof of the claim which we recently made that San Francisco is not as clever as she ought to be.

QUERIES AND REPLIES

By the Editor.

Inquirers Must Give Full Name and Address.
Answered questions also on other pages.

Unproductive Pears.

To the Editor: I have Kieffer pear trees, seven years old, in decomposed granite, sub-irrigated and well drained. They look fine but never bear worth while. Occasionally there is one pear on a tree. They bloom well, but the fruit does not set. Have tried various pruning and no pruning, but no fruit. Last year one tree, whose bark was entirely cut around by a rope and a wild calf, had a full crop of fine fruit but small. On this suggestion I cut all trees back and cut out centers. No results. Can you suggest the proper remedy? Should I graft on some other variety? If so, what? Unless you can help me, will grub out the trees this year.—R. L. B., Glendale.

Kieffer is one of the pears listed at the East as liable to be uncertain in bearing unless cross-pollinated from another variety. It may be that you have not enough other varieties, for you are not likely to be shy on bees. As to the effect of your treatments of the trees we are not sure. Perhaps your trees are still making too much wood-growth. When you cut back to imitate the result produced by the calf you did to the tree the exact opposite of what the other calf did. He reduced growth by girdling, and usually bearing is hastened or increased in that way. You stimulated growth by cutting back, which has just the opposite effect on the bearing of the tree. Sometimes the Kieffer likes to bear on the tips and by cutting back you may have cut off that chance. It is not desirable to grow Kieffers unless your local market calls for them. They have no place in the great pear business of the State. The trees can be grafted over to whatever pear you can sell well, but if you have a field of Kieffers and you have other varieties handy for pollination, stop winter pruning and see what happens.

Growing Loganberries.

To the Editor: When is the proper time to set out loganberry slips? What care should they have and how long before they come into bearing?—E. A. S., Broderick.

Loganberries are planted out in the early part of the winter—the plants being the rooted tips of new growth now being made, or of cuttings made from the well-hardened, lower parts of the canes of this year's growth planted out later in the winter after the ground becomes warmer, though still moist—with irrigation available as may be necessary to keep them going. Tip-plants are generally used and are surer to grow, even with less favorable conditions, and to make stronger canes the first year. Such canes will bear the following year, and new canes will grow also for the following year's crop. Thus you may get some fruit the second year from the tip and what you may call a crop the third year. To be profitable loganberries require good local conditions of medium temperature and ample moisture. They need trellising or well-directed row-growing. Their requirements of care and favorable natural conditions are rather more than blackberries and less than raspberries.

Rose Mildew.

To the Editor: I send a shoot of one of my roses, which goes to the bad in spite of sulphuring. What is there to do about it?—A. B., Alamo.

Your roses are stricken by mildew. Sulphuring is about the only practicable treatment because it is a specific remedy and because it can be applied without disfiguring the bush or the house wall or trellis upon which it is trained. But sulphur will not save the plant from the pest unless it is thoroughly and successively applied to protect the new growth as it progresses. Besides, there are places and times in the season when sulphuring does not catch up with the disease. Mildew enjoys dark, chilly weather and at such times there is too little sunheat to keep the sulphur vaporizing and therefore the mildew escapes its effects. Our experience is that in places where mildew is bad because of local climatic conditions, it is useless to fight it, and that the better way is to cut out roses which are badly affected by it and grow only those which are naturally resistant.

Too Much Topping, Too Little Water.

To the Editor: What can I do to my vineyard as my grapes are beginning to dry from the hot weather? I made a mistake in cutting off the tops of the vines with the hope of making better grapes and a second crop, but no second crop appears; neither have new leaves grown. The vineyard is not easy to be irrigated and therefore I am afraid that I shall lose very many grapes if you don't show me any protecting way.—M. S. P., Merced.

We know no way to get more moisture to the vines except by irrigation. It is possible that you can save what grapes you have from sunburn by throwing leafy brush over the tops of the vines to get a partial shade. This might save some grapes unless the vines are actually perishing from soil-drouth. If they are, nothing can save them from drying up, but water. Brushing-over might be worth while to save a few vines from sunburn, but it would cost too much for use on an acreage, probably.

Tragedies on Almond.

To the Editor: Is the almond root desirable for Tragedy plums planted in Paso Robles marl-adobe soil? Is it necessary to plant another variety with it for pollenizer? If so, what variety is best for that purpose?—S. E., Paso Robles.

Tragedies are frequently worked on almond stock, and we do not now recall impeachments of it. As for the suitability of the root for the soil you mention, we would prefer myrobalan, but we have seen enough in your district to convince us that the trees sometimes prefer their own ideas of suitability to ours. If you find almond trees growing several years thriftily on the soil you mention, you are taking no great risk in making the same root carry the Tragedy. The Tragedy needs pollination and any of the domestica which are worth growing, such as Washington, Jefferson, Yellow Egg, etc., will do it—as stated in answer to a question in our issue of July 3.

Summer Blight of Tomato.

To the Editor: I am mailing a tomato plant which is a fair representative of several diseased plants in my garden. Will you kindly let me know the trouble and its remedy?—L. H. H., Ramona.

The disease is known as "summer blight," and it is baffling because neither the specific cause of it nor the remedy for it is yet demonstrated. One has to take whatever he gets in its line. Professor Rogers has observed that plants set out after the June hot wave has passed are more likely to escape; also that when first affected the veins of the leaves become purplish, their leaves curl and turn yellow and growth stops; stem of the plant when cut shows little sap; plants die here and there.

Blemished Apricots.

To the Editor: I am sending some Blenheim apricots and would like to know the cause and the remedy for the defect. The trees are 15 years old, healthy and well taken care of.—N. E. J., Sunnyvale.

The trouble is blemishes of irregular form—generally raggedly oblong. In some cases the injury seems to have induced cracking; in most cases it is superficial. It is a mechanical injury done to the fruit when very small, probably before the cap fell off. Presumably it is the work of thrips, but any small, biting insect could have done it and thus started the trouble.

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More money, this is the place to look. We want several more genuine, dead-in-earnest men who are up and stepping, for our circulation work. Men who can look after our renewals and can find new readers for the Rural Press. If you are the kind to put things across, write us today.

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To save time tell us all about yourself in the first letter. Write it now and see what we have. You can't afford to let this go.

Getting Alcohol Out.

To the Editor: Not long ago the papers were telling us the great value of alcohol for fuel for gas engines, and that it was everywhere in unlimited quantities, and how cheaply it could be made, and that the weeds and so many things were full of it. Now that the country is in such need of it, why do we read no more about it?—E. F., Visalia.

There is plenty of alcohol in many weedy things—including political candidates. It is a hard job to get it out. The trouble with getting fuel alcohol out of waste vegetable substances is that though it may now be profitable in view of the cost of other volatile fuels, it can only be economically extracted by expensive distilling outfits operated to the limit of efficiency, and it requires other expensive fuel and labor to do it also. It is a good thing that you do not read more about it. The operation of small scale alcohol distillation is not only an economic ignis fatuus, it is also very likely to get you into jail.

Dry the Tomatoes and Wet the Cabbage.

To the Editor: I have tomatoes in flower. I sprinkle with hose and the flowers seem to be eaten or drop off before fruit can set. What is best to ensure fruit-setting? I have cabbage forming heads, but many of them have the leaves separating instead of heading. Am tying some up. Can you recommend anyway better to make them form heads? They have a bluish green color. Is that healthy in this State?—T. C., Santa Rosa.

You are using too much water on the tomatoes and causing them to grow too fast. When they do that the blooms will not set. Give them less water and they will set later. Your cabbage seed may have been poor—taken from plants which shot seed stems the first year instead of heading. Or the color you mention may be due to the fact that the soil is too dry. It is of no use to try to cause heading by tieing up. The plants have gone back too far toward the wild state. Try what you can do by giving them the water you take away from the tomatoes.

French Prunes on Peach.

To the Editor: Can French prunes be had on peach root? Must get something gophers will not eat. Suggestion as to gopher-proof trees will be appreciated.—R. Y., Glendale.

About one-quarter of the French prune trees are propagated on peach roots. Any nurseryman can probably supply them. The peach root is the safest one we know of from gopher attack.

Clearing Out Ferns.

To the Editor: Which is the best method of ridding a field from ferns?—L. F. J., Sebastopol.

Summer plowing, harrowing out the crowns, raking and burning, has to be continued until the shoots are scattered enough to grub out the crowns singly. It is a good year to tackle the job because of the prevalent soil-dryness.

CALIFORNIA WEATHER RECORD

The following rainfall and temperature record is furnished the Pacific Rural Press by the United States Departmen of Agriculture Weather Bureau at San Francisco for the week ending July 12, 1920.

Stations	Rainfall Past Week	Rainfall Seasons To Date	Rainfall Normal To Date	Temperature Highest	Temperature Lowest
Eureka	.01	.03	.08	60	48
Red Bluff	.00	.01	.00	106	62
Sacramento	.00	.00	.00	100	52
San Francisco	.00	.00	.00	68	48
San Jose	.00	.00	.00	84	48
Fresno	.00	.00	.00	108	58
San Luis Obispo	.00	.00	.01	78	46
Los Angeles	.00	.00	.00	86	54
San Diego	.00	.00	.00	72	65
Winnemucca	.00	.00	.00	96	46
Reno	.00	.00	.00	94	48
Tonopah	.00	.00	.00	92	52

An Amateur's Trip to the Yosemite by Auto

Written for Pacific Rural Press by R. E. Hodges.

We feel like conquerors! There is some satisfaction in conquering after a good scrap. We had a good scrap and most of us were pretty well out of wind before it was over; but, however much may have been thought of giving up, it wasn't said out loud; and you are never whipped until you admit it.

Less Load, More Joy.

We will do differently next time and avoid a lot of troubles. But oh, with all the troubles, the compensations were as great as the wonderful cliffs of Yosemite and the snow-clad mountains back of them. We will soon forget the little annoyances; but we will never forget the awe and rapture and the feeling almost akin to oppressive fear with which we approached those mighty vertical walls of rock—pure rock with scarcely a ledge wide enough to catch wind-blown dust and to support plant life on their bare faces! Night after night we were almost amazed at the black barrier reaching to the stars and seeming almost to overhang our camp. Glorious also was the waterfall of fire, which nightly sparkled down the precipice.

We were amateurs all right; though the writer has covered most of the roads crossing the coast ranges and the Tehachapis. We were unprepared for the grades and the curves of the Sierra roads. We now advise other amateurs to accept the advice we rejected—if you want a comfortable trip to Yosemite with a camp outfit, ship the outfit to El Portal by rail and drive down the valley floor to get it after you have mastered the mountain grades with a light load on your machine.

More Load than Automobile.

Our little automobile left Fresno one morning late in June loaded with four grown-ups and two children, and all the camp baggage required for the crowd. The load weighed 1500 pounds more than the automobile itself—the load weighed 125 per cent as much as the machine, which carried it over those grades. Well, it didn't carry it all the way, and that was the extent of our troubles.

This was the grand day to which we had loked forward for many a year. Two of us had come across the continent, hoping to see the little valley with the big world fame.

One Day's Drive Takes Two Days.

It was only 104.5 miles to Yosemite Vallage from Fresno—an easy day's drive! You would scarce expect to find so many worlds in so short a space. The vineyards and orchards of Fresno were behind very shortly. Hot, barren hill pastures passed more slowly. Smoke ahead gave promise of additional heat; but we were all wanting to see a forest fire, if such a fire had to occur! It proved to be only a pasture fire, started by some cigarette with a vacuum behind it.

Thenceforth the way grew rockier and steeper and hotter. To stop for the engine to boil down to a workable temperature was to grimly face the heat and compare the desolate landscape with what we had recently left. Night came with grateful coolness and we were among the pines—still a day's journey from Yosemite.

But we were wise enough to encamp where the camping was good, with 63 miles to our credit for the day's work! Big pines around us—pine needles and cones under us, a canyon in front of us, and beyond that a tree-tapestried range to the eastward. We arranged to sleep that night so we might watch sunrise over the mountains in the morning. Sleep among the pines wafted all weariness away, and we felt at sunrise like the birds so joyously greeting the new day above us.

Used More Oil and Gas.

With breakfast over and camp all packed up, the engine refused to start! Common enough in the low land—serious enough here, miles from any visible habitation. We had lubricating oil enough in the crank case for twice the distance we had traveled. Note that, for low-gear driving in hot weather uses twice as much oil as you might think. We could have avoided chagrin and the loss of an hour by carrying more extra oil than we did. There was nothing for it but to hike to the Sugar Pine sawmill, which proved to be two miles away—a wonderful walk through the forest, but under the circumstances "one dreffu!" walk.

There are several stations along the mountainous way, where gasoline should have been obtainable, but it wasn't. Thus, when we turned aside for a four-mile trip to the Mariposa grove of big trees, the steepness of the grade was too much for the small amount of gasoline in our tank. We would carry some extra next time. Altitude and low gear require at least 50 per cent more gasoline. That hike to the big trees took all the energy we sea-level breathers cared to exert at that altitude, but 'twas worth while. The seeds for some of those trees are computed to have been wafted to their resurrection place about the time Moses was leading Israel out of Egypt. Automobiles drive through two of the standing trees; and each of them has as much wood on each side of the driveway as was taken out.

Stalled the Unstallable.

Wawona, the meeting place of the roads from Fresno, Madera and Merced, would be almost worth the trip, but we were bound for Yosemite. Filling up on gas at 40 cents per gallon, we hit the real up-grades and stalled the (reputed) unstallable engine. Three ladies climbed out quickly and pushed while the gallant male driver sat in the machine and punished his engine over the top. That was easy; as events proved later.

Just above the first ranger station, where you present your credentials to a government official ensconced in a cool, rustic bungalow, built from trees of the forest overhanging it, we hit the first of those sharp curves where you get no headway for the steep grade that rises from it. This time we ousted not only the ladies, but the children, and part of the baggage was strewn along the grade before the machine reached top. 'Twas a comparatively small job to carry this three or four hundred pounds of baggage up by hand; and merrily on we bound. At one place we were stuck in a narrow place until another machine with several men came up behind. They helped us out with the camaraderie and good will which we soon found characterize 90 per cent of all the travelers and campers about Yosemite.

Dark overtook the weary travelers on a narrow winding mountain road, fortunately with no more heavy grades to climb and with a great deal of down-hill running. Our great concern here was to stay on the road and avoid the numerous chucks which all looked alike in the dark. We wanted to camp at Inspiration Point overlooking the Valley so that sunrise might reveal the majesty for which we had traveled two full days. At last we drew up behind a stationary automobile and inquired how far to Inspiration Point. "Right here," was the welcome reply. If we had driven four rods further we would have gone over the edge.

Inspiration Point at Sunrise.

We were to see Yosemite Valley first from the top. A great gash, where solid rock mountains had been burst a mile asunder more than half a mile into the depths of their foundations and for a distance of seven miles! Blocking the upper end as we viewed the valley from Inspiration Point was the great Half Dome. Just across a mile of pure air, yet seeming almost at our feet, was El Capitan—who could defy his brusque command, "Attention!" Setting off the superbly masculine El Capitan and on the cliff just opposing him is the filmy ever-changing, exquisitely feminine Bridal Veil Falls. They seem not to fall but gently to weave their mists down over the face of the cliff.

Camp Fires Must Be Extinguished.

Recalled from the rapture, we were bidden by the forest ranger to come view the live coals of a campfire left unquenched by others who had camped the night at the Point and had gone on down into the Valley. He told us that the campers who had thus laid themselves liable to $500 fine and one year's imprisonment, were the friends who had helped us up the hill the day before. He reported them by phone and they were mercifully ejected from the Valley without fine or imprisonment, on their arrival at the superintendent's office. These Government officials, though severe and sometimes apparently inhuman in their enforcement of regulations, really hope to get the regulations enforced without imposing the severest penalties. The campers should have poured water freely over their fire, especially around the edges, and then they should have covered it with dirt. Dirt alone is not enough, because it too often consists of leaf mold, which may smolder for days and be fanned into a great forest fire by the wind.

The exact minute at which we left the ranger's office for the 2½-mile trip down the side of the canyon was recorded and telephoned to the ranger at the bottom. We were compelled to take at least 15 minutes going down; but if the trip had taken until the end of the hour in which we started, we would have had to pull out to one side and wait an hour for up-coming machines to pass.

With the engine tipped so much on end for the 2½-mile trip, it became necessary to clean the spark plugs while the folks enjoyed Bridal Veil Creek. Proceeding, we passed Yosemite Falls, the highest in the world, dropping 1430 feet.

Campers Splendidly Hospitable.

At the superintendent's office we were given our choice of some 21 definite camp grounds on the floor of the valley. We chose Camp 15, just across the river from Camp Curry. We wanted to eat at Camp Curry and to enjoy the nightly campfire there along with the entertainment, all at the foot of the awe-inspiring Glacier Point. On arrival at Camp 15, one of the occupants advanced to inform us that he had a much more desirable location than we were choosing and that we could have it when he left next morning if we were ready to take it on the minute he left. Otherwise, someone else would take it. A few minutes later another camper offered us all the hot water we might want at the time and told us where to get all the firewood we might desire free of charge. Another camper gave us a hand with the tent. Everywhere we went, people seemed glad to greet us; and we soon acquired that friendly spirit with every one, which becomes so strange to city dwellers. We had been at first amused at the greetings received from everyone we met on the road or in camp. We are still amazed at the transformation which God's great out-of-doors works on human souls even so shortly freed from the city's suspicions.

Dozens of Special Hikes.

Our neighbors had been out on the many "hikes" which every Valley visitor should take; and they were eager to tell us which would give the most pleasure in the short time we could stay.

For grandeur and thrill, the "Ledge Trail" up the face of Glacier Point, climbing 3,250 feet toward the clouds on narrow ledges. For a more beautiful hike, take several miles up the Merced River, at first by burro trail, then by steps and ledges too narrow or steep or twisting for a burro. A mile and a half up, we cross a rustic bridge over the tremendous rapids and get our first view of Vernal Falls. We linger long, then climb closer. A perpetual wind carries a heavy mist across the "Jacob's ladder" trail we must follow to the top of the falls, and the verdure fostered by this mist gives the falls their name. We stand at the edge where the river glides into its drop of 317 feet and then climb a mile farther past and over a furious rapids, rivaling those below Niagara; thence into the mists of Nevada Falls, dropping 594 feet. We have passed the Illilouette Falls, tripping merrily down a little canyon to our right. Then, because it is past noon and we brought no lunch, we share the lunches of others who exercised more forethought and unlimited hospitality.

Mirror Lake, North Dome, Washington Column, The Three Brothers, Cathedral Spires, Yosemite Falls, and a thousand wonders within an hour's walk (to the base of them), all entice us to scale their heights, and we long for the time to do it. Folks had told us that two weeks were too short to spend in the Valley; but it took a personal demonstration to convince us of that as well as of the necessity of shipping our outfit in by rail.

Worst Yet to Come.

Inquiry revealed the alleged fact that the Big Oak Flat road out was better than the Wawona road in; so we with many others started up the long grinding climb out of the valley on the opposite side from Inspiration Point. The ranger let machines start a minute to half a minute apart, beginning on the even hours. We were held back two hours with some fifteen others; but finally got out with instructions that if we did not reach the control station, 4½ miles above, by 11 o'clock, we would have to park and wait until 12. On the way up, the girls jumped out at critical grades until they felt real acrobatic and acrimonious. They jumped in while the writer kept his car going as fast as possible in order to keep up momentum; and they finally believed themselves qualified as expert switchmen on the railroad. They pushed until all strength was gone. We dumped our luggage all along the road and then hiked down to carry it to the tops of the grades on our shoulders. We had to park at 11 o'clock in a wider part of the grade, and clean spark plugs, etc., until noon. Then, after more weary labors, we passed the upper control station and were told that the worst was yet to come. It sure was. It took all afternoon to drive the next 4½ miles. We aided others who got stuck on the grades, and when they got to a level place they aided us. One man even carried about 120 pounds of our luggage up a long grade when we were all so sick and weak from exertion in the altitude that we couldn't do half a man's work. Once we got a good start around an upgrade curve and a big machine ahead of us stalled in the middle of the road. It took over an hour for us to get started again. Meanwhile, we had dumped most of our luggage again. On one particular up-pitch we backed down and rushed at it with the engine whirring in low gear at a rate she had never known before. We did that four times, finally dumping the last bit of our outfit and came out on top empty with about eight hundred pounds to carry up on our back. Toward evening the last of it was landed on top—at an altitude of 7,000 feet.

We camped there under the stars mid spruce, pine, fir, sequoia, and a rare bit of air. Our troubles were not over; for it took all of the next day to get down to the farming country above Oakdale.

Ask us whether the trip paid—but wait a few days until the painful memories are soothed down. Then we will say, "All hail, Yosemite, the incomparable!"

Summer Pruning Improves Peach Production

Written for the Pacific Rural Press by W. S. Killingsworth.

In point of tonnage the peach stands next to head in the horticultural class—the apple being the ranking member. In popularity it is without a peer. It is at home in any clime and upon any heath. With all that, it is the most abused, as a tree, of any that comprise the family or commercial orchard. There are cases, however, where the peach is given preferred attention—in the matter of pruning, spraying, cultivating and thinning; but ordinarily the peach tree has to make the best of it, and as a result its product suffers accordingly. In the matter of summer pruning there is a diversity of opinion; while not practiced to any great extent, there is no objection to the method which has proven satisfactory in cases where it has been thoroughly and systematically put into operation.

Proper Season for Pruning.

The time-honored and Nation-wide practice of pruning peach trees is while they are in their dormant state —in the late winter or early spring. Those who have had experience in the growing of peach trees know that the peach always fruits on the growth of the previous season. When the pruning is done in the winter, or before growth begins in the spring, the new growth has the advantage of having the entire season in which to develop, and in thus developing the buds that are to produce the next season's crop develop also. In the peach, as in almost all trees, the terminal growth is stronger than the laterals, and when the summer pruning is not practiced, the more rapid-growing upper shoots shade the lower, slower-growing ones, and where the foliage is heavy, light and proper circulation of air fail to function, hence death is often the case. Eventually, what is the result? The fruiting wood gets farther and farther from the ground; and it is only a question of time, even when the trees are regularly pruned, that it will be necessary to use long ladders to harvest the crop. The writer calls to mind many peach orchards of long standing, pruned after the pattern of "September Morn"—not a sprig or fruit spur within ten feet of the ground. In the primitive days, when Chinamen were mostly employed as pruners, this manner of pruning was carried on. We are unprepared to say whether it originated in their fertile brain, or whether they were obeying instructions from "bosse man." However, in many instances, the grower realized that his trees were petering out and as a means of protecting himself against a total loss, the trees were dehorned. That method proved semi-satisfactory, provided, however, the exposed body and remaining branches were protected against sunburn. We have seen orchards where this decapitation could not be worked successfully on account of the body of the trees being burned from exposure; the tops had reached such a height that they were of no protection against sunburn.

Develop Fruit Wood on Lower Branches.

When trees tower beyond their normal altitude, it not only makes it expensive and disagreeable in harvesting the fruit, but in spraying and pruning as well. The loss of this valuable bearing space connecting the base of the tree with its top, naturally reduces the tonnage, when there is no excuse for such, as the tree would carry the additional amount of fruit were it accorded that privilege. The primary purpose, therefore, of summer pruning is to enable the tree to develop fruiting wood on the lower part of the main, or skeleton branches. There is a perceptible advantage in cultivating this undergrowth. The fruit is easily picked and during its maturing stage it is less liable to be bruised or blown off. A happening of either renders it useless as a shipping product and if affected very much makes it a second grade for either canning or drying.

It is characteristic of peach trees to develop a stronger growth towards their outermost parts. This of course is due to the constant exposure to sunlight and air. Now, should the trees be pruned on the inside, taking the "goblet form," it opens the way for sunlight and air to pass, which will aid development of fruit-bearing wood, where in unpruned trees this valuable space is lost. Not only is it lost, but the smaller growth is smothered and eventually dies, becoming a menace to the health and further prosperous growth of the tree. It must be remembered that the pruning of any tree—the peach not being an exception—must begin in its infancy—"just as the twig is bent, the tree's inclined." If started off in the right way at planting time there will be no trouble in keeping the tree symmetrical, as each successive pruning time rolls round, but if allowed to take its natural course and pruned with no system until it reaches the bearing age, it will be difficult then to shape it without serious injury.

"Goblet Form" Preferred.

The writer has always favored the "goblet form" of pruning. Some varieties of fruit trees will not require as much, nor will they submit to as much as others. The cherry requires it and will submit to it if commenced while the tree is young, but it will not submit to the promiscuous cutting and slashing any more than a peach tree will, for two reasons: first, the shock is too great; second, unless the wounds are given preferred attention, decay will set in, and it is but a matter of time before the orchardist has a lot of sickly trees, which eventually die. It is recognized that summer pruning involves additional expense to the grower, but the method is quickly learned; however, it is more tedious, especially should the tree possess much foliage, which obstructs the view. The wood of the previous year's growth should be removed before the middle of June, and only in the inner part of the crown; the outer branches get enough light latterly.

Even where, as ordinarily, it is the best practice to do the main pruning in the winter months, more summer pruning would usually be advantageous. Summer pruning of peach trees to induce bearing is little practiced in this State. Summer pruning to check wood growth is employed to some extent where the vegetative process in trees runs riot, and seems apt unless checked to ruin the tree by breaking to pieces when the wind and weight of the fruit tests its strength. Summer pruning to preserve form relates in the main to pinching in, to check undesirable extension and to direct the sap toward shoots in which growth is desired. Summer pruning for this purpose is approved by some orchardists, but it is not met with general approval. The old style is still in the lead and the chances are that it will continue until a general campaign is made and the grower becomes convinced that it is the proper way to handle peach trees.

Remove Misplaced Branches at Once.

Constant watch should be kept of the tree throughout the season of active growth. Whenever a branch is seen which is so placed that it is obvious that it will need to be removed at the annual pruning for the shaping up of the tree, it is well to take it off at once. In this way the annual pruning can be reduced to a minimum in the removal of large limbs will rarely be necessary. Often is it the case that limbs are allowed to cross and in the constant swaying of the tree by the wind many of the fruit spurs are rubbed off or damaged to the extent that they produce but little fruit of value. The only remedy is to remove the weaker limb. The practice of leaving such limbs is too frequently the case. As a matter of fact, there are many growers who do not take the importance of pruning seriously; they go upon the principle that the tree is there, and it's going to bear regardless of the time and manner in which it is pruned. Should it fail to come through with a good crop, it's the "weather"; it's either too dry or too wet, too hot or too cold. No; there is a better reason than that. In all probability the trees are being pruned by contract, and if the grower is not familiar with the manner in which a tree of any variety should be pruned, whether it be in the summer or winter, he is at the mercy of those employed in shaping the "destiny" of his trees.

"Why Do We Prune?"

Who does not remember the old-time "back East" family orchard—one in which the only pruning implement used was the ax? Those who do remember have not forgotten the flavor of those peaches and the load those trees carried. The only time a tree was ever pruned was when a limb would not hold up under its burden, and the only time the fruit was ever thinned was when it was ready for the table. However, one not familiar with commercialized fruit-growing in California may ask, "Why do we prune?"—a question, to be intelligently answered, would require detail at length, but can be satisfactorily answered by saying that there are many ends sought in pruning, whether it be summer or winter, the relative importance of which vary with soil, elevation, temperature, humidity, disease, variety and many other factors. As we have discussed these in former articles, we will not attempt to mention them here. It must be generally agreed, however, that, primarily, pruning must seek to bring trees into bearing at a reasonable age and then keep them bearing large quantities of high-grade fruit. As we are discussing the peach it may be stated that pruning should consequently aim to lead to the production of fruit buds, together with the maintenance of a reasonable amount of vegetative growth. To stimulate the formation of fruit buds and to increase the efficiency of those already on the tree requires that pruning must be afforded close to the point where we wish them formed. Theoretically, pruning should concern itself mainly with shoots and buds rather than with older or larger wood. Practically, it should be limited to the smaller branches. Of course there are exceptions; in the case of trees that have been neglected for several years the work of adjusting them will have to be done. Just because the removal of a larger number of smaller branches necessitates the exercise of better judgment and perhaps takes a little more time and requires greater skill than the removal of a smaller number of larger ones, this should not deter us from the best method of procedure.

Avoid the Wood Butcher.

Pruning, like spraying or cultivating, must be systematically conducted, regardless of the time of year the work is accomplished. The orchardist should exercise care in the selection of those who are to do the work, as there is many a fruit tree in California today a horticultural "white hope," made so by inexperienced pruners. Contract pruning by professional contractors, is often the death-knell of many a once prosperous orchard—a race to the finish. Many instances have come under the writer's observation where the pruning shears and saw were being wielded by the hand of one who hadn't fully recovered from seasickness while on passage from the Orient, but he must acquire that knowledge at the earliest possible moment, even though it is at the expense of the orchard's future producing powers; and unless the orchardist keeps a watchful eye on such work and fires the outfit bodily, he is ignorant of the method of procedure himself, and under those conditions his orchard will eventually be headed for the wood-pile. However, all of this may be averted by the orchardist or his foreman camping on their trail and weeding out all who would use his orchard to "practice up" on.

THIRD DRY SEASON DEMANDS COPIOUS IRRIGATION.

(Written for Pacific Rural Press.)

NOW THAT CALIFORNIA, for the third consecutive year, is suffering the ill-effects of drought, the matter of irrigation should be the paramount issue, regardless of that optimistic view taken by those with the ever-ready "We'll get rain yet; it's not too late." It may not be too late for some things, but we wish to bring in a minority report to the effect that if we don't get a copious downpour during the next natural rainy season, the deciduous orchards throughout the non-irrigated districts will make a poor showing on "dress parade" during the remainder of their declining days. Every orchardist is fully aware of the seriousness of the situation. It is admitted that irrigation is always an advantage wherever it is possible to enjoy the beneficial results accruing therefrom; therefore, a movement should begin at once in every section for the purpose of determining the best course to pursue by which a generous supply of water may be obtained, whether it be by gravity or pump system. Irrigation is today recognized as the greatest insurance and asset connected with fruit-growing in California, and the sooner the orchardist fortifies himself with this insurance the more valuable his asset will be. For a commercial undertaking it has reached the point where it is absolutely essential.

If conditions are such that only one irrigation can be given during the season, let it be thorough; while, on the other hand, should water be plentiful, irrigation should continue at regular intervals, the ground never being allowed to get really dry. However, water should never be permitted to cause the land to be swampy until the rains make it so. Should the winter rains fall short of normal, the trees should, by all means, be irrigated just before they bloom, so as to get a good "set," and once again to fill the young fruit out and start it on its way. It is unnecessary to make the suggestion that after each irrigation the soil should be thoroughly cultivated. This every orchardist is familiar with. We merely mention it as perhaps a new-comer, unfamiliar with the order of things, might neglect it. In that case the soil becomes baked, and as a matter of fact the trees will suffer the evil effects of such as if they had not been irrigated at all. Again, care must be used in not cultivating the soil until it is dry enough.

Because of the growing shortage of wire nails in this locality and the demand for them for the construction of fruit boxes for the shipping of green fruit, the Fresno County Chamber of Commerce has wired to the United States Steel Corporation at Pittsburgs asking for a change in the classification of the district. It is said that the San Joaquin Valley classification is that of a dried fruit shipping district overlooking the immense green fruit crop.

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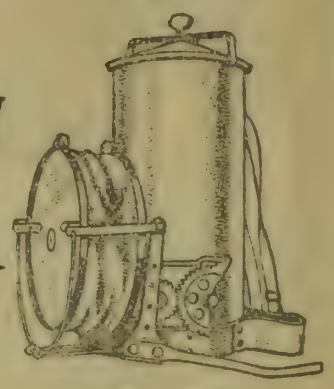

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Ask your dealer about Security Ladders. Dealers in 114 Coast towns handle the Security. For name of your dealer, see Rural Press of May 29, page 851.

WRITE ME FOR FOLDER JUST OUT.

J. B. PATTERSON, Mfr.
505 Lankershim Bldg., Los Angeles 84 Franklin St., Oakland

Bee-keepers can obtain from the Apiary Department of the Diamond Match Co. the finest quality of Bee-keeper's Supplies at fair prices.

The Apiary Department, which is in charge of experienced Bee-keepers, is one of the largest of its kind in the United States, and maintains a constant excellence of product and unsurpassed service.

Write for catalogue and if a beginner for Cottage Bee-Keeping, which will be promptly mailed free.

THE DIAMOND MATCH CO.
APIARY DEPARTMENT
CHICO, CALIFORNIA, U. S. A.

Place Your Order Now for
Nitrate of Lime

Guaranteed not less than 13 per cent.

Nitrogen—almost 100 per cent Pure.

Nitrate of Lime supplies Nitrogen in the most available form. Packed in solid wooden casks about 240 pounds.

Ask for prices delivery from warehouses, Los Angeles and San Francisco, or ex-steamer to arrive.

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General Agent
Pacific Coast and Hawaiian Islands.
311 CALIFORNIA ST., SAN FRANCISCO

Timely Work in the Orchard

(Written for Pacific Rural Press by W. S. Killingsworth.)

Tree Dentistry Should Be Practiced.

Frequently decayed cavities in the trunk or limbs are infested with wood-boring larvae, or are the retreat of different species of ants and insect pests. Such cavities are objectionable, for not only do they hasten decay and weakening of the trees, but they afford an excellent winter harbor for such insects as the codlin moth. These cavities are usually the result of improper pruning and neglect to care for wounds from other causes. Such cavities may be filled with cement and the condition of trees materially improved. However, the first move in the operation is to rid the part of all decayed wood. As soon as this is done the parts should be covered with a coat of shellac. After the cavity has been thoroughly cleaned out it should be treated with creosote and coal tar, and it is then ready to receive the cement. Use a good grade of eement in the proportion of one part to two or three parts of clean sand. These materials should be mixed with water to a thick plastic consistency, and should be well tamped into the cavity.

Encourage the State and County Fair.

One of the greatest assets that the agricultural and horticultural interests have, in any State, is its State and county fairs, provided, however, there is that support given so essential to the success of any undertaking. Exhibits may be arranged in such a manner that rivalry will be created among sections that will advertise and increase the popularity of the product as well as the locality in which it is grown. Now that the time is drawing near for the Annual State Fair, as well as those held in many counties of the State, it would be a wise plan for the farmers and fruit growers to begin to pay particular attention to whatever products they intend to exhibit, protect them as far as possible against injury from climatic or other conditions. Plan for a good exhibit of fruits, flowers, vegetables and general farm products. In the preparation of exhibits for prizes one learns a great deal about such things that would otherwise escape his or her attention. Encourage the fair.

Paris Green Not for Stone Fruits.

Paris green should never be used on stone fruits, such as peaches, cherries or plums. When used an apples, pears, grapes or foliage having similar resistance to arsenical scorching, Paris green should be combined with either BoBrdeaux mixture or milk of lime. It should not be mixed with lime-sulphate solutions. Liquid application of Paris green is as follows: Paris green, 6 ounces; stone lime, slaked, 2 to 3 pounds; water 50 gallons. If used in Bordeaux mixture, the lime is unnecessary. Should the dry application of Paris green be preferred, the following proportions may be used: Paris green, ½ pound; lime, air-slaked, or flour, 3 pounds. For smaller or larger quantities the same proportions should be observed.

Lead Arsenate and Paris Green.

As to the comparative value of lead arsenate and Paris green, the Paris green seems to be the more rapid in its action against potato bugs, but lead aresnate sticks to the plants better, and one spraying outlasts two of Paris green. This practically halves the cost of sprayings, as the big item is in the cost of application. Lead arsenate also is not so liable to burn the plant as Paris green. Both the paste and powdered lead arsenate are used. Since the paste is half water it requires double the amount to do the same work as the powder.

Watch for Grape-leaf Hopper.

The annual destruction from grape-leaf hopper is indeed serious, causing incalculable losses to the table and raisin grape growers of the State. Its work is well known to all grape growers, but there are but few who go to the trouble and expense of controlling them. It can be readily done by spraying the vines in June and July. A splendid spray of the following formula may be used: Atomic sulphur, 20 pounds; black leaf 40, one pint, added to 200 gallons of water. To get the best results the underside of the leaves must be well sprayed.

Protecting Fruit with Bags.

Choice fruits, especially grapes, may often be protected from birds and insect pests by the use of paper bags placed around the bunches by twine to the supporting shoot or cane. This method is suitable for small vineyards and arbors in reducing injury from such pests and invaders, but at the present price of paper it would be rather expensive for use on a commercial scale. Bags may be safely placed as soon as blossoms fall.

Apricot Worked on Number of Stocks.

The apricot is a good "mixer." It may be successfully worked on a number of stocks, and is suited to a variety of soils. On the peach root it is adapted to a low, warm, well-drained soil, and the peach is largely used in the State, owing to the fact that the gophers, which are at times a serious pest, do not attack this root readily.

Cultivate the Friendship of the Bird

(Written for Pacific Rural Press.)

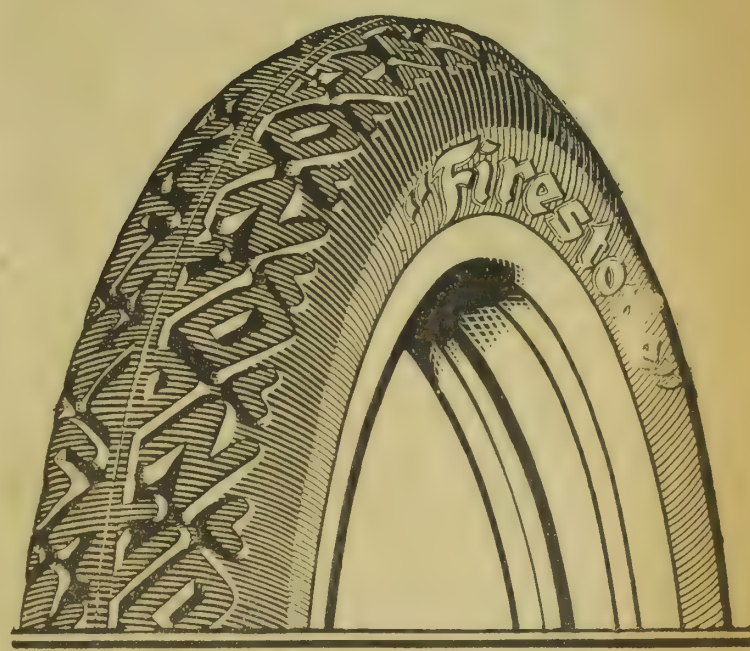
During the fruit season, how often do we hear it said, "The birds are simply destroying my cherry crop," etc. The writer has had some dealings with cherry orchards, and we are prepared to say that we never lost a cherry crop or any great portion of one by the invasion of birds. There are times during the early ripening period that there is a small loss of cherries in the tops of the trees, but after a cheery tree reaches the age of 18 to 20 years, let the birds have the the cherries on the topmost branches, as no cherry-picker will ever reach them, and should one mischievous little linnet, canary or wax bird invade a lower limb, the damage it would do will be offset many times over the following winter and spring by its destruction of insects and pests. We have known of many thousands of dollars' damage that might have been done by the measuring worm—destroying the foliage and even eating the young fruit in apricot, cherry and prune orchards—had it not been for the blackbird. Many growers cultivate their friendship, and will not allow them to be disturbed during nesting time. So eager are the farmers and orchardists in some sections of the United States to cultivate a friendly relationship between the birds and the surroundings that a large variety of shrubs an dtrees have been planted as a protection for the birds against the invasion of rodents during nesting and roosting times, and they also contribute to the success and effort to attract birds, such as a supply of water for drinking and bathing, nesting boxes and winter feeding.

Should there be fear of the birds getting beyond control and doing serious damage to the orchard and farm, nothing surpasses mulberries for alluring birds away from the early orchard fruits. The full summer-bearing variety should be planted. They should be planted along the creek bank—should there be one—or adjoining a grove of trees, where the birds can "loaf," and not be compelled to go to the fruit trees for such pastime. There will be nothing lost in cultivating the friendship of the bird.

Dried fruit is being received daily from all parts of the Santa Clara valley where the season is now on.

Firestone

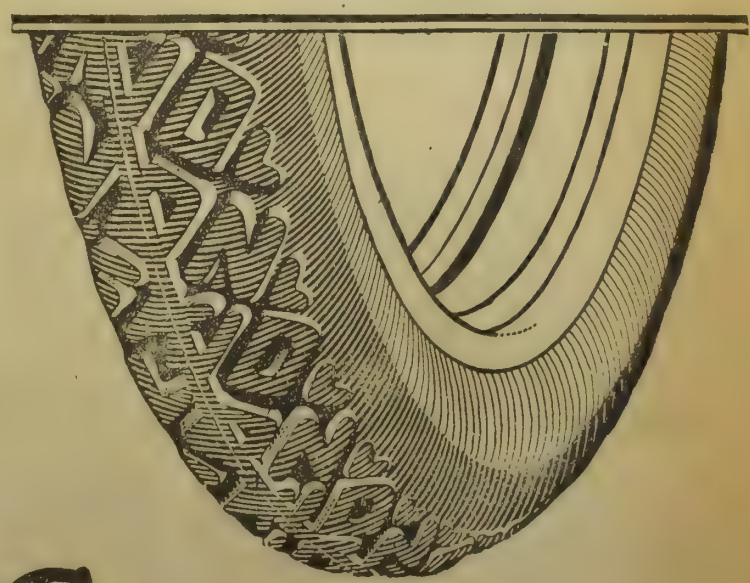
LAST year Firestone lifted the 30x3½-inch tire out from all the sizes made and focused attention on it—as the *only tire size capable of quantity production.* And not only the tire user but the whole tire industry responded.



Firestone built an exclusive factory devoted to this size—and worked out a specialized way of manufacturing this tire in quantity—without a backward move—every tire good.

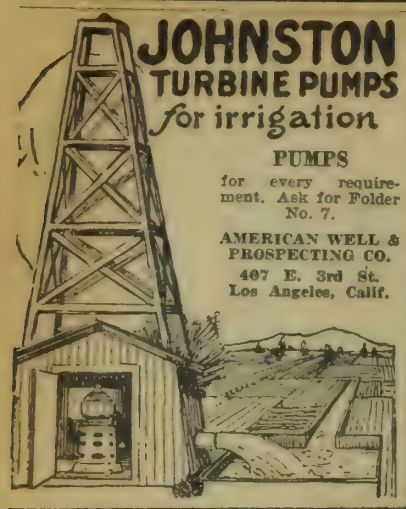
30x3½
(non skid)
$22.50
Gray Tube $3.75
Red Tube $4.50

Today—while others are centering on the tire for owners of small cars, the Firestone 3½-inch is out in front with a highly specialized and bedrock economical method of manufacture.



Firestone is two years ahead because Firestone saw two years ahead—and you owners of light cars get the benefit.

Most Miles *per* Dollar



Public Is Shy of New Fruit Varieties

(Written for Pacific Rural Press.)

There is no line of business being conducted at the present time on an extensive commercial basis that is doing more to advance its "wares" than the fruit industry of this nation. Each year sees new varieties brought to light and introduced to the trade, thus making the constant search for new varieties go on. Some of the leading varieties of many kinds of highly commercialized fruits came into prominence "over-night," so to speak, while others have been forced to the front by constant propagator. Many of these persist and in time become important in the fruit industry, but a very large percentage fail to score from a lack of some of the qualities necessary to place them on an equal with some of the well-known standard varieties.

Must Please the Public.

The introduction of a new fruit is not as easily accomplished as it might seem. It may be possessed with all the qualities of a "winner" in the estimation of its propagator, but unless it pleases the eye and tickles the palate of the consumer, its propagation is "love's labor lost." The consuming public are the best judges of the merits of any commodity, fruit not excepted, and their failure to recognize the merits of some highly prized peach, plum, cherry or apple, has placed many a "white hope" in the discard. Would that they had had a vote on some varieties that have been foisted upon the public! In years past we have witnessed some colossal failures in what was reputed to be the "best yet." Apparently, some were all that the fruit-consuming public might wish for, to be found, on placing them on the market, a dismal failure. The propagator was not to blame. The grower who purchased the scions or buds at high prices had been made familiar with the fruit in all of its make-up. They honestly and conscientiously produced the product and placed it on the market to find that it failed to meet with the approval of the consuming public, who are the only judges of their likes and dislikes. There have been cases when in the introduction of some new variety it failed to make a hit; but persistent advertising and keeping it before the public it came into prominence. The writer has been told by a Boston dealer that it took years to introduce the California black fig, and only by forcing them on the public—simply giving them away—did they make a start; and now there is no fruit going from California looked upon with more favor than the black fig.

Must Have Essential Qualities.

There are so many varieties of fruit now on the market whose reputation is so firmly established that it makes it hard to introduce something new unless it represents a high standard of excellence in all particulars. It must first have the shipping and keeping qualities, next size and looks, last and by no means least, flavor. However, there are many varieties of fruit shipped from California that should the producer be at destination, then blindfolded, and given some of his fruit to eat, he would disown it. This of course is due to the fact that many varieties of California fruit are from necessity picked before they are fully matured in order that they may reach destination before becoming overripe, making it a hardship, as in such condition California fruits fail of representation in their true light. Many varieties produced and allowed to mature on the tree are of excellent quality and flavor, but the same variety picked for eastern shipment arrives in an immature state and is naturally condemned by the consuming public as unfit for use, being a case where conditions force a reputable product into the discard.

The Standard Equipment on Up-to-date Farms Test Special Belt

WITH SIX BILLION DOLLARS invested in farming in the United States, modern farm owners cannot risk losses through inferior equipment.

The Test Special Belt, by actual performance, has proved itself an assurance against power losses and costly delays through breakdowns.

"Test Special" is the best rubber belt made and is especially adapted for hard outdoor usage.

See your dealer.

Any Dealer anywhere can buy "Test Special."

WRITE TODAY, giving the R.P.M. and diameter of the driving pulley—also driven pulley and distance between centers of same; also give the rated horsepower of your motor or engine, and name kind of machinery you are operating. We will reply immediately giving you our recommendation as to kind of belt to use.

Write today.

NEW YORK BELTING & PACKING CO.
519 Mission Street
San Francisco
Home Office, New York (10)

Male Wage Adjustment for 1920

The Industrial Welfare Commission of the State of California, pursuant to and by virtue of the authority vested in it by William D. Stephens, Governor of California, as his representatives to consider the wage demands of the adult male employees of the canneries and dried fruit plants of California, and authorize said commission to announce a decision establishing and fixing a scale of wages for adult male employees which shall hold, from June 1, 1920, to January 1, 1921, as the scale to be paid by all canneries and dried fruit operators who are parties to the agreement, have held a conference with as many groups of employees as it has been possible to meet and their demands have been considered fully and sympathetically. Meetings have also been held with the employers, who have signified their willingness to abide by the wage scale established by the Industrial Welfare Commission for 1920.

Therefore, by the authority vested in it by the Governor of California, the Industrial Welfare Commission does hereby fix and establish the following wage scale to be paid to adult male employees performing unskilled labor in fruit and vegetable canneries and dried fruit plants, to be effective from June 1, 1920, to January 1, 1921.

1. For the first 8 hours, 57½ cents an hour, or $4.60 for an 8-hour day. For all work performed in excess of 8 hours and not in excess of 12 hours, not less than 72 cents an hour. For all work performed on Sundays and the following holidays: New Year's Day, Memorial Day, July 4, Labor Day, Admission Day, Thanksgiving Day and Christmas, 72 cents an hour. For all work performed in excess of 12 hours, not less than 85 cents an hour. Where wages are paid upon a piece-rate system, all adult male workers are to be guaranteed not less than the foregoing rates.

2. Male employees performing unskilled labor, who, through advanced age or other reasons, may not be able to perform the work of an able-bodied man, may be employed for a wage smaller than the wage herein fixed, provided such employee and his employer have presented the facts to the Industrial Welfare Commission and there has been issued to the employee by the Commission a "Slow Worker Certificate." Applications for "Slow Worker Certificate" are to be made to the office of the Industrial Welfare Commission, 328 Flood Building, 870 Market Street, San Francisco.

3. Any question arising under this decision shall be adjusted by conference with the Industrial Welfare Commission.

4. For the purpose of this ruling, an adult male is defined to be a male eighteen years of age and over. This wage scale is established by the Industrial Welfare Commission, upon the authority vested in it by the proclamation of the Governor of California, dated June 8, 1920. As the acceptance of this agreement is purely voluntary on the part of both workers and employees, the Commission requests their earnest co-operation throughout the season.

Order Your Trees Now

Make sure next season's planting. Many varieties will be scarce.

ORDERS BOOKED NOW WILL BE GIVEN PREFERENCE

We are always pleased to answer questions regarding best varieties to grow, soil, irrigation, pruning, etc.

ROEDING TRUE TREES FRESNO, CAL.

Fancher Creek Nurseries

FRESNO, CALIFORNIA

Examination for Apple Inspector

The State Civil Service Commission announces that an examination for the position of Apple Inspector, Office of Standardization, State Department of Agriculture, will be held on July 28, 1920, in Sacramento, San Francisco, Los Angeles, Watsonville and Sebastopol, and such other places as may be necessary to meet the convenience of applicants. The salary is $7.50 per diem, with traveling expenses when away from headquarters, and the period of employment will be from two to five months annually. The duties of the position include the inspection of apples at Watsonville, Sebastopol, Southern and Central California apple districts, but principally in the Watsonville district. Inspectors will be required to enforce the provisions of the California Apple Standardization Law, to issue certificates of inspection on all carloads shipped from the commercial apple districts. Candidates must have had at least three years of experience in the apple business, either as growers, packers, shippers, or inspectors, and at least a common school education or the equivalent thereof. The examination is open to all American citizens between 21 and 60.

HERE AND THERE IN THE FRUIT BUSINESS

Sutter Peach Growers Meet Canners.

Leave it to Sutter county to do the right thing by her agricultural and horticultural interests. In our issue of June 10 we called atteneion to the action taken by the Sutter County Farm Bureau in offering prizes on clingstone peaches grown in the county. We now have additional information, which is to the effect that a peach growers' contest in Sutter county be made an annual event. At the joint meeting of the growers and canners, held recently at Yuba City, it was decided that a contest of this nature be inaugurated. The canners have offered four handsome cups for first prizes and 44 other prizes. The leading prize will be a large silver cup, known as the "Sweepstakes" cup. This will become the property of the grower who wins it twice. Other growers who win it once will have their names engraved upon the big cup. Three other silver cups will be awarded in the variety contest for the best showing in Tuscan, Phillips and Midsummer varieties. Forty-two ribbons for first, second, third, fourth and fifth prizes for trees of different ages will be awarded. This elaborate plan of encouragement is something new, and it goes without saying will make a hit to be patterned after by other fruit-growing sections of the State in whatever line of fruit that may predominate in that section.

No Price Limit.

There seems to be no let up in the splendid prices being obtained for all varieties of fruit in the eastern auction markets. In reviewing the auction sales of two days during the past week we find that all fruit-shipping sections are sharing alike in these prices. Newcastle's average sale per carload in the various eastern markets were $3,405; Penryn, $3,120; Marysville, $3,893; Walnut Grove, $4,000; Mayhew's, $3,299; Clothe, $3,161; Lodi, $2,938; Suisun, $2,814; Loomis, $3,199; Acampo, $2,280; Sacramento, $3,346; San Jose (cherries), $5.053; Dinuba, $3,893; Vacaville, $3,171. What a difference from some years of the recent past when five, six and possibly seven hundred dollars was the limit? As an explanation for such a vast difference, there are several reasons, first of which is, good times exist. Money is plentiful among the fruit-eating classes; second, there is comparatively a short crop. Next, standardization has forced a better pack and the trade has found it out. Next the fruit is more evenly distributed throughout the country—a combination of conditions hard to beat.

Apple Season Now On.

The 1920 apple season is now on. The first carload of Sonoma county apples has arrived on the San Francisco market. The car of fruit was grown and packed at Sebastopol. Levy-Zetner Company were the consignor, as well as the consignee. The opening price has not yet been named, but it is expected that the Sebastopol Apple Growers' Union will name a price on the new crop within a few days. Owing to the scarcity of apples on the San Francisco market for the past week, the first arrivals of Gravensteins brought fancy prices. However, that is no indication that there will be a continuance of such prices throughout the season, as the crop is very heavy, and the large carry-over of dried stock will restrict drying operations this season.

Increase of Judges at Fair.

The agricultural and horticultural exhibits at the Annual State Fair are increasing to that extent that it has been deemed necessary to increase the number of judges. At a recent meeting of the State Fair Directors it was decided to increase the number of judges in the agricultural and horticultural exhibits to seven in order that the work can be expedited, which will inflict a lesser burden on those who have this most important department in charge.

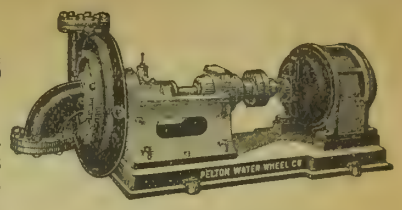
Spray Ineffective on Brown Rot.

Various Fresno county ranchers sprayed apricots with Bordeaux mixture last spring to prevent brown rot, which here affects the wood growth more than the fruit because most apricots ripen early. Some were treated with dormant sprays. Assistant Farm Advisor Keller made an inspection trip last week to observe the effect of various times of application. He couldn't see any results; but hopes to have more closely controlled experiments carried out next season.

Opening Prices on Dried Pears.

Offers of 15½ cents per pound have been made for Contra Costa county dried pears and 18 cents per pound for Lake county dried pears. Offers are also being made for Bartlett pears for drying purposes at $80 per ton, orchard run, which is a splendid price when considered that everything regardless of size or quality goes.

SET THE SPRING BUDS



BY IRRIGATING in the fall. Experience in irrigation is teaching that generous irrigation of fruit trees in the fall will set the buds better and bring out a greatly increased crop, without forcing. Water can be turned into profit-bringing crops in an inexpensive way and with little additional effort.

PELTON

Pump irrigation will provide the water, but real profit depends on the type of pump used. Put in a pump that will be ready for use at any time, year after year, and that will pump more water with less effort—A PELTON.

PELTON Dealers will give you full details.

The Pelton Water Wheel Company

1990 Harrison Street, San Francisco.

A Record Which Proves They *Must* Be Good

BEST Tractors, during the six years ending December 31, 1919, have earned 27.06% on all capital invested in the C. L. Best Gas Traction Company. In 1919 the net profits were greater than $340,000.

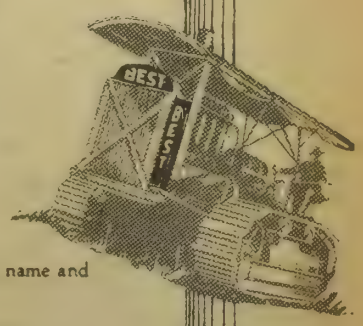
For the first three months of the present year the net earnings have been approximately $175,000, and from orders on hand the net profits for the year should be more than $750,000.

Enlarged plant capacity is needed to double the output of Best Tractors. To accomplish this a new issue of $1,250,000 cumulative 7% preferred stock has been offered.

Attractive features Best Cumulative 7% Preferred Stock:

Non-assessable.
Exempt personal property tax (in California).
Net quick assets must be maintained at $100 a share.
Dividends payable quarterly.
Exempt Federal Normal Income Tax.
Total net assets must be maintained at $200 a share.

Beginning January 1, 1923, corporation will establish sinking fund of 10% of annual surplus earnings after payment of dividends on preferred stock, but before payment of dividends on common stock. This sinking fund shall be used either to purchase preferred stock if obtainable below call price or to call this preferred stock at the following prices: For the next 5 years at 100, for following 3 years 102½, for following 5 years 105 and 110 thereafter.



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INVESTMENT SECURITIES
LOS ANGELES SAN FRANCISCO SEATTLE

BUILD UP YOUR SOIL WITH

Whip-Poor-Will Cow Peas

WHAT THEY WILL DO:

They make the best summer covercrop.

Maintain a moist surface mulch.

Will prevent June drop.

Require less irrigation than other crops.

Need no irrigation where soil moisture has been conserved.

Build up poor soils with more nitrogen bacteria and humus than any other covercrop.

Afford the best kind of pasture for cattle and hogs.

As a hay have a food value of 43% more than Alfalfa.

Will improve your silage.

There is no better Bee Pasture.

Thirty pounds of seed is sufficient to plant one acre.

Our seed germinated 96%.

PLANT WHIP-POOR-WILL COW PEAS

Buy Your Seed from

AGGELER & MUSSER SEED COMPANY

620 So. Spring St., Los Angeles, or
767 So. Central Ave. (There is no parking limit here)

Our Seeds are handled by your local dealer

Hybrid Wheats Rarely Have Value

To the Editor: Enclosed you will find two heads of wheat that I would like to know the name of. Do the heads get any longer and are they heavy yielders? Which do you think is the best tool for working out Bermuda grass after plowing—a spring-toothed harrow, or a disc?—A. E. Peterson, Turlock.

(Answered by Prof. Geo. W. Hendry, Professor of Agronomy, Univ. of California.)

Your letter of June 22, including a specimen of wheat for identification, has been referred to me for reply. This has been very carefully compared with all of the wheats in the United States Department of Agriculture Classification Nursery at Chico, which has the most complete collection of American wheat varieties in existence, and contains specimens of virtually every known wheat variety in the United States. It has also been very carefully compared with the wheat nursery at Davis, and we have failed to find anything with which it corresponds exactly.

It is nearer to Mayview Club than anything else in any of these collections, but is not identical with it. It is, we think in all probability, the result of a natural field cross or hybrid between Club and some Red Chaff bearded variety. Such wheat crosses occur occasionally and are more frequently found in California grain fields than in other parts of the United States. They are often odd-appearing, such as the specimen submitted, and are unlike any existing varieties. We have selected a great many of these from our own grain plats from time to time, and planted them in separate rows the following season, but have found that, invariably, the resultant row will break up into a number of wheat types indicating that the original head was of hybrid origin.

It is very rarely that hybrids of this character are of any commercial importance, and it would require several years of patient and careful selection in order to fix a new variety so that it would breed true to type. We are saving the heads submitted for planting this fall, and have accessioned them as California Number 3188. This will be planted this fall, and if you are interested in the outcome, and care to write us about a year from this date, we will be glad to give you the results of our test of the same.

In regard to the most suitable tool for dragging out Bermuuda grass roots after plowing, we are of the opinion that the spring-tooth harrow or the Forkner cultivator, which is a modification of the spring-tooth harrow would be more satisfactory for this purpose than a disk for the reason that the digging action of these implements would bring the roots to the surface, whereas the disk would cut them into small pieces and bury them into the soil.

HOW UNION LABOR HELPS THE FARMER.

To the Editor: I read the reply of the "Union Labor Farmer" to the article, "How It Looks to a Farmer," in a recent issue, and am very sorry that he finds the farmer to blame for the long hours that he (the farmer) and his family have to work.

I am also pleasantly surprised to learn that the Union Labor men are in favor of curing this evil instead of prolonging it. I know that Organized Labor has been taking the lead in many great movements, the most recent being the demand for a six-hour day, but fail to see in just what way this is to improve the conditions on the Farm.

Since the Union Labor Man's conscience is clear, and he is working harder to better conditions on the farm than the farmer, perhaps it would be a wise plan to let the farmer know so that he could help along.

I would like to know what kind of a farm a man can run, keeping union hours and still beat the old H. C. L., with the view of entering it before it is too crowded.—J. E. W., Paradise.

FAIR DATES.

Sonoma County Fair, Santa Rosa, August 25-29.

Patterson Fair, Patterson, August 26-28.

California State Fair, Sacramento, September 4-12.

Humboldt County Fair, Ferndale, September 14-18.

Tulare County Livestock Show, Tulare, September 14-18.

San Fernando Valley Fair and Market, Owensmouth, September 15-18.

Kings County Fair, Hanford, September 21-25.

Ventura County Fair, Ventura, September 22-25.

Glenn County Fair, Orland, September 27-October 2.

Fresno District Fair, Fresno, September 28-October 2.

Shasta County Farm, Bureau Fair, Anderson, October 1-2.

Los Angeles Livestock Show, Los Angeles, October 2-10.

Siskiyou County Fair, Yreka, October 5-9.

Tulare County Fair, Visalia, October 9-16.

Southern California Fair, Riverside, October 13-19.

Western Royal Livestock Show, Spokane, Washington, November 1-5.

Pacific International Livestock Show, Portland, Oregon, November 15-19.

FAIRBANKS SCALES

Don't Guess at Your Farm Profits

MANY A FARMER is losing money every year without knowing it through "estimating" the weights of his stock and produce, or through accepting the buyer's weights.

A Fairbanks Scale for Wagon and Stock use will give you the *exact facts* about your farm weights.

These scales have been doing just this for ninety years.

Weigh your feed to check results. Know your weights when you sell *anything* your farm produces. This is the only safe way.

Fairbanks Scales for Wagon and Stock use are designed and built to stand up under the day-after-day service your farm needs call for. They are built by experienced scale-makers who know farm conditions.

Fairbanks, Morse & Co.
INCORPORATED CHICAGO

Western Branches:
Los Angeles Portland San Francisco
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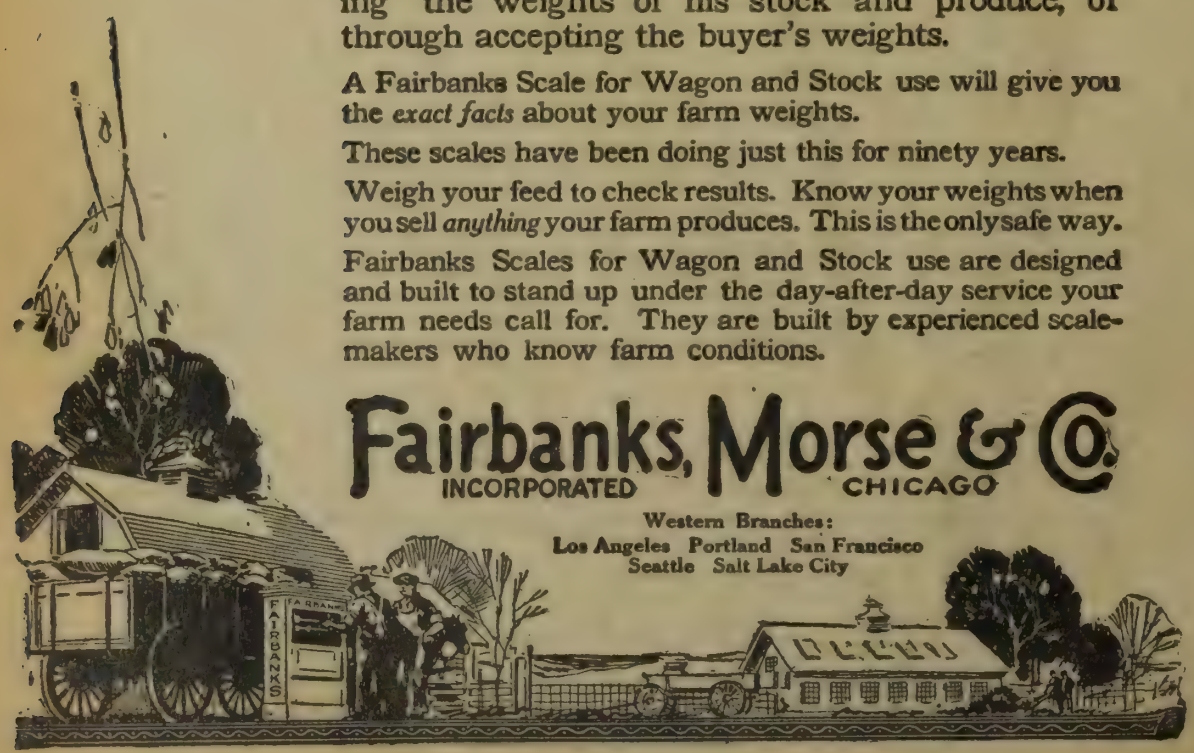

Significant Agricultural Pointers

New Farm Bureau Exchange.

The Tri-County Farm Bureau Exchange has filed articles of incorporation, and is now working for the first 100 members, who must be obtained before they may begin business. Only members of the Farm Bureaus of Madera, Stanislaus, and Merced counties are eligible. The object is to buy certain supplies and to pool those products of the members which are not already eligible for marketing through co-operative associations, as stated by Stanislaus County Agent A. A. Jungerman. In the pooling of various products, they will be graded in a standard form. The large quantities, as well as the standardization, will mean greater convenience for buyers and better prices for the producers. Members will pay $20 initial fee and give an $80 note to serve as credit capital on which the Exchange can do business. Headquarters will be at Merced. Wm. Butler of the Merced County Farm Bureau is the first president; R. W. Sweetland of the Stanislaus Farm Bureau is vice-president; Attorney Walter Maloy of Madera is secretary-treasurer, and E. Hazleton is organization manager.

Standardizing Bean Varieties.

Commendable concentration on varieties of beans, which seem specially adapted to Stanislaus county, [illegible] which will enable them to [illegible] to better advantage by the canner, has been carried [illegible] this year, according to Howard G. Thompson of Thompson Bros. [illegible] Pinks and Large [illegible] were planted this season; [illegible] retired to the hot [illegible] Thompson estimates [illegible] are 20,000 to 25,000 [illegible] of [illegible] in the county, 5,000 [illegible], and 5,000 of Henderson [illegible] limas. Most of them are [illegible] following hay or grain, [illegible] not far along; though the [illegible] saw many fields of Blackeyes [illegible] too big to cultivate, looking splendid. This variety replaces the discarded varieties and occupies a greater acreage than last year. Very few old Blackeyes and Reds are left in the county, and it is estimated that 90 per cent of all the old beans are now in the hands of dealers. Fumigation has become a universal practice here.

Dust for Bean and Melon Aphis.

Aphis have of late years done serious damage to blackeye beans and melons in Stanislaus county, and were even found on bush limas last year. They appeared late in July. But already Prof. R. E. Smith has been demonstrating the use of the "nico-dust," which he is making for the Walnut Growers' Association at Los Angeles; and it is hoped that this control which has proved so effective and inexpensive on walnut aphis, may prove cheaper and better than ladybirds, heretofore imported for the beans and melons in Stanislaus. A 2½ per cent nicotine sulphate dust applied with a sulphur blower at the rate of 20 pounds per acre has been found effective. The nico-dust costs 8 cents per pound; and is inexpensive when it is considered that infestations are found at first only in small spots.

Learned by Alfalfa Grower.

This summer's experience of a Fresno County alfalfa grower of small acreage is making him solid on two propositions. "I wouldn't plant alfalfa again for a million dollars without precise levelling," he remarked. And after seeing the clean big growth of fields in eastern Stanislaus county where they thoroughly submerged the newly mown plants, he vows he will never again grow alfalfa with such a small head of water that the cannot fill a check so full that no alfalfa will be visible. He now irrigates with a stream which gets lost in a check. Most of the second cutting alfalfa was lost in the weeds.

Kerosene Emulsion as Lice Killer.

Kerosene emulsion is one of the best lice killers on plants. It is cheap and easily prepared. Dissolve ½ pounds of soap in a gallon of boiling water. Add 2 gallons of kerosene and stir or churn with a force pump for a few minutes. For use, dilute one gallon with 9 to 10 gallons of water. If only a small quantity is wanted, use 1 to 2 ounces of soap, 2 quarts of boiling water and one pint of kerosene and dilute to 2 gallons. Stir well. If convenient, use rain water.

Strong Demand for Sweet Corn.

Sweet corn is a good crop to grow, judging by the extortionate prices charged on city markets. W. F. Duffy of Stanislaus county found the demand so strong for an acre of this crop planted in their orchard in a previous season that early in July, 1920, he planted seven acres to sell locally to a merchant who agreed quickly to take the entire crop. Now it will be up to Mr. Duffy to keep worms out by methods mentioned in our previous issues.

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Get a Little Giant tractor belt from your Fordson dealer at the time you buy your Fordson tractor, or get it now if you have not already done so.

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Hay -- Its Future Price and Supply

The time is now upon those who have cattle or other livestock to feed, and this includes owners of milk goats and rabbits, to make up their minds as to what they intend to do about a supply of hay. Shall they buy a supply now sufficient to carry them through to grass? Or is it best to buy only a small amount at a time trusting that the price will not be any higher? So far as the future is concerned it is not within our province to say positively what the price will be. We can, however, tell our readers what we have learned about the situation in various parts of the State and contiguous territory.

Alfalfa in Field and Bale.

The nutritious legume, so much desired by stockmen generally, was not carried over in any appreciable quantity from last season, therefore the first crop was in immediate demand and sold or fed at once. The second crop also has been or is being absorbed at once, it is said. Some reports have it that the quality was not up to standard in that the stalks were woody and lacked leafage.

In the Orland district so many of the dairy cattle have been sold that some alfalfa will be shipped out. The grinders are not finding it as profitably as last year owing to the producer asking a higher price.

At Ripon the price in the field is $20, in stack $25 and baled $30. About 25% of the livestock has been sold out of the district.

One farmer in the Turlock district was found filling his barn with $20 alfalfa loose from the field.

In the Salt River Valley of Arizona cotton has driven the alfalfa out to a great extent, and where 60,000 dairy cattle formerly almost tinged the Salt River white with milk the creameries and condensaries are closed for lack of patronage. No alfalfa to come from there and no milk or butter.

The Oakdale farmers in Stanislaus County are harvesting good crops of alfalfa so far and with plenty of irrigation water to extend over a season three weeks longer than last year, expect a profitable season. Six good cuttings are now promised for this district.

The alfalfa districts in the Sagebrush State are reporting good crops with plenty of water for irrigation in sight at Fallon. The Lovelock regions are also in line with a bumper crop of alfalfa.

Grain Hay Gossip.

Reports are from a first-class crop to less than half, depending on the locality. Spotted as an old-fashioned Poland-China hog and about as erratic as to where the price is going, although it don't seem as though it can go much higher. It must not be inferred from this, however, that any reduction in price can be expected.

From the Hollister and Livermore sections a first hand report indicates about half a crop, with barley better than that but wheat and oats not up to the average.

The Tulare Lake region has a wonderful crop of grain in the newer lake region, of which none is cut for hay. A large acreage of the late sowed area is being grazed so it is not entirely lost. Very little hay is cut in this locality.

On the west side of the Sacramento valley the hay crop is reported very light, only 25 per cent, with range and pasture poor. However, a reliable party writes that 50 per cent of the livestock has been sold out of the Williams region, the price of hay quoted from $20 to $35 depending on place and condition. Other points in the Sacramento, on the whole, make the hay crop very light, but considerable acreage cut for hay that was intended for grain.

Our agricultural editor, R. E. Hodges, on a recent trip, has the following to say about the Sierra section.

Southern Sierra Ranges.

"Cattlemen along the foothills east of the San Joaquin valley quite generally send their stock in summer to the mountain pastures—usually National Forests, on which they get permits to graze so many head on certain areas. These Forest Reserve ranges are governed by rangers, part of whose duty is to prevent overstocking. They have succeeded to a large extent; and our inquiries from cattlemen all down the eastern hills and mountains indicate that the cattle will come out of the forest ranges late this fall in a fat condition. This is not so generally true of private ranges nor of all the foothill ranges. In the foothills of Tuolumne county a cattleman said the stock was in fine condition, but would be getting thin before long unless they were brought down to the homestead meadows. Other cattlemen with stock in the national forests higher up in the same county and in Mariposa county expected to find them fat late in October, pasturing about 20 acres per head. Excellent range in the high mountains of Madera county is supporting one head per 20 acres. The foothills of this county are not well covered with feed to keep stock up during the winter. In Fresno, Tulare, and Kern there seems to have been more rain and snow than has been common of recent years and there seems a fair reserve of feed. A cattleman in the Tehachapi told us that more rain had fallen and run off while less snow had come and stayed so the cattle will be losing flesh after August 15th. They are in fine shape now and will gradually drift toward lower dry feed. Springs in the areas mentioned seem to be scarce and with less water than usual."

Government Figures.

The government reports show hay crops of all kinds as below that of last year from 2 to 7 per cent. Alfalfa conditions are not as good as a month ago and 7 per cent below that of a year ago and a 10-year average.

Grain all along the line is from 2 per cent for oats, 8 per cent for barley, 12 per cent for wheat below a 10-year average.

Pasture is 6 per cent below a 10-year average with stubblefields and abandoned grain fields affording relief with stock in good condition.

Price.

Many reports show a reluctance on the part of consumers to buy in quantity at present prices. The feeling seems to indicate no reduction, but those who have the livestock will sacrifice still more of their animals rather than pay any increase.

The San Francisco hay merchants adopt rather a bearish tone in their weekly market report and say that consumers evince no inclination to buy for future use. Country trading is reported equally dull.

The Alfalfa Association report from Los Angeles for the same period shows a lively business in alfalfa. They announce the Nevada production as normal, Arizona taken by cotton, and $27.50 the price for loose alfalfa in the field in Utah with much of the second crop going for seed. Rabbit (choice) alfalfa is quoted in Los Angeles at $41 with No. 1 at $36.

In the Yakima Valley of Washington the price of first crop alfalfa in the field loose is $25. One grower sold 400 tons at that figure.

Reports show an inclination to hold off and not buy in quantity at present. It is hard to see how prices can go much lower, except as owners of livestock sell their holdings for slaughter.

Merced Tomato Crop Doubled

(Written for Pacific Rural Press.)

The height of the tomato-shipping season from Merced county is on. About seven carloads per day are going out from Merced. The acreage this year is double that of any previous year, and the crop could not be better. There is no disease such as destroyed 60 per cent of the plants last year. Prices are high, demand is strong, and due to strict standardization under constant supervision of a deputy horticultural commissioner at the packing shed, there had been not a rejection or serious complaint from markets on any of the 50 carloads already shipped before July 9, when the writer visited the packing-house. The season opened June 20 and will not close until the middle of August, when some 200 carloads of tomatoes will have been shipped, as estimated by G. J. Hunt of Hunt, Jewett, and Bontz.

Heretofore, growers have packed their own tomatoes at their ranches —not very well-standardized and more poorly marketed. The packing took so much time that it kept the acreage at a low point. This was changed by organization, before the present growing season opened, of the Merced Growers' and Packers' Association. This association pays Hunt, Jewett & Bontz a commission for marketing their entire crop. Growers get the full market price less the commission, freight, etc. The shipping firm has brokers in the Northwest and Middle West who handle all the vegetable field crops the shippers send.

Collective Marketing Pays Well.

Advantages of the arrangement are numerous. When growers saw that they would be relieved of the packing, they put in double the acreage. They felt safe in doing this, because their crops were to be concentrated in one marketing organization which could handle them to much better advantage than individual growers selling to the various buyers and commission men who had been getting the crop. It was commonly said that buyers came to an understanding each day as to the price they would pay; and growers accepted that price.

One of the greatest advantages comes in the increased efficiency of standardized grading and packing. All grading is done under the eye of one inspector, who issues a certificate for each carload shipped. Grades are No. 1 and No. 2 in the ripes, half-ripes, and greens. Stones and Early Anas are packed and labeled separately. The latter variety comprise only about five per cent of the acreage. They are planted only because they usually ripen about a week earlier than the Stones and bring higher prices then. But the eating and carrying quality are inferior, and it is well that they do not continue so long in bearing as the Stones do.

All greens are wrapped in individual papers and packed in 30-pound Los Angeles lugs for long distance shipment all over the western half of the United States. They ripen en route. The ripes are not wrapped and are shipped to California markets. Formerly only the ripes were shipped, and of course the markets could not stand such a crop as this year's.

The Los Angeles lugs are used this season for the first time. Formerly 20-pound peach boxes were used. All of the trade are highly pleased with the change.

A gain in cost of transportation is made possible by collective marketing. Formerly each grower's shipments went by express. Now they go as refrigerated freight. Express from Merced to San Francisco is 91 cents per hundredweight. Freight is 23 cents.

Merced is fortunate in her season. This year her first shipments went out on the day Imperial Valley tomatoes were finished. The price immediately jumped a dollar a box. Prices July 9 were ranging around $3 f. o. b. Merced for No. 1 ripes and $2.50 for greens. These will come down when Sacramento and San Joaquin come in about July 30; but there will still be money in shipping tomatoes.

A WELL-PRINTED ANNUAL.

The Byron Times sent out last week 5,000 copies of the best printed review edition we have ever seen. The paper contained 200 beautifully illustrated pages, describing and illustrating the eastern section of Contra Costa and the western portion of San Joaquin counties. If everyone who secures a copy will read it and then pass it along to some friend the paper will prove of great advertising value to the Delta section.

A land army of 100,000 farm hands, recruited and organized by the United States Department of Agriculture, is moving northward across the Middle Western wheat belt, harvesting the nation's grain crop. A wage of $7 for a ten-hour day is provided for.

Late rains and lower temperatures have removed the danger of a 20 per cent power shortage this summer which had been threatened earlier in the season, says State Power Administrator H. G. Butler.

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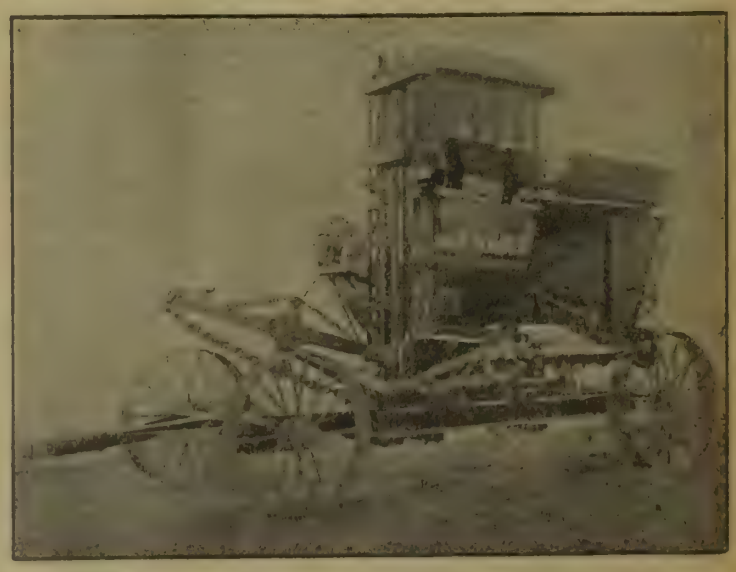

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Federation of American Farmers

(Written for Pacific Rural Press.)

The Federation of American Farmers has taken action to back up their words by deeds, and to that end has retained the services of Gerald Beatty Wallace, a well-known attorney of Stockton, to draft a bill to declare the mineral oil industry of California a public utility and place it under the control of the State Railroad Commission.

Mr. Wallace will also prepare the text for a point resolution requesting the President of the United States to place an embargo on mineral oil and its products, to continue until such time as may be necessary to accumulate a reserve supply of these natural products and vital necessities, sufficient to assure this State and Nation against a shortage in the future which would prove a great national calamity in limiting the production, harvesting and distribution of food crops and other necessities.

These measures will be presented to the legislature and their adoption of American Farmers, as well as by many other individuals and organizations whose interests are vitally connected with the matter of a dependable gasoline and oil supply.

There are many other matters in which the legislative committee of the Federation of American Farmers will interest itself during the coming session, on the part of the farmers of this organization and the State at large. The personnel of all committees having in charge matters of the remotest interest to farmers, will be closely scrutinized, as will all bills offered for enactment. Any legislation which can operate detrimentally to any branch of the farming industry will be strongly opposed.

Contrary to all usage in the past, the legislative committee of the Federation of American Farmers will be composed of actual farmers, who will speak for themselves and their brother farmers. What they have to say will probably be lacking in rhetorical and oratorical effects and show a dearth of classical allusions and flowery flights of fancy, but it will be straight American talk and will be backed up by hundreds of thousands of citizens and voters whose material interests are tied to those acres and that investment. There is little fear that they will not be able to get their ideas and wishes across.

The labor situation has proven very satisfactory, as far as reported by the county units of the federation. The Santa Clara county unit has been able, through its labor bureau, to supply its membership with all needed help in the fruit and of a superior class. The prices for such labor has been satisfactory to all concerned and the prospects for the rest of the season are exceptionally bright.

The San Joaquin unit has started a labor bureau and has furnished to the farmer-members a large number of dependable men for the hay and harvest fields, in the orchards and vineyards as well as general ranch help. Many young students have been given profitable, healthy and remunerative employment during their vacation, and several have been sent to Santa Clara county, where they are still employed.

Calaveras county members of this federation have called upon the San Joaquin county unit for help in the hay and harvest fields and their calls have always received response. The men applying for work are of a superior type, and there has been no complaint from employers or employes, as to hours, wages or conditions of labor, to date. This service to the membership of the federation will be continued and will grow from year to year till the question of labor supply for the farmers is answered.

Attend to Your Own Business.

"If you want a thing well done, do it yourself," is an old saying and a true one. The actual farmers who form the membership of the Federation of American Farmers are conducting their affairs according to that idea. The old method of "leaving to "George" has been abandoned by this federation. Its financial action will never be distated by a banker member, its business policy will not be decided by a merchant member, and its political activities will not be defined by a politician or lawyer member—for the reason that there are not now and never will be any such members.

The increasing activities of this federation, with its exclusively farmer-membership, is causing a little jealousy among the membership of so-called "farmers" organizations, the aims and objects of which, as laid down in their organic law, are totally different from those of this federation. They are social, educational and co-operative, excellent in their way, and deserving of the protection of the Federation of American Farmers, as farmers' organizations.

The jealousy referred to seems to be entirely on the part of the non-farmer membership, the men who are always most active in such organizations, and who are at all times in the limelight of publicity on committees and in other positions of authority. They are not interested in the farmer to the extent of allowing him to run his own affairs but wish to do it for him—to their own glory and their own profit in whatever line of business they are engaged. Such men as these cannot be expected to enthuse over this federation, which refuses them membership and consequently they are opposed to this organization.

Producing Milk at a Loss.

Very little investigation is necessary to prove that the milk producers of the State of California, the men who feed, care for and milk the cows, must have an increased price for their product or they must go out of business. They cannot continue to sell milk at a loss. They are justly entitled to a fair profit for their investment and labor, such as is granted to people in other lines of business.

The consumers or milk in the cities and the towns demand certain things which are entirely unconnected with the price received by the dairymen for their product. They do not differentiate between the milk producers and the milk distributors, and there is a wide difference. The latter are usually individuals or companies who are operating for a profit and must be paid for the service they render and any increase they make in the price for delivery is not reflected back to the producers, but is absorbed in their own particular line of delivery. This organization holds no brief for them—it speaks for the dairy farmer.

Whether the city dweller requires his pint of milk delivered to him twice a day and placed in his ice box or whether he is willing to go to the corner grocery and carry his milk home is a matter for him to decide. Let him pay for what he wants. But he should not condemn the man who produces that milk as a profiteer because of his own laziness and desire to avoid trouble and exertion.

Fine dairy cows are being sent to the butcher at this time and bring less than fifty per cent of their dairy value of a few years ago and men who have followed milk production for many years are turning their attention to other lines of farming. What is the answer? Pay the increased price for milk as you pay the much greater increased price for shoes, stockings, dresses and shirts, bread and candy. The price of milk to the producer must be raised.

The Southern Pacific Company has granted the Sutter Basin section the same terminal rates enjoyed by Marysville, the new rate to take effect on July 18. The new rate will enable the farmers of the Sutter Basin to ship their products to Eastern markets at a saving of 5 cents on each 100 pounds.

WHY continue to feed long hay when you can save 25 per cent by chopping it with an Acme Feed Cutter?

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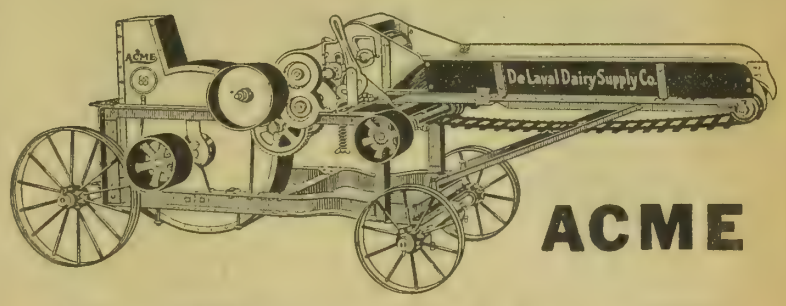

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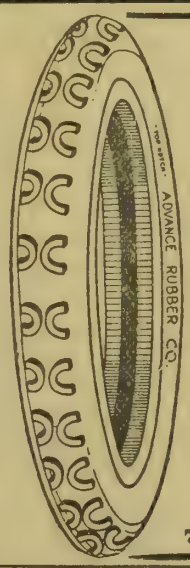

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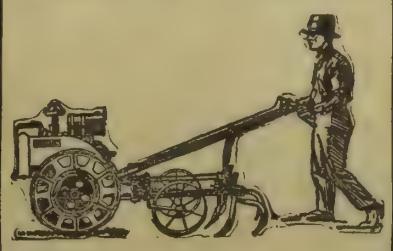

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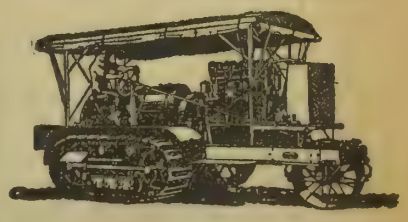

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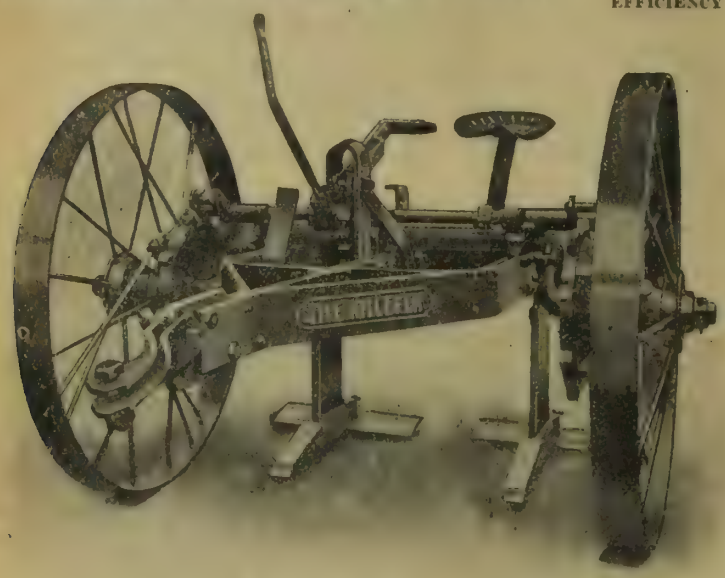

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State Fair to Show "Power on the Farm"

(Written for Pacific Rural Press by N. C. Wilson.)

Bigger than ever, the State Fair at Sacramento this year will furnish thrills and information for 150,000 persons. Do not fail to make plans now for attending. The dates are September 4-12. The "Power on the Farm" exhibit, in the biggest tent ever erected in the West, will be an outstanding feature of the Fair. Tractor and power implement makers and dealers will show eight acres of exhibits, under auspices of the California Tractor and Implement Association.

Sixty thousand feet of tent space will be devoted at the State Fair this year to exhibiting "Power on the Farm" implements. Eight acres of exhibits, marshaled by the tractor and power implement manufacturers, will show the forward-looking farmer how his labor troubles are to be met henceforth. Half a million dollars' worth of machinery will be spread out before him, some of it entirely new, some of it well tried and tested, and all of it interesting to the highest degree.

L. J. Fletcher, Professor of Agricultural Engineering at the University of California Farm School at Davis, will add further zest to the power-farming display by bringing his five assistants to Sacramento and conducting a "School of Operation." How to build a weir box, how to grind a valve, how to adjust a carburetor, or hitch a power-lift plow, or operate a milking machine, or set up a combined harvester—these things will be done by Professor Fletcher and his assistants for the benefit of as many of the 150,000 spectators as care to take him on.

The operation of trucks, silage cutters, mowing machines; the tying of a knot; the lacing of a belt; the threading of a pipe—these pieces of farm-mechanical information will be demonstrated in half a dozen places at once under the big tent. Primarily the forward-looking farmer will be interested in the care and operation of the labor-saving devices that power-farming has to offer.

There was a time when "power-farming" meant tractors, and the displacing of horses and mules. It means much more than that now. It means the displacing of human labor as well, and to the utmost degree. With labor at present prices and short hours prevailing in the cities, it is a lucky farmer who can count on enough farm help to get him through the ordinary season, let alone a harvest. How is he going to get along in the future?

As much expect an old-fashioned cobbler to compete, economically speaking, with the power methods of a shoe factory, as expect the farmer of yesterday to compete by hand with the power implements of today! Or a Russian "moujik," with a scythe, compete with a "combine" moving majestically down the field.

Because these things are so, the "Power on the Farm" exhibit at the California State Fair is of enormous importance. And because of its importance, the men behind it are determined to put on a power implement show that will be worth while. The tractor men will be there. The pump men will be there. The truck men, and milking machine men, and thresher men, and belting men, and electric-lighting men—they'll be there. And, on top of it, the public will be there.

Condition of San Joaquin Valley Grain

From Tracy to Los Banos the barley crop is very light in yield and weight—fair estimates placing the average at 6 to 8 sacks per acre, weighing 38 to 42 pounds per bushel. Wheat acreage harvested is very small and the crop will feed few people. On the east side of the San Joaquin river, irrigated districts produced a bigger acreage than ever since water came, and it is heavy stuff, weighing perhaps 46 pounds on the average. Some in Stanislaus weighs 51 pounds. This is generally followed by beans or other crops, which keep the ground in good shape and is handled in small tracts. The yield is 25 to 40 sacks per acre. Stanislaus irrigated barley has commanded the highest prices we heard of in the Valley, averaging $3 to $3.15 per cental until recently. Three dollars seems to have been the average received by growers throughout the Valley, who sold previous to the recent break in the market. East side dry districts in Stanislaus are about the best in recent years, showing an average of 8 to 27 sacks of barley per acre, weighing 43 to 48 pounds, so that much of it can be shipped. Wheat here occupies only a quarter of last year's acreage, but is of good quality. Highest price to grower for Baart was $4.41 per cental. The average has been about $4.30 for plump wheat, but it also dropped recently. Yields were six to eight sacks per acre. In irrigated districts nearby it went ten to twelve sacks. An average oat crop has met strong demand, selling at $2.90 to $2.95 for feed and twenty cents higher for seed up to July 1. Merced county grain is not generally so good as last year, either in yield or in weight. One qualified to judge says that not five per cent of the barley can be exported. The last rain that fell would have made a good crop but the winds licked it up. Wheat is very short in acreage and in yield.

Madera county barley is best toward the hills and gets poorer toward the river on account of more rain in the hills. Fortunate were those who harvested seven to eight sacks per acre on fallow. Even that is "shoepegged." There is only a little wheat here, but some fields are good, epecially one of Bunyip, which we saw yielding ten sacks per acre on fallow and four sacks winter sown. Hot winds in May when wheat was in the dough injured other varieties, as Bart and Cub. One grower mentioned "lots of wheat fields going seven sacks per acre and lots of them not going one."

Fresno county had fair rains, but the grain crop especially on the west side is light. On the Tulare lake bed in Kings county, overflow from the Kings River a few weeks ago was narrowly averted by piling sandbags. The lake wheat growers are harvesting a "whale of a crop." In Tulare county an increased acreage of wheat was irrigated and we would not have believed the reported yields had we not seen some of the wheat standing. Grain here seems generally in better condition than farther north. A good deal of grain remains unharvested in Kern county and much of it looks very fair.

Gyp and milo throughout the valley are generally looking fine; though we still find some fields planted where there was no possibility for it to mature. Some 14,000 acres were proposed for these crops in the Turlock district alone, mostly white gyp. Most grain sorghums in the valley are grown as second crops and are not far along; although some acreages are already heading out as we saw in Tulare county. We were told in Madera county that growers are not enthusiastic about this crop on account of the cost of water. Some of the finest grain sorghum fields we saw in the valley were in Kern county, where great development is going on and water seems available to date in better shape than in some recent years. No contract prices have been offered in the valley so far as we could learn.

ASK A SQUARE DEAL IN FUEL OIL DISTRIBUTION.

At a recent meeting the Federation of American Farmers adopted the following preamble and resolutions:

Whereas, the production, refining and manufactures of mineral oil has become a matter of overwhelming importance to the people of the State of California; and, whereas, the present dearth of these vital necessities is threatening the production of food and the transportation and distribution of the same; and, whereas, the farmers of the State have been and are at this time discriminated against in the distribution of gasoline, distillate and crude oil for irrigation, power and transportation purposes; and, whereas, the present shortage of oil and oil products is caused by the tremendous exports of these necessities to foreign countries; therefore be it—

Resolved, That we, the State Board of Directors of the Federation of American farmers (formerly the Farm Owners' and Operators' Association) in regular session assembled, do strongly protest against the exportation of these vital necessities, and urge the National Government to declare an embargo on same; that we call upon the authorities of the State of California to take the proper steps to have the production, refining, distribution and sale of mineral oil and its products declared a public utility and placed under the authority of the State Railroad Commission; and, that this organization devote all its efforts to induce legislation for the regulation of this great natural resource, that the people of this State and Nation be served before the needs of foreigners be considered.

The Pacific Gas and Electric Company has been authorized by the Railroad Commission to increase its rates for electricity by the addition of a 15 per cent emergency surcharge to apply on all bills rendered beginning with July 10, 1920, and ending with April 10, 1921, a period of nine months. Similar authority was also granted the Great Western Power Company.

GRAIN OR HAY-PILING MACHINE.

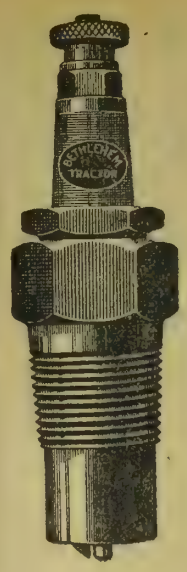
Grain-piling machines run by electric or gas power are much more common now than a few years ago. They are especially adapted for high stacks and might well be used where baled hay is to be piled high. One was recently observed in the Cardwell Warehouse in Madera county, piling barley to the roof—24 sacks high. It is easily moved about the floor to grain temporarily piled when received. Its length may be extended; and its steepness is easily regulated. One man tips sacks of grain onto the elevator at its base and another takes them off at the top to lay in "staggered" tiers. A three-horsepower gas engine operated an endless chain conveyor to do the heavy work.

INTERNATIONAL MOTOR TRUCKS ENLARGE.

Announcement is made of the selection of Fort Wayne, Ind., as the site for the erection of the largest motor truck plant in the world. This new plant is to be the addition to the great factory operated by the International Harvester Company at Akron, Ohio, and is made necessary to supply the great national and world motor truck business of this company. To show how thorough the International Harvester people are in their work, it is announced that as a preliminary to the great factory, that 1,000 houses for employees will be first erected at and near Fort Wayne.

TRACTOR COMPANY TO DOUBLE CAPACITY.

The big plant of the C. L. Best Gas Traction Company at San Lenadro, Cal., built only a few years ago, is already proving inadequate to meet the demand for the well-known Best Companies. Steps are being taken by the company to enlarge the capacity of its plant sufficiently to double the output.



Spark Plugs in the Grain Field

WITH the present scarcity of labor, and considering what you have to pay for it, idle tractors, *made* idle by poor spark plugs, cut down your yield—and profits.

Bethlehem Spark Plugs keep your tractors IN the field and OUT of the repair-shop. For they are heavy-duty plugs, especially built for tractor work, with a knowledge of what a tractor plug must do.

Bethlehem Automobile and Truck Plugs are also especially designed to wring the last ounce of power out of your motor-fuel.

The great International Harvester Company, after exhaustive tests, has adopted Bethlehem plugs as standard equipment. So has the Studebaker Corporation.

They couldn't afford to go wrong. Neither can *you*. Write for free copy of "Hit or Miss?", which tells what you ought to know about spark plugs.

BETHLEHEM SPARK PLUG CORPORATION
E. H. Schwab, *President*
Bethlehem, Pa.

Bethlehem SPARK PLUGS
"They Pull You Through"

An Opportunity to Purchase A Double Suction Pump
AT A SINGLE SUCTION PRICE
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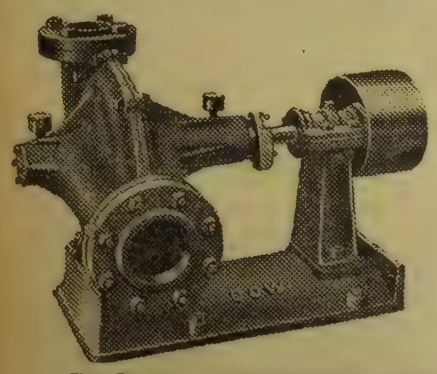

Built for Hard, Continuous Service

BELTED OR MOTOR DRIVEN

Write for Bulletin 101

DOW-HERRIMAN COMPANY
Factory: Petaluma, Cal. *Sales Office, 142 Howard St., SAN FRANCISCO*

Level Your Land for Less Money with a Compton scraper

Operated by the tractor driver from the tractor seat—one man does it all. Moves more dirt with less power. The 5-foot size does the work of 3 or 4 four-horse scraper teams. Saves enough time, horse-feed and labor to pay for itself in a few days. A size for every tractor. Prices from $215.00 to $335.00. Send for descriptive circular and price list.

THE WOODWARD COMPANY FRESNO, CALIF. Box 706 A

DE LAVAL IRRIGATION PUMPS

High Efficiency Saves Power

Above are pictured the DeLaval Labyrinth Protecting Rings. The pump case ring on left, impeller ring on right.

These rings are so constructed as to eliminate all leakage and yet provide the greatest possible clearance. They are made of bronze and to standard gauges, and can be replaced without fitting. They mark the highest point of efficiency.

This is one of a series of advertisements explaining the different parts of the DeLaval Irrigation Pump.

Write us and learn what can be saved with High Efficiency Pumps.

HERZOG ELECTRIC and ENGINEERING CO.
179 STEUART STREET, SAN FRANCISCO

Handling Brood Sows During Gestation

Written for Pacific Rural Press by Thos. F. McConnell.

It is a wonder that as many breeders have "good luck" with their pig crop, as we will find, if we were to take a hog census tomorrow. Many well-informed men in other lines will persist in believing in "luck" in carrying on their livestock operations. Nothing happens without a cause. We may not be able to determine just what is the cause of "white scours" in young animals, but it exists, and scientific investigators think they have solved the problem.

Filth.

Eliminate filth. Establish sanitary conditions. Do this and your troubles will, we might say, all be over. Easy to say, isn't it? How hard to really accomplish. "'Eternal vigilance is the price of liberty" from filth. A continual watchfulness until it becomes a habit on the part of those who have supervision of the sows and their quarters is necessary. When this habit is formed then the work is easy and the results are correspondingly good.

Water Supply.

The thing that seems of prime importance is establishment of sanitary hog pens and quarters, is an adequate supply of pure water—not a river or creek to which the sows may go at will; such streams many times carry disease germs. Cholera and other deadly bacteria are often distributed by natural streams or irrigation ditches. Good, pure well or spring water, piped to each pen or lot and so arranged that mud wallows cannot be made indiscriminately by the lady hogs.

Purity of the drinking water is just as necessary for hogs as it is for dairy cows, beef cattle, or horses. They have gotten along without it and some have lived and many have died. Just think that when one good brood sow dies or aborts that the pig crop is reduced 6 pigs at least. It would not take many such losses to pay for a very complete water system.

Along with the pure-water supply should go proper housing. Many think that in California no housing is necessary. We will admit the necessity is reduced to the minimum, but during the summer months ample shade must be provided. If trees are available, so much the better, but if sheds or shelters have to be built, make them large enough and leave them open on the sides so that air may circulate freely. In the winter the housing should be good enough to protect the animals from storms.

Exercise and Feed.

It is impossible to raise pigs successfully with the sow closely confined during the gestation period. It may have been done once or twice, but it is the "exception that proves the rule." Exercise and plenty of green feed are essential. The hog is naturally a vegetarian, eating grass, roots, nuts, berries, etc., with a modicum of slugs, snails, insects and perhaps reptiles. We try to improve upon nature by making "two hogs grow where one grew before by making it easier for the grunting meat-producers to find their necessary supply of food and lessening the amount of exercise. This is all right so long as we do not carry it to the extreme with the brood sows. The animals in the fattening pen for the short period of 6 to 8 weeks may have the exercise practically eliminated.

The most common source of green feed, in the summer especially, is alfalfa in our State. In these days of "wacketing" prices on the desiccated legume the tendency is to reduce the pasture acreage as much as possible, so that the hay production may be as large as possible. However, if alfalfa is pastured too closely by hogs, they will root out and destroy the stand, therefore it is best, if possible, to change the pasture lot a time or two during the season. There are two advantages in changing, as the hogs like alfalfa before it gets too old and tough. They will eat it even as hay, but there is a point "betwixt and between" that is liked the best and will produce the most growth.

Outside of the coast region in Humboldt and Mendocino counties alfalfa is surely the mainstay for pasturage of brood sows in the summer, but even in that favored region it has much merit. In many localities it is the best pasture throughout the year. During the winter season, if we want something else, rye and rape will produce much green feed for a time, as both plants like cool, moist weather.

Pasture.

Pasture, it would seem, then, supplies exercise, a low-priced feed and healthy, profitable pigs, from big, strong brood sows that are in the best of condition to furnish the lacteal ration for the squealing progeny when they arrive.

Feed other than pasture is a very broad subject and can only be touched upon in a general way in a newspaper article. With alfalfa pasture as a base we can go anywhere for the rest of the ration we wish. Naturally we would look for something that would balance the ration and at the same time keep the cost as low as possible. Barley, the grain sorghums, middlings, skim milk, buttermilk, etc., are all more or less available. Some feeds compounded by the milling companies are producing good results, and they—the millers—are going far and wide for their material, even drawing on the sea for some of it.

No matter what is fed, care should be taken to avoid too much flesh at farrowing time. It is the nature of the female at this period to "lay on" fat, for the adipose tissue to increase. In the natural, wild state this condition did not threaten the well-being of the animals, but in the more or less artificial environment, if the feeder does not exercise judgment, the fat development may be excessive. Here, again, we might mention that exercise will prevent such harmful conditions in most cases. The excess fat, if there is any, is counter-balanced by a healthful condition of the body that prevents trouble.

Hairless Pigs.

Some complaint has come to us at intervals about an unnatural condition of the pigs at farrowing time. The first indication would be a prolonged gestation period—prolonged, perhaps, not more than two days, or possibly a week, and then the whole litter may be born dead and practically hairless. Sometimes, only part of the litter would be dead and hairless, with others alive but lacking in vitality and strength. Part of the litter might live, although probably never be really normal and grow into strong hogs of the kind desired by all swine growers.

This is a trouble that is not confined to swine alone, but is common to all classes of livestock in certain localities. One pronounced symptom is the enlargement of the thyroid gland in the neck. This is plainly in evidence in lambs, colts, and calves, but is not so readily seen in the pig or hog, due to their short, thick necks.

Old-Time Experience.

The writer was familiar with the disease in lambs and colts over forty years in Wisconsin. As lambing time approached the first arrivals were watched for with much anxiety. If they made their appearance on time or slightly ahead of their date, the indications were favorable, but if the coming was delayed two or three days then look out. The neck would be examined, and if a lump even the size of a cherry was found the prognosis of a healthy lamb crop was unfavorable. We had to persist in trying to raise the little fellows as that was the way things were done on the farm in that locality. In some cases the gland would be enlarged so as to interfere with breathing and still the lamb able to swallow milk, and some few of this type could be raised although the profit in so doing was doubtful. The lamb seemed to be able to overcome the trouble more successfully than other young animals, especially colts. Pigs at that time, for some reason, were never known to be affected.

Cause and Cure.

In those days experiment stations, with their corps of investigators, were not in existence, although Prof. Henry in Wisconsin was commencing to lay the foundation for what is now known to be a great work. We had to guess, and we guessed that it was either a sin of omission or commission in the way of nutriment. We lived in a prairie and "openings" region with very fertile soil, growing great crops of all cereals and forage. The livestock was never starved or even restricted in their feed; but some years, say about one out of three, the lambs would be "goitered." Farmers in a region to the west, bordering the Fox Fox river marshes, and feeding much wild hay, never had the trouble among the livestock.

The trouble among pigs in recent years becoming prevalent in the Pacific Northwest, Montana and Wisconsin, the experiment station workers commenced to investigate, and they have found that the trouble may be prevented by the addition of a small amount of iodine to the feed of the female during the gestation period. This drug is given in the form of potassium iodide and can be purchased at any drug store.

How to Use the Iodine.

In Bulletin 297 of the Wisconsin Experiment Stateion, E. B. Hart and H. Steenbock says: "We have successfully corrected the hairless pig trouble by giving the sow during her entire gestation period 10 grams (approximately ⅓ ounce) of potassium iodide per 100 pounds of feed. It should be powdered to a meal as fine as flour and then mixed with the feed.

"Tests of this treatment at the Montana Experiment Station have shown that about half the amount of potassium iodide we have used, when fed for 60 days, will prevent hairless pig production. We have not as yet had time to test the smaller dose, but would recommend that from 5 to 10 grams of potassium iodide (1/3 to 1/6 ounce) per 100 pounds of feed be used. Do not use more, as it would be unnecessary and a waste of money. It had better be fed during the entire gestation period, or at least during the last 75 days, until further experiments have determined whether a shorter period will answer."

The same investigators are quite certain that a ration of a large percentage of roughage, say 25 per cent, especially if this roughage is alfalfa or clover in the form of pasture or hay, will materially assist if not entirely prevent the goiter.

It has been noted by early observers as well as the later investigators that females which had produced "goitered" young at one time at a later delivery gave birth to absolutely healthy pigs, lambs, or colts, as the case might be. It would appear from what we now know that this trouble is due to the lack of the mineral mentioned. The writer knows of cases where both sire and dam had large goiters developed, but the progeny was absolutely free from the trouble. This was the result of an experiment conducted by a farmer many years ago to prove that the diseased condition was not hereditary, but due to feed consumed.

Cannibalistic Tendencies.

It sometimes happens that sows will devour their pigs shortly after birth. Many reasons have been advanced for this unnatural action and appetite, but it seems to be chiefly induced by close confinement with a consequent lack of exercise and feed restricted to a carbonaceous ration. Sows closely confined often form the chicken-eating habit and woebetide the luckless fowl that strays within their reach. Such animals are apt to eat their pigs. We all advocate feeding a rather narrow ration with some tankage, charcoal, salt, etc., accessible at all times, and say that sows never will come the cannibal act when so supplied.

Just to prove that hogs, like dreams, go by contraries, we will quote a letter written by one of our subscribers, Mr. A. F. Dobrowsky.

An Aggravated Case.

"Some of your readers might be interested in these facts. I have owned a large Duroc sow for three years. She has very large litters of 10 to 16 pigs, but just as fast as they were born she would tear them to pieces, and devour 5 to 7 without resting, just as though she was crazy. The next day she would eat all except four. Once she raised 5 beauties. This last time we watched her closely. Two days before farrowing we commenced to feed her meat in the form of freshly killed rabbits, and continued this diet for 6 days. She farrowed 9 beautiful pigs, laid on one, did not eat it, and has eight left, which are two weeks old. This sow has always had plenty of tankage, salt, sulphur, ashes and charcoal at her disposal. She always ate all the other sows' pigs also if she could get to them. Gilts from her have never eaten any of their pigs and never were fed fresh meat."

However, sensible treatment of sows will prevent such bad habits in a very large majority of the cases. The writer visited a hog ranch once upon a time where the pens were found covered with woven wire fencing. It did not look as though the hogs could jump out, but it was found that this wire fencing was a life-preserver for chickens, which were "gone geese," if we may be allowed the expression, if they ever happened to call on their porcine friends. How much better it would have been all around if the fencing had been used to enclose a patch of alfalfa and allowed the hogs the run of that from pighood up. Then they never would have become addicted to the spring chicken habit.

Handling.

Hogs are as susceptible to kind treatment as any of the domestic animals. We sometimes hear it said of a nice-looking sow that "she is a dandy, but she is so cross that she is positively dangerous at farrowing time." Men who have been in the hog business all their lives and never have had a cross sow are responsible for the statement of "like man, like hog." Kind, firm treatment will make kind, tractable animals of all hogs, as well as horses. What a contrast between a herd handled in a sensible way and the one mentioned above, from which the chickens had to be fenced. Which do you suppose would be the most profitable?

Early to Market—Full Weight

51 per cent of all hogs marketed in the United States in 1918 were Duroc-Jerseys.

Duroc-Jersey hogs have proved themselves in championship shows as well as on the market.

Duroc-Jersey hogs raise large families and put on weight quickly. They are hardy, easy feeding animals that mature at an early age, and are uniformly red in color.
Write for our Free booklet "*Duroc-Jersey Hogs Are Prolific and Profitable.*"

The National Duroc-Jersey Record Association. Dept. 120 Peoria, Ill.

The largest swine record association in the world—12,000 members

BERYLWOOD HOLSTEINS AND DUROC-JERSEYS.

Under the direction of J. W. Snodgrass, the Berylwood Investment Co. at Hueneme, Ventura county, California, have started an enterprise in the breeding of purebred Holstein cattle and Duroc-Jersey swine that bids fair to become one of the highest class-breeding establishments in the State. There has just been completed on the ranch a large dairy barn that is of the most modern type in every detail. The living quarters for the men are unusual also. There has been provided private rooms for each one, every room having hot and cold water, a large living room and shower baths, as well. The Holstein herd, for its size, would be hard to beat. They are running strictly to official tests. A 3-year-old daughter of King Korndyke Sadie Vale 27th has just finished a 7-days test with 30.03 lbs. butter to her credit, and she is reported to still be going strong and is expected to make a good yearly record. The cow barn is equipped throughout the "James' way," having white enamel, cork brick floors, litter carriers, concrete floors in corral, fly-proof concrete manure pit. The hog barn is just as well equipped as to detail. The herd boar is the high-backed senior yearling, Rancho's King Col. Orion 28401, with blood lines that trace direct to the best herds in Nebraska, Iowa and Ohio. There are also some excellent boars and gilts of last fall's litters got by the well-known sires, such as Great Model, Golden Model and Ireland's Joe Orion. The brood sows represent such well-known sires as P. & L.'s Defender, Grand Golden Model and Cherry's Volunteer 2d. The four leading sows are Grand Lass 745082, Cherry Lady 745974, Defender Maid 738400 and Defender's Model Belle 732778. Supt. J. W. Snodgrass is highly pleased with the progress made so far on the ranch and also states that they have over three thousand chickens with up-to-the-minute buildings for them.

DOINGS IN DUROCS AT LAMB'S.

This next week, to be explicit on Wednesday, the 21st, will see the dispersal of one of the leading herds of Duroc-Jerseys. Elmer Lamb of Ceres, who, through years of consistent careful selection and mating, has built up a herd of the red beauties that are very favorably known up and down the Pacific Coast wherever Durocs are bred.

Mr. Lamb; while breeding animals of fashionable type and lineage, never lost sight of the fact that the ultimate destination of all swine is the pork barrel. His aim has been to produce hogs that would attain 200 pounds in 6 months with a condition desired by packers or that would go on and grow to a size equivalent to that of any breed at maturity.

Durocs of Lamb breeding have enjoyed a popularity as great as that of any west of the Rockies and always have an added value when known to have come from this herd.

While this herd has not been in the show-ring so much in the last year as it was formerly, it was not on account of deterioration, as the quality of the stock has always been maintained at that high level demanded by the ideals of the owner. Size, quality and economical feeding have been the leading characteristics. The date of the sale is July 21st.

A DOUBLE OPPORTUNITY.

One feature of the fair to be held at Patterson, August 26-28, will be the sale of a large show herd of Holsteins selected from the best herds of Stanislaus county. A committee, composed of A. M. Bibens, R. L. Holmes and H. E. Cornwell, are making the selections. At last report they had secured from 18 breeders 45 head of the best stock these breeders had.

An attempt will be made to fill all classes. The stock will be put into show condition, exhibited at the fair and sold at auction, probably on the last day. A glance at the stock, or the mere announcement that the herd will include Stanislaus' best, will be enough to convince anybody that this will be some sale as well as a great drawing card for the fair.

Now, you Black and White breeders, or those who want foundation stock from herds in the greatest dairy county in the State—we had almost said in the country—here will be an opportunity to secure something worth any breeder's while.

Just look over the names of the selection committee, and then, when you are told that nearly all the breeders visited gave them carte blanche to select anything from their herds for this sale, you can hardly draw a picture good enough in your mind to equal the offering that will be there. You will also have a chance to attend a fair that will pay for the trip—just "killing two birds with one stone," you see.

HEREFORDS AT VERAMONT STOCK FARM.

A recent letter from H. W. Barngrover, owner of the Veramont Farm and breeder of registered Herefords, announces the sale of some foundation stock that will reflect much credit to the breeder and satisfaction to the purchaser, T. L. Raney of Toll House. The purchase includes the yearling bull Edgewood 5th by Patrician 5th, out of Catherine; also the two-year-old heifers, Miss Tempter 21st by Beau Tempter and Miss Perfect 11th by Don Perfect. This is the fourth son of Patrician 5th to go to head registered herds.

Mr. Raney, the purchaser mentioned, has recently joined the ranks of Hereford breeders, and if he continues to show the good judgment displayed in the selection of the above stock he will surely attain prominence in "Whiteface" circles.

The sale of three unregistered Hereford bulls that Mr. Barngrover had at Santa Clara for $300 each to Jno. P. Cuddleback at Gilroy is also reported.

Mr. Barngrover says they have a splendid calf crop at Veramont, and cattle are doing finely. His two-year-old bull, Don Woodford 4th, weighs 2,100 lbs. and is as smooth and mellow as a calf. Twelve head will comprise the contingent from this well-known herd at the State Fair this year.

CONEJO HERDS OF DUROCS AND HAMPSHIRES.

At the Conejo Ranch auction to be held at Newbury Park, July 29 and 30, there will be seen many of the prize-winners in both the Duroc and Hampshire breeds which have been shown at the San Francisco National Live Stock Show and many fairs.

Conejo Ranch herds have been very consistent prize-winners since 1917. At the recent National Livestock Show, held in November, 1919, Conejo Ranch herds won ten championships, and many other prizes, making a total of forty-nine ribbons. In this show the prize awards included Reserve Grand Champion boar in both Durocs and Hampshires; Junior Champion in both breeds; Grand Champion sow in Durocs; Reserve Grand Champion sow, Durocs and Hampshires; Senior and Junior Champion sow, Durocs; Champion barrow in Hampshires; also first prize, get of sire and produce of dam in both Duroc and Hampshire.

At the Los Angeles Live Stock Show, October, 1919, the Conejo herds won three championships and ribbons, making a total of thirty-five ribbons. This included Grand Champion Hampshire sow, Senior Champion Hampshire sow, first prize produce of dam and get of sire.

A shipment of fancy riding horses was made to China lately by Mrs. Charlotte B. Anderson of Chameron Farm. The horses were purchased for prominent Canton merchants by Tom Chin, who was here some months ago in the interests of the Chinese Government.

Dispersal Sale of
LAMB'S DUROCS
At CERES, CALIF.
Wednesday, July 21st, 1920
80 HEAD IN THE OFFERING
Consisting of
BRED SOWS AND GILTS, HERD BOARS
OPEN GILTS AND YOUNG BOARS
Sows bred to Orion Cherry Pathfinder, a big grandson of Pathfinder and Orion Cherry King Jr., and Lord's Orion Cherry King, First Prize Senior Yearling at Sacramento, 1919
CATALOGUES OUT IN A FEW DAYS
ELMER LAMB, Ceres, Cal.

The Ross Cuts Clean
There is a vast difference between *cut* silage and *macerated* silage. *Ross Ensilage* Cutters *cut* the corn. Each particle retains its juice. Thus the *entire food value goes into the silo.* Ordinary cutters chew and beat the corn, throwing only the pulp into the silo and allowing most of the juices to run out at the bottom of the machine.
The *Ross* cuts with *a perfect shear,* nipping every stalk slick and clean into perfect cubes of even length, brimming full of the juices that Nature put there.
That is why Ross-cut silage is always *better* silage—why it *keeps* perfectly and tastes better. It is one of many big reasons why the Ross is unquestionably *the right cutter for you!* Drop us a card today for the complete story.
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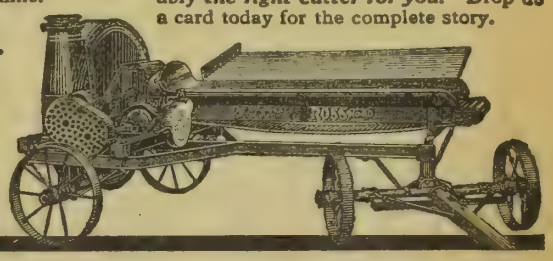

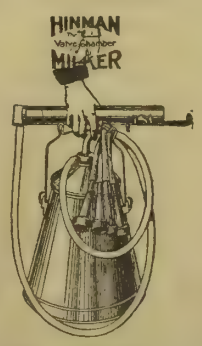

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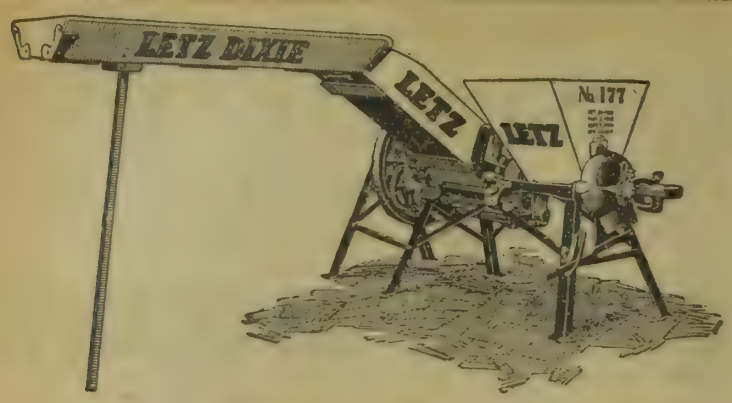

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What Becomes of the Dairy Cows Sold?

(Written for Pacific Rural Press by Ralph Newman.)

Attention has been called in these columns to the fact that unusual numbers of dairy cows have been sold since the first of the year and are still being sold as fast as any kind of a market for them can be found. When in Modesto the other day a group of well-posted dairymen assured me that fully 7,500 head of dairy stock had been sold since the 1st of January and they named one broker who bought 962 head in five days.

What Becomes of the Cows?

The question is being fired at us so frequently that some kind of an answer will be here attempted even if it cannot be very definite. As the writer has gone about the State, he has endeavored to get a line on the ultimate destination of these dairy cows that have been thrown on the market in larger numbers than ever before for the same length of time, but must admit that he hasn't learned very much of a definite nature that would enable the use of statistics or justify indulgence in percentages. About all he can do is to generalize.

Reasons for the Sale.

It will aid our guess if we recall the reasons that have prompted dairymen to sell their cows. There are three main ones. The first is the appalling high price of feed. In some cases the dairyman has yielded to the temptation to sell his cows from which little or no profit could be realized in order to be in a position to sell his hay at a fair profit. Cows thus disposed of have been usually not of the best. In other cases, where the dairyman is so situated as to have to buy his feed, prices asked have proven prohibitive to him, and reluctantly he has let the cows go or is anxiously looking for a market. In this class have been many really good dairy cows.

The second reason for sale is the scarcity and high price of labor. An employment bureau man has just told me that in most lines labor is easier and he looks for no farther advance in wages, but he sees no relief for the dairy. In desperation, dairymen are bidding against each other for the meagre supply of help, and $150.00 a month and board is now frequently met, for all the fact that the price of dairy products cannot possibly support such wages. There are purebred herds where no testing is being done for lack of help. In other herds, the owner himself, in addition to his other work, is milking the test cows. This means broken sleep at night with no chance to catch up in the daytime—a strain that no man can endure, for long periods of time. Because of the labor situation, hundreds, yes thousand, of high grade and many purebred cows have been sold.

Then there is this third reason for the sale of cows. Under the urge of necessity, cow-testing has been done and is going on now far more widely and thoroughly than ever before. With feed and labor as they are, the dairyman, without stretching the truth, may call himself a fool to feed and care for cows so poor at the pail that they will not begin to pay for room and board. Dairymen by the hundred have been going through thin herds, weeding out unprofitable cows, and getting rid of them. Here and there you will find a man milking more cows than he did a year ago, but for every one of such there are easily ten who are milking a smaller number, having culled out the poorer animals.

Here Is Where They Go.

Now, if you will bear in mind the reasons impelling dairymen to sell their cows and the classes of cows sold, you can make a fairly good guess as to where they have gone.

Several entire herds of purebreds have been dispersed. They have gone to other established breeders, or as foundation stock for new purebred herds to displace grades. Most of them have remained in the State, though some, notably the Dr. Hand Jerseys, have found a foreign home.

The best-producing cows from the grade herds, in good flow of milk or soon to freshen, have largely been bought by new men hardy or foolhardy enough to start new dairies in the face of present conditions, or by brokers who have bought them at a low price and will gamble on a chance to resell at a profit.

The poorer producers offered in the auctions, and many really good cows that would have to be carried for some time before freshening, together with most of those culled out by the cow-testing method, have gone to the butcher. If these cows were fat when sold, we have eaten them or are eating them. If they were in poor condition they have gone onto the range, never to return to the dairy.

As to percentages, we can make only rough estimates at this time. The purebreds are relatively so few as not to cut much figure in the totals. For the rest, after talking with dairymen, auctioneers, brokers and butchers, the statement is risked that easily a fourth of all cows sold have gone to the slaughter with possibly another fourth on range in the ownership of butchers or brokers.

Will the cow population of the State show an actual decrease at the end of the year? Undoubtedly there will be a very marked decrease in some sections. But for the State at large? Well, a fellow who goes about and notes the number of heifers in the sale offerings and the number of heifer calves joy-riding in butcher wagons, can't get very enthusiastic over the notion that any increase will be shown. He will rather expect the figures, when they are in, to show a decrease, however much he may hope that his expectation may be disappointed.

A Competent Corps of Judges

(Written for Pacific Rural Press.)

The officials and directors of the State Fair feel that they are particularly fortunate this year in securing the services of a staff of judges in the live stock, poultry and pet stock departments whose abilities are internationally admitted. With the increased effort on the part of breeders to attain 100 per cent perfection in the several types of animals of the different breeds, there comes an increased demand for men who have kept abreast of the movement and whose judgment of quality and type is unquestioned.

Breeders who are familiar with show-ring matters will recognize and appreciate the ability of the following noted men in whose hands rests the awarding of the prizes. The dairy cattle will be judged by John L. Smith, of Spokane; beef cattle and draft horses by C. W. McCampbell of Manhattan, Kansas. L. A. Weaver of Columbia, Missouri, will judge the Poland-Chinas and Durocs in the swine classes, while Wilson Rowe of Davenport, Iowa, will handle the Berkshires, Hampshires and Chester Whites.

W. H. Lee of Mexico, Missouri, the natural home of the saddle and light harness horse, will judge the Horse Show and the light harness horse classes. W. J. Head of Berkeley will pass on the pigeons and Lewis H. Salsbury of Pasadena will place the ribbons on the rabbits.

A dairyman, writing to the Oregon Farmer, says that from ½ to 1 pint of melted lard mixed with 3 to 4 tablespoonfuls of spirits of turpentine is a sure cure for poisoning from water hemlock or larkspur. The dose may be repeated in 6 hours if necessary.

Better protect milk from infection than to free it from infection.

Associated Dairymen's Books Wide Open

(Written for Pacific Rural Press by Ralph Newman.)

One thing that impresses the man in touch with the organized dairymen is the fact that if the organization is not democratic, "there ain't no such animal." At a recent meeting in Modesto, President Watson, of the Central Association, declared that if there was anything that any member wasn't fully informed about it was his own fault, for if he would go to the plant he could get all the information there was, down to the last detail.

This same spirit prevails clear through to the State office. The other day the writer wanted some information about expenditures by the State body, so walking into the office he asked for it. He got it. Not in vague generalities, but in the form of an auditor's report, covering the activities of the association from its beginning to March of this year. This report was made by certified public accountants employed by the Central Association for that purpose. It contains matter of so much interest to all dairymen that President Henderson was asked if it might be made public. He replied, "Certainly, go as far as you like."

What the Organization Is and What It Does.

The Associated Dairymen, as all organized dairymen know, is a body made up of directors from the boards of the local associations and employing a paid secretary. Its function is to federate the local associations and handle their common interests. It assists the locals in getting organized and in working out their problems, but its big mission is to direct the standardization and take charge of the co-operative marketing of the products of the local associations.

Its Financial Support.

Its financial support comes almost exclusively from assessments levied on the locals, each one paying in proportion to the number of cows under its jurisdiction. When it is remembered that this body has been developing virgin soil; that it has had to meet the bitterest and uncleanest kind of opposition; and that, almost from its first day, it has been involved in litigation, one would expect pretty stiff assessments, pretty heavy expenditures, and quite considerable sums gone up the flue in tentative ventures that did not pan out.

The report, covering the thirty months of operation up to March 1st of this year, shows the total assessments levied to be less than $49,000. A careful hunt for money expended without an apparent satisfactory return reveals only one item of some $2,000 expended on a prematurely launched purchasing department. Any fair-minded man going over this report will admit that expenditures for salaries and expenses of secretary and assistants have been very modest. Indeed, one wonders how men of ability have been secured for such small salaries. About $1150 has been expended in assisting local associations to get organized, but most of this will come back as these associations get on their feet.

Some Unpleasant Revelations.

An item that makes your blood boil is more than $8,000 for legal assistance. Nearly all of this was made necessary by the unwarranted and unsuccessful assaults made on the dairymen by the big interests and their puppets. One revelation, not to the credit of the local associations, is the fact that some of them have been slow in meeting their assessments, and, strange to say, the stronger associations are the greatest sinners. The association could have saved $1,400 interest on borrowed money but for this fact.

A perusal of this report has satisfied this dairyman that the money he has paid in has been efficiently and economically administered and that the management is well able to go right ahead with the larger work now in contemplation. If any dairyman thinks differently about it he is advised to go and study the report for himself.

Disease Control Among Livestock

The first trouble along disease lines among livestock that we think of in California is tuberculosis among dairy cattle. Why do we not think of this trouble among beef cattle? We all want tuberculosis eradicated, and if every dairy cow in the State was freed from the curse and beef cattle left as they are, we will still have it with us. It would be with us in such a way as to endanger complete freedom from the trouble.

The work is progressing among dairy herds in as satisfactory a manner as can be expected under our present laws, but until there is some further legislation along this line, the elimination of the disease will be a Sisyphus-like toil and therefore almost impossible attainment.

The May report of the State Department of Agriculture on this subject shows 317 herds of cattle tested, composed of 3,477 head, of which number 190 or 5.4 per cent were reactors. According to this more than one cow out of twenty is tuberculous and a menace to the health of the general public. Not only through the milk consumed but hogs following cattle or fed on dairy by-products are apt to become diseased. Poultry also are in danger of infection. Therefore, it behooves us to help this work along in every way we can and remember that beef herds as well as dairy animals should be freed from the trouble.

Another disease embodied in the report cited is sheep scab. While this is not a menace to the health of the public, still it concerns us in that it tends to increase living expense by lowering the supply of wool and mutton. At one time the State was almost free from the trouble, but now it is again making its appearance. Sheep inspected during the month numbered 370,880, of which number it was found necessary to dip 320,833.

Fever tick eradication also has the attention of the department with only 1428 cattle inspected, of which number but 493 were dipped.

A RED HOG EVENT.

Things are about to happen in the Duroc-Jersey line south of the Tehachapi this month. One of the leading events will be a bred-sow offering at a public sale in Los Angeles, Wednesday, July 28th, by the Winsor Ranch of Bonita, San Diego county. Red swine from this noted ranch have attained prominence in the show and sales-ring during the past year. Not only in the public way has their worth been demonstrated, but in private sales also.

Those of us who are acquainted with the breeding and individuality of the female side of the herd at Winsor Ranch know that the offering at the coming sale will be of the very highest type. This alone would be attraction enough, but when the boars to which these sows are bred are considered, the attraction becomes doubly great. Much has been said about these sires, but the statements have not been overdrawn. From both sides of the herd, then, we know that the offerings are of the best. Size, a characteristic deemed of the foremost importance by our leading swine breeders of today, finds its highest exemplification in this herd. This characteristic, combined with quality and excellent conformation, make attendance at this sale of supreme importance to those interested in Duroc-Jerseys.

A fly in a trap is worth a dozen in the milk pail!

An axiom: Flies, be they ever so few, will strive continuously to contaminate milk.—State Department of Agriculture.

There are, broadly speaking, two kinds of pasteurization—the positive and the negative. The former kills germs and the latter kills people.

HOT WEATHER

the season when a

DE LAVAL SEPARATOR

saves most over any other separator or skimming system

IT'S A GREAT MISTAKE for any dairy farmer without a separator or using an inferior machine to put off the purchase of a New De Laval Cream Separator in the summer months, especially with butter-fat at the present unusually high price.

Great as are the advantages of the New De Laval over all other separators, as well as over any gravity setting system, at every season of the year, they are even greater during the mid-summer season than at any other time.

This is because hot weather conditions occasion greatest butterfat losses with gravity setting and render it most difficult to maintain quality of product with any gravity system or unsanitary separator, while, moreover, the quantity of milk is usually greatest, and any loss in either quantity or quality of product means more.

Then there is the great saving in time and labor with the simple, easy running, easily cleaned, large capacity New De Laval machines over all other methods or separators, which naturally counts for more at this time of the year.

Hence the great mistake of putting off the purchase of a New De Laval Cream Separator in summer, whether you already have a poor machine or none at all, and every dairy farmer should keep in mind not only that a De Laval will pay for itself in a few months but may, if desired, be bought on such liberal terms as to actually save its own cost while being paid for.

Every claim thus made is subject to easy demonstration, and every De Laval local agent is glad of the opportunity to prove these claims to you, in your own dairy, without cost or obligation on your part.

Why not see the nearest De Laval agent at once? If you do not know him, write to the nearest office for catalog or any desired information.

DE LAVAL DAIRY SUPPLY CO.

THE LARGEST DAIRY SUPPLY HOUSE ON THE PACIFIC COAST

61 BEALE STREET SAN FRANCISCO, CAL.

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"Cows increased in one week 3 per cent in milk."
A. L. McCULLOCH, Alpaugh, Cal.

"I never saw hogs do so well or grow so fast as on this molasses ration."
C. H. HARTWIG, Yuba City, Cal.

"It has enabled me to keep my stock in better condition at less expense."
J. M. HENDERSON, JR., Sacramento, Cal.

"Have one calf that refuses to drink new milk—prefers skim milk with molasses. What do you know about that?"
R. HECKLEY, Santa Rosa, Cal.

"It has been a great advantage in getting the stock to clean up the roughage."
H. H. AMES, Chowchilla, Cal.

"One cow will turn down the choicest handfuls of alfalfa hay unless it has been 'Molassed.'"
REDWOOD AYRSHIRE FARM, La Honda, Cal.

MOLASSES

cheaper than hay, but has same feeding value as corn or barley.

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Sows by the world's leading sires, including Great Orion Sensation, Orion Sensation, Pathfinder, Orion Fancy King, and Cherry Chief.

WINSOR'S GIANT ORION

The Greatest proven sire in the West — The largest boar on the Pacific Coast

We believe this is easily the best bunch of big-type Duroc-Jersey sows ever sold in the West, and they are all bred to

THE TWO LEADING SIRES OF THE COAST

These sows are all backed by WINSOR RANCH SERVICE, the best guarantee a Duroc-Jersey hog can have.

GREAT SENSATION 3RD

A son of Great Sensation and the record sow Uneeda Lady — The boar we just sold for $8,000, the highest price ever paid a Western breeder for a boar of any breed.

EXPOSITION PARK—LOS ANGELES

Wednesday, July 28

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Big Type Polands

May and September GILTS Bred to

GOLDEN WEST KING

Grand Champion California International Livestock Show, 1919

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DUROC BOARS

TWO ATTRACTIVE YEARLINGS sired by Orion's King Gano. Big-type, stretchy, heavy-boned and good feet. ONE FALL BOAR by Chief Sensation and one by Pathfinder's Likeness. Also SPRING PIGS, either sex, sired by Orion's King Gano.

SATISFACTION GUARANTEED.

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DIGESTER TANKAGE

Send for Sensible Folder on Feeding Hogs

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Livestock and Dairy Notes

LIVESTOCK SALES DATES.

July 21.—Elmer Lamb, Ceres, Duroc-Jerseys.
July 28—Winsor Ranch, Los Angeles. Duroc-Jerseys.
July 29, 30—Conejo Ranch, Newbury Park Duroc-Jerseys and Hampshires.
August 11—Butte City Ranch, Butte City. Shorthorns, Shropshires, Berkshires and Shetland Ponies.
August 14. — Merced Co., Poland-China Breeders' Ass'n. Merced.
August 28.—Stanislaus Holstein-Friesian Association at Patterson Fair.
Sept. 27 — McCarty-Shinn-Elliott, Tulare. Poland-Chinas.
October 6.—Kings County Poland-China Breeders' Association, Hanford.

The Dairy.

Frew's Good Luck Creamery at Tulare was recently bought by Armour & Co.

Rumor has it that milk prices will advance to the distributors 5 cents a gallon Aug. 1st in San Francisco.

John L. Smith of Spokane, the prominent Holstein breeder, will judge the dairy cattle at the State Fair this year.

"One or a Carload" is the motto on the letterhead of the Stanislaus County Holstein Breeders' Assn. This is good business, as it is reaching out for both the retail and wholesale trade.

J. W. Hanner, who has been breeding Ayrshires at Sanger, has transferred his herd from that place to Elk, Mendocino County, where he has purchased a fine farm fully equipped for the dairy business.

Dairying is the biggest industry around Oakdale, Stanislaus County, according to A. L. Gilbert, who says that the local creamery pays out $1,000,000 per year for milk and cream besides a lot that goes to Modesto.

Authorities have found the milk furnished to consumers in Richmond below the standard and producers have been warned their permits will be revoked if the product is not brought up to requirements.

A junior 2-year-old daughter of Sis Skylark Ormsby in the herd of the Lewis Company at Watsonville made a record of 500 lbs. milk in 7 days. Only 10 cows in the world have been credited with such records in the past year.

The Kings County cow testing department of the farm bureau report 48 cows producing 40 lbs. or more of butter fat during the month of May. Cow No. 88 of the Post Card Ranch was the top cow for the month, producing 64.40 lbs. butter fat.

Stanislaus Queen Segis Pontiac, owned by H. E. Cornwell of Modesto, has made a 7-day record of 29.49 lbs. butter and a 30-day record of 118 lbs. butter. Three daughters of his 41-lb. herd sire, Sir Johanna De Kol Ragapple, are completing very creditable records.

The Denison dairy at Modesto is another example of the value of the purebred sire. Among the 16 cows now being milked are 3 giving 80 lbs. or more a day on hay alone. Several first calf heifers sired by Juliana Stratford King Segis, who has headed the herd, are rolling out seven gallons of milk wth ordinary dairy care.

H. V. Bridgford, A. M. Bibens and R. L. Holmes, directors of the Stanislaus County Holstein Breeders' Ass'n and delegates to the National Holstein Ass'n Convention at St. Paul last month, brought back the word that the annual meeting of the National Ass'n would be held in San Francisco in 1924. Some time ahead, but it will be all the better when it does come.

The first entry in the dairy cattle classes at the State Fair was received from Dean Beeman, Holstein breeder of Woodland, a new exhibitor who has entered an interesting exhibit. As a demonstration of what can be accomplished by intelligent breeding this exhibit will prove of more than passing interest. The Beeman herd is headed by Dean Fayne Segis, a three-year-old bull of excellent type. Two of his calves will be shown, one a junior heifer calf and a senior bull calf. In addition Beeman will show the five-year-old Johanna Hengerveld Capunna with two of her calves, a two-year heifer and a senior yearling heifer.

The Lewis Company of Watsonville is buying up all the good members of the family of Ormsby Segis Marie they can get hold of. They recently secured a 100% sister in Washington and another sister from W. J. Higdon of Tulare. The first crop of calves from Ormsby Segis Marie Lad, son of the world record cow, Ormsby Segis Marie, and junior herd sire of the Lewis Company herd, are now coming in and showing the splendid type of their sire.

Swine and Swinemen.

E. M. Harsch, field secretary with the Hampshire Record Ass'n, will make a visit to California this month and visit the various breeders, ending up with the Conejo Ranch sale on the 30th inst.

J. H. Cook, proprietor of Forest View Ranch at Paradise and breeder of Poland-Chinas, has transferred his hogs to a more accessible location 12 miles north of Chico near the State Highway. His post office address is now R. R. 4, Chico.

Hogs sold at $16.15 in the Stanislaus Farm Bureau auction July 6. This was 40 cents higher than the San Francisco market and it saved $1.50 freight to San Francisco which the buyers paid, as reported by Farm Advisor A. A. Jungerman.

One of the special attractions of the Winsor Ranch sale of July 28th is Miss Pathfinder, the 1st prize senior yearling sow at Sacramento in 1919. She will be bred to Winsor's Giant Orion, the largest Duroc boar in the West. Mr. Walker considers her the best sow they ever sold.

The Hollow Hill Farm of Colton has just received a wonderful young Duroc-Jersey boar from the East sired by Mammoth Sensation, the largest two-year-old boar the breed ever produced. He is a last fall boar and was selected for Hollow Hill by R. K. Walker of Bonita. This boar is out of King of Orion's dam, combining in him the blood of the Sensations and Orion Cherry Kings.

Beef Cattle.

The market cattle and hog auction at Red Bluff last week was a success, selling 4 cars of hogs and one of cattle. The top hogs brought 14 cents and the cattle 10½ cents weighed out over the local scales.

The Rodeo given by the cattlemen of Livermore at that place on July 3-5, was a great success. Some excellent races as well as broncho stunts were staged each day. The attendance on July 5th was about 4,000.

The Nellie Bacon ranch in Franklin Canyon, Contra Costa County, has been sold to F. M. Bechler, a New Mexico cattleman, who will transfer part of his stock to his new ranch which will be used as a winter pasture and distributing center.

Sheep.

The last two weeks have seen some indications of new life in the Boston wool market at figures from 20 to 30 per cent off the markets of two months ago.

A New York dispatch states that instead of being lower that foreign worsteds will cost $5 to $15 per suit pattern more than in the spring of 1920.

The Nevada flocks of sheep are reported as below normal by the Livestock Ass'n of that State. The lamb crop is 20 per cent below the average. About half the wool clip has been sold with the remainder in storage.

Livestock Miscellaneous.

A rodeo is planned for the Fresno District Fair to be staged by Tom Mix, the "movie" actor.

Stockmen attending sales at the Tulare pavilion will be interested in the project now definitely under way to build a $225,000 hotel in that city so stock-buyers need not go to Visalia to sleep.

Recent rains smutted the grass being held in Madera County hills to feed cattle after they shall come down from high ranges in the fall. Showers about the last of June helped the mountain ranges.

The two-year-old colt, Inch Ape, of which mention is made in another column, was bought by Samuel C. Hildreth of New York for $125,000, the highest price ever paid for a colt of this age. Another record for California.

A call for a Co-operative Marketing Conference has been issued by the American Farm Bureau Federation to meet at Hotel La Salle, Chicago, July 23 and 24. The call includes all organizations interested, co-operative livestock marketing associations as well as others.

The Los Angeles Livestock Show prospects are exceedingly bright. A subscription totaling $80,000 is on the books, which assures ample capital for the premium list and running expenses. Manager Thomas has started an aggressive campaign for entries and intimates that all coast shows will be eclipsed by their coming exhibition.

Heavy accumulations of raw stocks of hides and skins are reported to the United States Department of Agriculture by 1,094 packers, dealers, importers and tanners, May 31, 1920, as compared with the stocks reported by 1,111 concerns April 30, 1920, and 1,256 concerns May 31, 1919. There were declines in only four items as follows: Cattle hides, 4 per cent; kangaroo and wallaby skins, 17.9 per cent; goat skins, 3.7 per cent; and pig skins (pieces), 29.7 per cent.

HAMPSHIRE BREEDERS WILL MEET.

E. C. Stone, Secretary of the American Hampshire Swine Breeders' Association, has sent out a call to all breeders of Hampshire hogs in the West to meet with California Hampshire Swine Breeders at their annual meeting to be held at the Conejo Ranch, near Newbury Park, on the Ventura State Highway, about forty miles northwest of Los Angeles, on July 30th at 11 a. m. The National Association will be represented by Mr. E. C. Stone, Secretary, or one of his associates.

President F. V. Gordon of the California Hampshire Swine Breeders' Association, expects a record attendance and states that this meeting will be of particular interest to all Hampshire breeders. Among other things the employment of a field man will be discussed.

CREDITABLE COW-TESTING RECORD.

E. A. Peterposten writes from Hughson: "I am sending you a report of the official test just completed on our cows at my ranch in Hughson. The records are as follows: Clothilde Corndyke Hengerveld, aged 5 years, butter 7 days 24.87, milk 487.4. Berta Johanna, age 6 years, butter 3.77, milk 536.6, in 7 days. Miss Harvg Pontiac, senior 3-year-old, butter 4.08, milk 341.6, in 7 days. Mabel Cisteria Mechthilde, senior 3-year-old, butter 12.73, milk 340.3, in 7 days. The last two records were made at approximately five months after calving and during these five months the cows had been milked only twice a day with the regular string."

LIVESTOCK DIRECTORY.

Rate 3½ cents per word each issue.

SWINE.

Duroc-Jerseys.

DUROCS—BIG-TYPE—HIGHEST QUALITY popular blood lines. Herd headed by John's Defender, Jr. and Western Pathfinder. Bred sows and gilts and young boars for sale moderate prices. Greenwood Farm, Withrow & Stafford, Live Oak, Cal.

A DUROC ON EVERY FARM—I am offering every California farmer a chance to start in registered Durocs at my expense. Write today for details if genuinely interested in real hogs. Geo. L. Horine, Winton, Cal.

BIG-TYPE DUROCS—Herd headed by California Orion King. Am offering excellent young boars at right prices. Inquiries invited. Harvey M. Berglund, Dixon, Calif.

WINSOR RANCH DUROC BOARS—Big-type utility boars for farmer trade; priced to move. R. K. Walker, Swine Dept., Morris C. Allen, Ranch Manager, Bonita, San Diego, Co.

BIG DUROC GILTS — March litter. Orion blood lines; best type. Five for $150, or $35 each. Boar pig, $40. El Dorado Duroc Breeders Association, Placerville, Cal.

JACK LONDON RANCH, Glen Ellen.—Exceptionally good weanlings. Bred sows and gilts. One good yearling boar and one fall boar. Prices reasonable.

ROCSTEIN RANCH DUROCS headed by Lord's Orion Cherry King. Breeding stock for sale at all times. W. M. Way & Son, Rt. 1, Box 320, Modesto.

BARGAINS in bred sows and gilts. Pathfinder and Great Wonder I Am blood. Derryfield Farm, Capital National Bank Building, Sacramento, Cal.

DUROC-JERSEYS — Fine big-type gilts, tried sows and boars, Eastern and California bred. H. P. Slocum & Son, Willows, Calif.

REGISTERED DUROCS—Choice gilts and weanlings, either sex. Breeding and satisfaction guaranteed. H. E. Boudier, Napa.

DUROC-JERSEYS — Am offering registered pigs, April farrow, either sex. Lowell Beaver, R. "C," Box 397, Fresno, Cal.

BIG-TYPE DUROCS — Gilts and boars of Winsor's Giant Orion breeding. Falfadale Farms, Perris, Calif.

DECEMBER AND MARCH DUROC BOARS —Pathfinder breeding. Sterling Smith, Route 1, San Diego.

FOR THE BEST in Durocs, write June June Acres Stock Farm, Davis, Cal.

Poland-Chinas.

TOHOQUA POLAND-CHINAS — Big type. A good big tried sow to sell. Has farrowed two litters of ten pigs each. Bred for August farrow. Also a dandy young boar pig from the Grand Champion sow of Glenn Co. Fair. This stuff is good, fully guaranteed and priced to sell. Ferguson and McKaig, Orland, Cal.

ELDERSLEY AND SHADY BROOK Farms big-type Poland-Chinas that make money for the Feeder, the Farmer and the Breeder. Prices reasonable. J. H. Ware, Brown's Valley, Calif.

BRED GILTS for sale. A few choice ones bred for fall farrow, to a good son of F'Big Jones, the Iowa 1920 Grand Champion. N. Hauck, Alton, Humboldt Co., Cal.

J. F. McSWAIN, Breeder of Poland-China hogs. Herd headed by Big Model Fellow, Reserve grand champion 1919 State Fair. Young stock for sale. R. 3, Merced, Cal.

REGISTERED POLAND-CHINAS — Large type. A few 3-months-old boars and gilts. Satisfaction guaranteed. J. E. Thomas, Gilroy, Cal.

WAUKEEN HERD POLAND-CHINAS — Home of King's Big Bone Leader. A few service boars for sale. Les McCracken, Ripon.

LAKESIDE STOCK FARM—Large, smooth and big-boned Poland-Chinas. Geo. V. Beckman & Sons, Lodi, California.

REGISTERED POLAND-CHINA SWINE—Prize-winners. Finest stock in the State. Bassett Bros., Hanford, California.

BIG-TYPE POLAND-CHINAS—Good as the best. Always glad to show you. Houck & Lewis, Winton.

REG. BIG TYPE POLAND-CHINAS—Service boars and weanling pigs. J. H. Cook, R. 4, Chico.

LIBERTY HERD—Service boars. July weanlings. J. W. Raymer, Soledad.

LARGE TYPE POLAND-CHINAS — Winton Poland-China Farm, Winton, Cal.

POLAND-CHINAS—Strictly large type. J. F. Lehman, Lodi, Cal.

Berkshires.

BRED GILTS.

Sired by Mayfield Rookwood 2d, a Grand Champion Boar, out of 600-700 lb. sows, and actually bred to "ACHIEVER," our English Blood Boar, the Sire that puts more bone and pork-making qualities into his pigs.

Priced reasonably and absolutely guaranteed. Castleview Ranch, Santa Rosa, Calif.

TWO SOWS and an unrelated boar for $100. These are purebred registered Berkshires, sired by Grand National boar Baron Duke 201st and Rincon's Rival 2nd; also a grand champion, Baron Duke 201st is dead and this the last opportunity to secure pigs from one of the greatest boars of the breed. The pigs are from 700 pound sows. They are guaranteed to please or your money refunded without question. Sandercock Land Co., 703 Market St., San Francisco. In charge of Natomas Land Sales.

ANCHORAGE FARM BERKSHIRES
Orland, Calif.
HERD BOARS—STAR LEADER, Junior and Reserve Grand Champion of the World. The Grand Champion carload of barrows, over all breeds, at the San Francisco Live Stock Show, was sired by a son of Star Leader, NATOMAS BARON DUKE, grand champion of California. For sale, bred gilts, open gilts, young boars and weanling pigs. Write for booklet, prices and list of sows.

SOW PIGS and Boar Pigs sired by Ames Rival 118th, Ames Rival 70th, Ideal Royal Lee, Champion Masterpiece 8th, Escalon Majestic and Achiever, and out of prize-winning sows. A postal will bring prices. Geo. A. Stingle, Lark Meadow Ranch, El Monte, Cal.

CARRUTHERS FARMS' BERKSHIRES — Cholera immune. Live Oak, California.

BERKSHIRES — Purebred registered — 4 bred sows, beautiful animals, will farrow soon; a wonderful "Star Leader" boar—a real show animal as good as any in the State. To close out am offering this choice stock at an extremely low price. A special offer for the lot. Wm. C. Laux, Morgan Hill, Cal.

GRAPE WILD FARMS—Berkshires—Guernseys. Big-type Berkshire Boars of serviceable age, sired by Big Leader—greatest son of Grand Leader 2nd. Panama-Pacific Grand Champion. A. B. Humphrey, Prop., Escalon.

BERKSHIRES—We are compelled to reduce our herd, owing to green feed shortage. Write us today. R. J. Merrill & Son, Morgan Hill, Cal.

QUALITY BERKSHIRES — Young stock, both sexes. Calac Orchards, Geo. P. Upham, Martinez.

REAL GOOD BERKSHIRES — Cholera immune. Frank B. Anderson, Sacramento, Cal.

Chester Whites.

CHESTER WHITES — E. E. Fulton, Fair Oaks, Cal.

Hampshires.

PUREBRED HAMPSHIRES — The "Belted Beauties"—herd of the Uneeda Hampshire Swine Farm—has been acquired by this corporation and we wish to reduce the stock to some extent before fall farrowing time. We offer 2 four-months-old boars and 4 four-months-old sow pigs at very attractive prices. Rio Hondo Rancho, Compton, Cal.

REGISTERED HAMPSHIRE HOGS—"Belted Beauties" need no apology. Pigs, young boars, gilts and sows for sale. Uneeda Hampshire Swine Farm, Gardena, Calif.

DAIRY CATTLE.

Holsteins.

TOYON FARM ASSOCIATION
UNDER STATE AND FEDERAL SUPERVISION
SMALL FOUNDATION HERDS, HEIFERS and BULLS
PERFECT IN HEALTH, RIGHT IN TYPE, PRODUCTION AND BREEDING
MILLS BLDG., SAN FRANCISCO
Farms at
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350 HEALTHY HOLSTEINS

THE LEWIS COMPANY BAYWOOD HERD
Bulls from yearly record stock.
Health under State supervision.
Terms on purchases if desired.
Herd Sire: Ormsby Segis Marie Lad.
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THE LEWIS COMPANY, Owners
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YOUNG BULL by grandson of Tilly Alcartra, out of dam with good record. His half sister milking 68 lbs. per day as senior yearling. Also bull calves. H. M. Cross, Merced.

OAKDALE HOLSTEIN FARM, Pacheco, Contra Costa Co., J. M. Christen, Prop., Breeder of registered and high-grade Holstein cattle and purebred Hampshire swine.

REGISTERED HOLSTEIN-FRIESIANS — Both sexes choice stock; tuberculin tested. Sunnybrook Ranch, H. H. Sisson, Mgr., Willits, Cal.

THE VICTORY HERD—Registered Holstein cattle and Duroc Jersey swine. H. E. Spires, Hillcrest Farms, Caruthers, California.

PALO ALTO STOCK FARM, Palo Alto, breeders of registered Holsteins. Heifers and service bulls. Reasonable prices.

WANTED—30 head high-grade Holstein cows. Must stand tuberculin test. Burroughs Bros., Knightsen, Cal.

CREAMCUP HERD — Registered Holsteins. Pontiac bull calves. M. Holdridge, Rt. A, Box 437, San Jose.

REG. HOLSTEINS, both sexes. World's record backing. Kounias Reg. Stock Farms, Modesto, Cal.

REG. HOLSTEINS—A. W. Morris & Sons Corp., Importers and Breeders, Woodland, Cal.

F. H. STENZEL, SAN LORENZO—Breeder of Registered Holsteins. High test producers.

REGISTERED HOLSTEINS — Best blood lines of the breed. R. L. Holmes, Modesto, Cal.

CHOICE HOLSTEIN bulls for sale. No females. Millbrae Dairy, Millbrae, California.

GOTSHALL & MAGRUDER — Breeders of registered Holstein-Friesians. Ripon, Calif.

EL DORADO HERD OF HOLSTEINS — Alex. Whaley, Tulare, California.

Jerseys.

SERVICE JERSEY BULL, bull calves. Financial King blood, Chester White boars, prize winners. Best blood, type, production. N. H. Locke Co., Lockeford, Cal.

SUNSHINE FARM JERSEYS—No females for sale. Bulls from high-testing cows for sale. E. E. Greenough, Merced.

JACK LONDON RANCH, Glen Ellen—Two fine Jersey bulls, one ready for service.

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REGISTERED MILK AND BEEF SHORTHORNS, bulls and heifers for sale; catalogue free. Thomas Harrison, Santa Rosa Stock Farm, Santa Rosa, California.

INNISFAIL HERD MILKING SHORTHORNS—Young stock for sale; both sexes. Owned by Alexander & Kellogg. Leased by J. D. Rowe & Son, Davis, Cal.

BREEDERS OF REGISTERED SHORTHORNS—Milk strain; choice young stock for sale. John Lynch Ranch, Box 321, Petaluma.

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ELKHORN FARM AYRSHIRES — Choice young bulls at reasonable prices. J. H. Meyer, 440 Montgomery St., San Francisco, Calif.

STEYBRAE AYRSHIRES — Registered; all ages. E. B. McFarland, 414 Claus Spreckels Building, San Francisco, Calif.

NORABEL FARM AYRSHIRES—Le Baron Estate Co., Valley Ford, Cal.

Guernseys.

A FEW REGISTERED Guernsey cows for sale tested by the State Veterinarian and found free from tuberculosis. Address E. R. Frey, Byron, Cal.

BEEF CATTLE.

SHORTHORNS—The foremost beef breed—Have a limited number of stock for sale, both sexes. If you wish to start a small herd I can probably supply your needs. T. T. Miller, Hollister, Cal.

ALAMO HERD REGISTERED HEREFORDS (founded by Governor Sparks). Herd and range bulls. Reasonable prices. W. D. Duke, Gazelle, Siskiyou county, California.

RANCHO SAN JULIAN SHORTHORNS—Purebred range bulls, unregistered, for sale. Estate Thos. B. Dibblee, Santa Barbara, or Lompoc, Calif., John Troup, Supt.

REG. SHORTHORNS — Good dual-purpose animals raised without pampering. Young stock for sale. Prices reasonable. W. E. Rucker, Willitts, Cal.

HEREFORDS—Sierra Vista Herd, Minturn, California. Over 100 registered animals. Fairfax and Repeater bulls head the herd. On highway.

THE NEVADA HEREFORD RANCH—Jno. H. Cazier & Son Co., Prop., Wells, Nevada. Reg. Hereford cattle. Breeding stock for sale.

JACK LONDON RANCH, Glen Ellen—Shorthorn bull ready for service, and some good bull calves.

ABERDEEN-ANGUS cattle of quality and breeding. Lilac Ranch, Escondido, Cal.

SIMON NEWMAN CO., breeders of Registered Herefords, Newman, California.

HEREFORDS — Mission Hereford Farm, J. A. Bunting, Prop., Mission San Jose, Cal.

REGISTERED HEREFORDS—H. H. Gable, Diamond G Ranch, Esparto, California.

GEORGE CALLAHAN—Breeders of registered Herefords. Milton, California.

GEORGE WATTERSON — Breeder Registered Herefords. Bishop, California.

REGISTERED SHORTHORNS — Fair Oaks Ranch, Willits, Calif.

SHORTHORNS — Carruthers Farms. Live Oak, California.

SHEEP AND GOATS.

FOR SALE—Rambouillet rams and ewes—purebred; the very highest grade of large smooth body; heavy shearers; the wool and mutton type. Immediate delivery of individual or carload lots. You can find none better or of higher grade. Address Glenn, Cal. Location, 8 miles south Hamilton City, 1 mile west Ordbend. Windell Orchards Co.

FOR AUGUST 15TH DELIVERY I offer 100 Rambouillet Ram Lambs and a few yearlings, all from registered rams of most noted breeders of America and from big-boned, smooth, heavy-shearing, purebred ewes. Special rates on the lot; also a 3-year-old registered Butterfield ram for sale. W. H. Guscetti, Loyalton, Cal.

F. A. MECHAM ESTATE, Petaluma, Cal.—Breeders and importers of Shropshire, Rambouillets and American Merinos, both sexes. Also Red Polled cattle. Take electric car at Petaluma or Santa Rosa for Live Oak Ranch.

WRITE ME for early Rambouillet ram lambs, ready for light use, by September 1. Also a few yearlings. Carl Lindheimer, Woodland, Cal.

HARRY L. HUSTON, Winters, Calif.—breeder and importer of Shropshire sheep. Stud and range rams. Prices on application.

J. R. BLOOM, Dixon, Calif.—Twenty-five years breeder of purebred Shropshire sheep. Rams for sale. Single or carload lots.

FOR SALE—Yearling Southdowns. Twenty-five rams, thirty-eight ewes. Mary S. Crane, Route 3, Box 353, Santa Rosa, Cal.

FOR SALE—Purebred Shropshire buck lambs and long yearlings. Address C. D. Dean, R. F. D., No. 1, Yuba City.

DORSETS AND ROMNEYS — Dorset ram lambs for sale. John E. Marble, South Pasadena, California.

HARVEY S. VAN VLEAR, Lodi, Cal.—Breeder and importer of Registered Hampshire sheep.

CALLA GROVE FARM, MANTECA, CAL.—Breeders and importers of Hampshire sheep.

KAUPKE BROS., WOODLAND, CALIF.—Breeders and importers of Hampshire sheep.

FOR SALE—600 two-year-old Merino ewes. Swall & Wilson, Box 742, Bishop, Cal.

CHAS. KIMBLE—Breeder and importer of Rambouillets. Hanford, California.

BULLARD BROS., Woodland, Calif.—Breeders and importers of Rambouillet sheep.

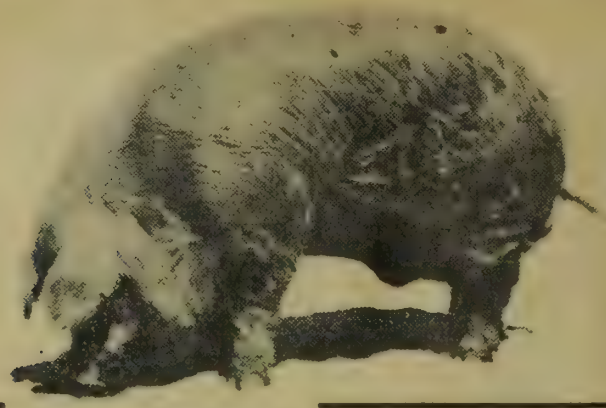
DR. A. S. ALMEIDA, Dixon, Cal. Reg. Shropshire sheep.

MISCELLANEOUS.

BUTTE CITY RANCH
SHORTHORN CATTLE, SHROPSHIRE Sheep, Berkshire Hogs, Shetland Ponies, Bronze Turkeys, White Plymouth Rocks. Stock for sale at all times. Next sale all breeds, Wednesday, August 11, 1920, at ranch. W. P. Dwyer and W. S. Guilford, Box P, Butte City, Glenn county, California.

SIX BORDER SCOTCH SHEEP DOG Puppies, imported from New Zealand. Highly bred stock. Dogs, $30. Females, $25. Ben Shaw, Hollister, Calif.

CHOICE STOCK EWES AND BUCKS. Also herding Collie dogs. John G. Mee, St. Helena, Calif.



Conejo Ranch Auction Sale

THURSDAY, JULY 29—DUROC-JERSEYS
FRIDAY, JULY 30—HAMPSHIRES

If you are looking for the big, growthy type of hogs, of either breed, which are now preferred by all the breeders, make arrangements to attend this sale. Lunch will be served at the ranch.

Autoists' Information

The ranch is located 40 miles northwest of Los Angeles on the Ventura State Highway near Newbury Park. On the Coast line, go over the Conejo grade and follow road signs. On the Inland route, go to San Fernando, cross over to the Ventura State Highway, and then go towards Camarillo to the ranch.

If you come by train, notify our Los Angeles office regarding transportation.

Write at Once for an Illustrated Catalog

CONEJO RANCH
NEWBURY PARK, VENTURA COUNTY
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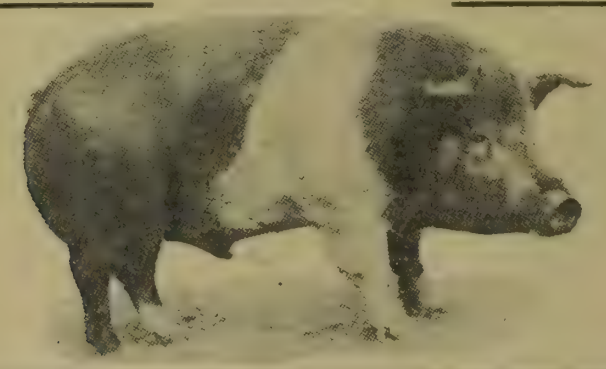

Duroc-Jersey Hogs for Sale

BOARS AND GILTS
BRED SOWS
SOWS WITH LITTERS

DIABLO STOCK FARM,
E. F. PETERSEN, Supt., Danville, Cal.
G. W. EMMONS, Owner, Oakland.

They are the large type and the best blood strains to be had anywhere.

HERD BOARS AND SOME OF THE SOWS

Lucy Orion's Model
California's Defender
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Prize of Tulare Belle
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and 50 others

WEANLINGS, $15.00 EACH AT RANCH.—A large number always on hand to choose from. Crates, $2.50 each, refunded when returned prepaid in good condition.
MAIL ORDERS SOLICITED. SATISFACTION OR MONEY BACK.

THE MOST PROFITABLE BROOD ANIMAL
ON THE FARM

THE OLD RED SOW

She Is No Slacker, but Does Her Bit and Guarantees Returns on the Investment.

SHE IS ALL THIS BECAUSE

The Duroc sow reproduces more rapidly.
The Duroc sow is a good mother.
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The Duroc sow is a prepotent breeder.
The Duroc sow is an easy feeder.
The Duroc sow is the most popular.

SHE FEEDS THE WORLD, PAYS DEBTS AND MAKES PROSPERITY.

For information relative to DUROC-JERSEY HOGS, write to
S. E. WHITING, Secretary-Treasurer
California Duroc-Jersey Breeders' Ass'n
R. R. 4, Box 810, SACRAMENTO, CALIF.

HAVE YOU SEEN
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HERD ESTE
CHOI d for Sensibl II
Mahaska Wonder } Great Wonder, Grand Lady 20th
Grand Lady 72nd } Grand Model, Rose
Littermate (gi Last Sale at $5600
WESTERN te for yours from the most select herd in California.
V. F. DOLCI Dept. 704 ES STOCK FARM, DAVIS, CALIF.

Which, If Either, Is the Greater

(Written for Pacific Rural Press.)

We don't know as it is exactly fair to make the comparison and, to make a little play upon words, we don't know whether it is possible to make a fair comparison, but here goes.

Some time last April the Federal government, or that part of it known as the Department of Agriculture, published a story about the discovery of Rowan county, North Carolina, through the importation by the inhabitants of purebred Guernsey cattle.

Eastern Enterprise.

Through the combined efforts of field men of the U. S. Dept. of Agriculture and the State of North Carolina in 1918, interest was aroused in purebred dairy stock and in Rowan county a bull association was formed for the purpose of owning purebred Guernsey sires in common. This bull association was the "big noise" that brought the aforesaid county into the spotlight. At first the number of purebreds was limited to 15, but in 2 years the number had jumped to over 200 and they are still acquiring them.

More than simply buying purebreds, the better methods came along with them. A fight against "T. B." was started and is being steadily pushed with the idea of cleaning up the county. This will not be a difficult task, as only a fraction of one per cent reacted out of 1,600 animals tested. It is not really a cleaning up; it is simply keeping clean.

The people who brought in this purebred livestock believed in showing it, as practically half the number brought in were exhibited at the fair last fall. This, with their bull association, gave them publicity enough so that shortly enquiries for cattle commenced to come in.

A man from New York knew one of the association bulls was a very wellbred fellow and sired by a $20,000 bull. He visited the county and offered $15,000 for their bull. The association would have sold their prize, but the "County Agent" was opposed and finally the visitor had to be satisfied with the visitor had to be satisfied with leasing Antoinette Itchen Rose King for a period of two years.

The farmers and dairymen of Rowan county are certainly to be congratulated on their acquisitions in the purebred livestock lines. "Like begets like," and if the dairymen have seen the light, breeders of other classes of livestock will follow suit.

Western Energy.

Situated across the continent where the blue waters of the smiling Pacific lave the shores of the continent in a very favorable location from the standpoint of a dairyman, we find Humboldt county, California. Some 10 years ago the dairymen in that region became infected with the germ of improvement. In fact, many of them were Danes, and this germ had simply been quiescent, for a wonder. When it did get started, though, it "took" with violence and has been working ever since. The germs of improvement are different from some others as they continue working forever and are classified as benign rather than pathogenic. Be that as it may, our dairy editor in a recent trip to Humboldt county has the following to say about what some of the dairymen have accomplished along the same lines on which those of Rowan county have started, except they have worked individually rather than collectively.

"Among the many dairy herds visited here are two (there are many more) examples of the value of the purebred sire and the cow-testing association.

"About nine years ago the Rasmussens of Loleta purchased a purebred Guernsey sire and joining a cow-testing association, began breeding up and weeding out. That first year their cows averaged 235 lbs. of fat, which was pretty good and would have satisfied some dairymen. They, however, were not satisfied. They kept up the testing and have used the best bulls they could buy. C. S. Rasmussen now has a splendid herd of Guernseys, several of them purebred, and last year the same number of cows they had nine years ago averaged 367 lbs. of fat—same number of cows to feed, same feed and same care, with 137 lbs. more fat per cow, due to breeding and testing.

"In 1904 Jess Petersen's herd at Loleta averaged 255 lbs. of fat for the year, which wasn't so very bad at that. He bought a purebred Holstein bull and began testing and weeding out. He has kept it up ever since. Now he has a fine herd 15/16 pure, and last year they averaged 401 lbs. of fat—same number of cows to feed, same feed and same care, but 146 lbs. more fat per cow. The moral of this is plain enough so that he who runs (to scrubs) may read and should."

It is plain that the same leaven is working in the two localities, although the width of a continent is between. Both have procured the very best money could buy, and it is safe to say will reap results equivalent to their effort and expenditure.

The type of sires Humboldt county dairymen have been and are still using to improve their herds and increase their net income. The cut shows C. S. Rasmussen's Guernsey bull, Proud King of Edgemoor. The sire of this animal sold for $36,000 at a consignment sale and his dam has a record of 719.86 lbs. fat from 14,020 lbs. milk in a year.

CALIFORNIA COLT WINS BIG STAKE.

Inch Cape, a two-year-old, bred and owned by J. H. Rosseter of Wikiup Ranch at Santa Rosa, won the Tremont Stake in the East last week, enriching his owner by $5,400. It was Inch Cape's race from the start and he won handily under a pull, in 1:12 for the furlongs. Mr. Rosseter received an offer of $100,000 for the colt by wire immediately after the race, but has refused it.

This colt was sired by the noted stallion, Friar Rock, out of Rose of Gold, and is considered one of the most promising colts in America today.

Livestock Queries and Replies

Distemper and Mange.—An Airedale pup shivered, had sore eyes, abscess in ear and scratched and gnawed herself a great deal. Had some little scabby spots and numerous pimples on the skin. At first had no appetite and was lacking in puppy characteristics of mischief and play. The appetite has improved and is in good spirits now. Can the mange be cured? —W. O. S.

Give the pup Hamburg steak, milk, soup, eggs, etc., to give her strength. The distemper has about spent its force. Give the following medicine: Quinine, 1 drachm; antipyrin, ½ drachm; ammoniated citrate of iron, 2 drachms; pulverized gentian root, 2 drachms; guiacol carbonate, ½ drachm. Mix and make into 24 powders. Give one every 8 hours. Bathe the eyes with a saturated solution of boracic acid several times daily after which drop into the eyes 10 percent solution of argyrol.

For the mange use the following: Cottonseed oil, 1 quart; formalin, 2 drachms; balasam Peru, 1 ounce. Mix and apply to affected parts every second day. The mange will not be permanently cured until everything with which the pup has come in contact has been thoroughly disinfected or burned.—Dr. E. J. Creely, San Francisco.

Keratoma—Horn Tumors.—A horse ten years old, is in good condition. Has not been shod in four years. Three months ago, while working, he appeared lame, and gradually became worse, until by the end of the third day he could hardly walk. Tried to walk on toes. Lies down much of the time. Has not been worked for 3 weeks, but has not improved—H. S. N., San Fernando.

Horse is not malingering. He has keratoma or horn tumors. A good horse-shoer can relieve the lameness by properly paring the hoofs and removing the bearing on the sore spots by an exceedingly wide-webbed, well-concaved shoe. Use plenty of pine tar, oakum and leather. Pay especial attention to the cracks in the hoof. Stand the horse in mud for several days before taking to the shoer. Dress the hoof constantly with crude oil. Give a heaping tablespoonful of saltpitre once daily. Report progress in 3 weeks.—Dr. E. J. Creely.

Development of the Modern Hog

Most hog breeders are of the opinion that the medium-type, quick-maturing hog, easily weighing 200 pounds at 6 months of age, is a thing of the past. The fashion has set towards the high-backed, long-bodied animals with deep sides and big bone, the bigger the better. The claim is made that lard is not wanted, that lean bacon and ham bring the highest prices and therefore the old-time lard type is a back number. The chief reason back of it all, perhaps, is one that is of the utmost importance and that is prolificacy. The lard type of ten years ago were not as prolific breeders as the big-type fellows of today.

The Poland-China and Duroc-Jersey breeds have, in the past ten years, been developed from a type growing to two hundred pounds very economically, but as breeders they lacked, and those who were raising them saw that something had to be done, consequently the type has been gradually changed and in these two breeds we have now what is known as the "Big Type" with all the desirable qualifications of prolificacy, lean meat percentage, etc.

The Berkshire, according to one authority has always had these much-to-be-desired qualities and he says: "The ideal hog is the 200 pounder that cuts with little waste and has the greatest amount of edible meat and the Berkshire meets these conditions to a greater extent than any other breed of hogs. At a recent experiment at one of the Western Agricultural Colleges five Berkshires killed dress out at the average of 86.71 warm dress and 85 cold. In a feeding experiment covering a period of four years the Berkshires led all breeds in the number of pounds of feed consumed to make 100 pounds of pork."

The Hampshire breeder, too, would claim all that has been said for the above breeds and from all accounts they are not to be denied a place in the lime light and a chance to be heard. Men who have had years of experience in growing pork are admirers of and boosters for the "belted beauties."

Now it would seem from the above that the lean meat is what is wanted. This is true especially of all the carcass that is sold for fresh meat. No doubt a certain tendency can be developed for converting protein feeds into lean meat, but the fact remains that as much as thirty years ago Prof. W. A. Henry demonstrated the possibility of producing a hog carcass showing a large percentage of lean meat by feeding a narrow ration.

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ROSE PERENNIAL.

The worn gray slab yet lies before
What once was a thrifty farmer's door;
Now roofless cellar and scattered stones
Show skeleton hopes with time-picked bones.
Here backed against a crumbling wall
Still blooms at bay, unpruned and tall,
A soil-disdaining moss-rose bush.
The delicate buds in faintest flush;
Clutched by the brambles and woodbine,
Whose envious fingers tear and twine.

There was the huge barn; here the yard,
Where the grim farmer labored hard
From dawn to dark, and never knew
A dream beyond the crops he grew,
The stock he raised; the silver store
Under the loose board in the floor.

To and fro, to and fro,
The feet of his little wife would go,
All day long and half the night,
Up a flight and down a flight;
Pantry to kitchen, pen to barn,
Cellar to garret with loom of yarn;
In to the babies, out to the men,
Down to the pasture and back again.
Farms were never planned, you find,
To save the steps of womenkind.

One can trudge and drudge through a long life's course,
If she discover a hidden source
To seek when the spirit is faint and dry.
Here was her rose-bush growing high,
That he never knew—for he never cared—
This was her joy no mortal shared.
Her hands were never too stiff or tired
To foster beauty the soul desired.
Never too worn the busy feet,
Never too dull the old heart's beat,
For a furtive trip to the little shrine
That made the moment a pause divine.

Here by the bush one glimpsed the hills,
Where forests crooned and ran free rills;
One breathed deep drafts from a windswept sky,
Sunset, moonglow, mystery.

This was her rose-bush by the wall.
Gone is the farmer, farm and all,
The herd, the crops, the silver store.
The children grown return no more
To the hearth deserted, the loveless place,
Haunted by one enduring grace—
A dream of beauty torn with brier,
Clutched in vain as it clambers higher.

—Abbie Farwell Brown.

TREED BY A FISH.

A Good Yarn for the Camp Fire.

There are plenty of men who have been treed by wolves, grizzly bears, mad bulls and other dangerous beasts, but I never heard of anybody except myself being treed by a fish.

It happened in this way: I was summering in the northern part of Maine, visiting my cousin, who had cleared off a small farm of about thirty acres in the wilderness, built a comfortable frame house, and moved his family there.

About two miles away was a chain of lakes or ponds, all connected and flowing into a small river, along whose banks considerable lumbering was done. My cousin owned a leaky, flat-bottomed boat on the nearest of the lakes, and I soon began to employ this craft in my fishing excursions, of which, being a devotee of rod and line, I took many. But I never ventured any great distance from shore in the "punt," as she was called, because of her very uncertain character.

Just before I came to visit my cousin a dam had been built on the river, for the purpose of obtaining a head of water to carry a big raft of logs safely down stream. This dam caused a "setback" on the lakes, so that their shores were overflowed for some distance into the woods, and the trees stood out of the water like cloves in a pudding. It seemed strange to have to paddle a quarter of a mile or more through the woods, as I did, before reaching the open lake. But on warm days I rather enjoyed it, and there was a certain romance in the experience, too.

One day I was casting for trout from the leaky old boat, about thirty yards from the edge of the overflowed woodland. Every few minutes I was obliged to pause in my sport and bail out the punt with a large short-handled dipper, which was kept in her for that purpose. The water came in so fast that if I had not done this she would soon have gone to the bottom.

I had secured about a dozen handsome trout, and was about to reel in and paddle back to the shore when there came a tremendous strike at my flies. The reel fairly screamed as the line ran rapidly out, and the rod bent almost double. Recognizing that I had hooked a finny monster of some kind, I braced myself for the contest of skill and muscle which must inevitably follow. For five minutes I fought my wily antagonist with such entire absorption of mind that I never once thought about the leaky boat and the water that was pouring in at a dozen different cracks in steady streams. Not until I felt the chill sensation rising above my ankles did it occur to me to look down. Then I was startled to see the water nearly half-way to the gunwales of the shallow boat. Already she was beginning to settle and lurch, and I knew that if I did not bail her out at once she would go to the bottom in a few minutes.

But how I hated to lose that magnificent fish tugging at my line! I knew that if I dropped my tackle for even a minute the fish would carry it away, rod and all; and badly as I disliked to part with my unseen captive, I felt still less inclined to lose my precious split-bamboo rod. In the confusion of the moment I tried to do two things at once—bail with one hand and play the monster with the other. It was a foolish attempt. I fell over the thwart, trying to grasp my floating dipper, and by the time I got on my hands and knees again I saw it drifting away on the surface of the lake, the lurch of the boat from my fall having carried it overboard with a surge of escaping water.

Before I could fairly make up my mind what to do under the circumstances, it was too late to do anything. The old punt went down under me. As I felt it going I leaped out shoreward, rod in hand, and tried to swim.

It was then that the big fish at the other end of the line took matters into its own hands—or fins, rather. It darted away from the boat, diagonally, fairly dragging me with it. Seeing that the course which it was taking would gradually bring me nearer the half-submerged trees, I made no resistance but simply kept afloat and suffered myself to be towed along like a log. Finally I came near enough to grasp the branch of a tree, and by a strong effort succeeded in dragging myself to the trunk and mounting into a crotch. I was both exhausted and chilled, and for some moments was in no condition to pay any attention to my captive. But fortunately the fish, as well as I, was somewhat exhausted with its struggles and kept comparatively quiet for some time. At length, however, it began to make the reel sing, and I was glad enough to warm myself a bit by standing up in the crotch of the tree and "playing" it as well as I could. I was determined not to let it go, now that, to speak exactly, it had brought me so far; and I used the utmost caution to prevent the lines becoming entangled among the trunks or branches of other trees. This was no easy task, as the trees stood all around me within a few yards, and the fish plunged and dove with a gameness that was surprising, considering the time it had been on the hook. At last, however, I had the big fellow under comparative subjection, though I could not get him to come to the surface. He hung back sulkily, occasionally move a short distance to and fro over the bottom.

There I sat, 20 feet up a submerged tree, with a fish patrolling the water beneath me, and no chance to get ashore, unless someone should discover me and help me out of my plight. I did not dare to try swimming to shore, because, aside from the fact that I was a poor swimmer, I knew that there were patches of thick-growing vines and underbrush scattered through the woods, which, if I

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should run into them, would entangle and drown me.

The sun began to go down upon my perplexity, and the shadows of evening lengthened across the lake. I was about to raise my voice in a helpless shout, when a sound came to my ear that made me pause. It was the far-off cadence of a well-known voyageur's boat-song. Louder and clearer it sounded as I listened. The boatman, whoever he was, could not be more than a mile away, and was evidently approaching at a good rate of speed. Presently I could hear the hollow top of his paddles as it struck the gunwale of his canoe at the completion of each stroke. What a blessed sound it was! What a relief to know that somebody in a craft that would float was near at hand and would soon rescue me!

Suddenly the boatman came into view. He was evidently a Canadian backwoodsman, a log-driver and hunter combined; a common type in the Maine woods, and a very picturesque and interesting type, too.

When the voyageur had come nearly opposite me, I lifted my voice and cried:

"Hello!"

The unexpected sound so startled the Canadian that he nearly dropped his paddle, and it was only after some moments of wild gazing around that he finally located me in the tree.

"Hello—you!" he explained. "What you do dere—feesh?"

"No," I replied, laughing. "A fish has treed me."

"Hein!"

"A fish has treed me, I say. Come here, and I will show you."

The Canadian paddled incredulously nearer. Just then the big fish, frightened by the shadow of the canoe, made a break for the surface, and for the first time threw itself clean out of the water—a magnificent trout, fully eight pounds in weight.

"Parblieu! Mon Dieu! exclaimed the Frenchman.

"Help me land him and set me ashore, and I will pay you well," I exclaimed, struggling with the now desperate fish.

In a moment more the light canoe was pressed against the trunk of the tree, and I stepped carefully upon the blankets spread out in the bow and sank upon my knees. Then, with the help of the skilled Canadian, who reached out and caught the exhausted fish by the gills, as I coaxed it alongside the canoe, the prize was captured, and we set out for the landing at the foot of the lake.

When we parted I gave the Frenchman $2. He picked up and shouldered his canoe and started down the carry; but before disappearing in the woods, he turned and shouted back:

"Say, m'sieu! Sen' for me when big feesh chase um up tree agin, hein?"

APRICOT RECIPES.

Apricot Souffle.—One cup apricots pressed through a colander; add ½ cup sugar, the juice and grated rind of 1 lemon. Mix well. Beat the whites of 3 eggs very light and carefully fold in the apricot mixture. Pour into a buttered baking dish, set in a pan of hot water and bake until firm in a moderate oven. Serve hot with custard sauce or cream.

Apricot Sherbet.—Two cups cooked apricots and juice; 2 cups of boiling water; cup sugar; 1 lemon (juice and grated rind). Press apricots through a colander. Boil sugar and water together 5 minutes. Cool, add lemon and apricot pulp and freeze. Pack and allow to stand 2 hours.

Jellied Apricots.—Two cups cooked apricots, unsweetened; ½ cup sugar; juice 1 lemon; 1½ tablespoons gelatine dissolved in ¼ cup cold water. Heat apricots to boiling point, add sugar and cook until sugar is dissolved; remove from fire and add gelatine; cool, add lemon. Turn into mold and chill until set. Serve with whipped cream.

PRUNE BREAD.

Take 1 cup scalded milk, 1 tablespoon melted shortening, 2 tablespoons sugar, 1 teaspoon salt, ½ cake yeast dissolved in ¼ cup warm water, between 3 and 3½ cups flour and 1 cup prunes cooked until tender enough to pit; drain and cut in quarters.

Put shortening, sugar and salt in hot milk; let stand until lukewarm; add dissolved yeast and flour gradually, beating until too stiff to stir. Knead in remaining flour, place in greased bowl, brush dough over with melted shortening, cover and allow to rise until twice its original size. Turn on molding board, knead dough slightly and flatten into a square with the fists; cover dough with prunes, roll up like a jelly roll and pinch edges together.

Place loaf in a greased pan, having it about half full. Brush over the top with melted shortening, let rise again, and bake in a hot oven about 45 minutes for a medium-sized loaf.

CHOCOLATE CAKE.

Take ½ cup butter or butter substitute, 2 cups brown sugar, ½ cup sour milk, 1 teaspoon soda (in sour milk), ½ cup ground chocolate, ½ cup boiling water on chocolate, 2 eggs, the yelks and whites beaten separately, 1 level teaspoon baking powder, 2 cups flour. Cream the butter and sugar together, add all the liquid ingredients and the beaten yelks, then the flour, and last of all the baking-powder and beaten whites of eggs.

Bake in greased pans and frost when cold. For frosting, use 2 cups powdered sugar, 2 tablespoons butter, 6 teaspoons ground chocolate, 5 tablespoons hot coffee. Stir until smooth and apply.

If you possess a cosy corner with a shelf at the top have a zinc trough made to fit it, and fill this with some hardy foliage and flower plants.

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THE MARKET REPORTS

Compiled from Independent Sources.

SAN FRANCISCO

San Francisco, July 14, 1920.

WHEAT.

There is little change in the wheat situation. Some buying is reported in the country, but not enough to establish quotations here.

BARLEY.

Barley developed further weakness this week. On light demand the price dropped down 25 cents.

Feed .....$2.90@3.00
Shipping ..... Nominal

OATS.

Oats took a drop also, the new quotation on red feed being about 30 cents off.

Red Feed, ctl. .....$3.10@3.20
Red for seed .....Nominal
Black for seed ..... Nominal
Recleaned Red or Black for seed....Nominal

CORN.

Corn continues dull and unchanged. There is practically no movement except for chicken feed, and this does not amount to any great volume.

Egyptian, white .....$4.75@4.90
do, brown .....$3.65@3.80
California .....$3.80@3.90

HAY.

Receipts of hay for the past week were 1988 tons, compared with 2349 tons the previous week. Light receipts are accounted for by delay in getting to market caused by wire shortage and scarcity of labor and baling outfits. Lack of life characterizes the local market, no purchasing in any amount being done as consumers still decline to purchase in advance at prices asked. Country trading is equally dull. The first necessity demand has apparently been filled and buyers are now waiting for lower figures. Export business is affected by the general situation here, with a tendency on the part of buyers to hold off for lower prices before placing orders in quantity. Alfalfa is relatively stronger than any other hay, but reports of sales at lower figures have come from several sections.

Old Hay .....Nominal
Wheat Hay, new .....$26.00@28.00
Tame Oat Hay, new .....$26.00@28.00
Wild Oat Hay, new .....$20.00@22.00
Barley Hay, new .....$20.00@23.00
Alfalfa, new .....$20.00@25.00
do, 2nd cutting .....$24.00@28.00
Stock Hay .....Nominal
Barley Straw, bale .....Nominal

FEEDSTUFFS.

Rolled barley and oats are lower in sympathy with the lower prices on the whole grain. The new quotation on the former shows a decline of $5 and on the latter a falling off of $6. There is no change in alfalfa products and lower prices cannot be expected so long as the alfalfa market continues strong.

Rolled Barley .....$64.00@65.00
Rolled Oats .....$67.00@68.00
Alfalfa Products .....$45.00@50.00
Cracked Corn .....$85.00@86.00

POTATOES, ONIONS, ETC.

(Wholesale prices paid by commission houses.)

Potatoes seemed to be on the downward trend last week, but a stronger feeling is now developing. Higher prices are asked in the producing sections, which will probably be reflected by higher quotations here very shortly. The onion market is easier with receipts heavy. Recovery in demand after the post-holiday slump has brought prices up on certain vegetables, peas and beans being much higher than last week. Southern tomatoes have been replaced by shipments from Merced.

Peas, Bay, lb. .....6@7c
Beans, wax, lb. .....7@8c
do, green, lb. .....5@12c
Carrots, per sack .....$1.25@1.50
Lettuce, crate .....$1.50@1.75
Cucumbers, Alameda, lug box $1.75
Tomatoes, Merced, ...$1.00@1.25
Rhubarb, Strawberry, box 40 lbs. $1.50@2.00
Summer Squash, box, 35-40 lbs. 70c@$1.00
Egg Plant, lb. .....10@12½c
Potatoes, New Garnets, cwt. ....$4.00@5.50
do, New River, cwt. .....$4.00@5.50
Onions, Bermuda, wax, 50 lbs. ....40@50c
do, Red, sack .....75c@$1.00
Green Onions, box, 25 lbs. ....$1.25@1.50
Garlic, lb. .....9@11c

BEANS.

(Wholesale prices. Buying prices made on sample.)

The bean market as a whole is very quiet. The only show of strength is on pinks, which are up 10 cents in this week's quotations. Blackeyes are down another 25 cents, and San Francisco prices on limas are off 10 or 15 cents. Other quotations are unchanged.

Bayos .....$11.75@12.50
Blackeyes .....$ 8.25@ 8.75
Cranberry .....$ 6.75@ 7.00
Pinks .....$6.40@ 6.60
Red Mexican .....$ 9.00@ 9.25
Garbanzoes .....$ 9.00@ 9.50
Large Whites .....$ 6.00@ 6.25
Small Whites .....$ 5.90@ 6.15
Limas, Ass'n prices, South $11.42
do, Baby, Ass'n prices, South $11.42
Limas, S. F. prices .....$11.40@11.60
do, Baby, S. F. prices ....$11.40@11.60

POULTRY.

(Wholesale prices made by commission houses.)

Broilers are becoming scarce and the market is firm. Prices are up 2 to 3 cents this week with indications of further advance rather than decline in quotation. Hens and roosters are also a little above last week's level.

Broilers .....32@35c
Hens, mixed color .....32@36c
do, Leghorns .....20@27c
Roosters, young .....42@45c
do, old .....17@20c
Friers, ...30@35c
Squabs .....55@60c
Geese .....28@30c
Ducks .....25@28c
do, old 18c
Belgian Hare, live .....13@16c
do, dressed .....17@20c
Jack Rabbits .....$1.50@3.50

BUTTER.

(Exchange quotations less commission.)

The local market was featured by heavy receipts during the week and only moderate demand, which has caused lower prices to rule. Arrivals contained a large proportion of medium and undergrades, which could not be moved easily, and, as a consequence, had a tendency to weaken the better grades. Towards the end of the calendar week some butter was moved into storage rather than to sell at available prices. Storage holdings increased 32,906 pounds compared with 3,977 pounds for the previous week. Monday opened with prices a half-cent higher than Saturday's closing, but the market was not very healthy on Tuesday and on Wednesday prices dropped from a half to a cent lower.

	Thu.	Fri.	Sat.	Mon.	Tu.	Wed.
Extra	57	57½	56½	57	57	56
Prime 1sts	55½	56	55	55	55	54½

(Exchange quotations less commission.)

Extra eggs showed strength throughout the week, closing 4½ cents above the close of last week. The other descriptions also closed considerably above last week's quotations. Receipts are showing a decline, a very limited quantity going into storage. Balance of eggs in storage at the end of the calendar week was 141,906 cases, or less than the previous week.

	Thu.	Fri.	Sat.	Mon.	Tu.	Wed.
Extra	47½	51	51	51	51	52½
Firsts	43½	45	45½	45½	46½	48
Dirties	46	48	48½	48	48	46
Ex. pullets	43½	43	43	43	43	43
Undersized	32	32½	32	32	32½	32

CHEESE.

(Exchange quotations less commission.)

There was some trading in California flats during the week, and good inquiry for Oregon cheese for storage purposes, but no great activity in the market as a whole. California flats firsts are quoted again; Y. A. firsts are a cent lower; otherwise prices showed no changes.

California Flats, fancy 30c
do, Flats, 1sts 26c
Y. A., Fancy 31½c
Y. A. Firsts 24c
Oregon Triplets 24c
do, Y. A. 31c

FRESH FRUITS.

(Wholesale prices made by commission houses.)

New crop apples are coming in fair supply. They are quoted at $2.50 to $3.00 per box. With the exception of figs, other prices remain about the same. These are getting very scarce and the prices are much higher, nearly double last week's quotations, although some figs in crates intended for shipment East from the interior were too ripe and sent here. Cherries last received from Oregon were partly in poor condition, and California cherries are scarcer. Gooseberries are about gone.

Plums .....$1.25@2.00
Currants, drawer .....50@55c
Cherries, loose, lb. .....5@12½c
do, box $1.25
Apricots, lb. .....5@7c
do, box .....$1.25@1.50
Peaches, 4 baskets .....$1.25@1.50
Pears $2.00
Figs, box, 1 layer .....$1.50@1.75
Strawberries, 6 12-oz. boxes .....75@90c
do, 6 8-oz. boxes, drawer .....50@70c
Blackberries, drawer, 12-oz. boxes ...40@45c
Raspberries, drawer .....60@75c
Loganberries, drawer, 12-oz. boxes ..40@45c
do, 8-oz. boxes .....35@40c
Gooseberries, lb. .....5@7c
Cantaloupes, Standard .....$2.25@2.50
do, Ponies .....$2.00@2.25
do, Flats .....$1.00@1.25
do, Honeydew, crate .....$2.00@2.50
Watermelon, lb. .....2@4c

DRIED FRUITS.

(Wholesale prices made by commission houses.)

The Packing Corporation and others have named prices on 'cots ranging from 20 to 28 cents, according to grade. It is expected that the Prune and Apricot Association will announce opening prices on 'cots this week. Just when the Prune Growers' Association will announce its prices is still uncertain, but probably not before the middle of August.

Raisins, 1920 .....18½@20c..
Prunes—40-50s, 1920 crop basis 17c
do, 50-60s 15c
do, 60-70s 13½c
do, 70-80s 12c
do, 80-90s 11c

HONEY.

Little honey is reaching this market, and the demand is not very urgent. Prices remain unchanged.

WOOL.

The wool market is still in a somnolent condition, though a few large sales here and there, at quotations 35 to 40 per cent below those of a few months back, would indicate a tendency to a re-awakening. Cancellations of mill orders are still being received. Any quotations are merely nominal.

HIDES.

Hides are still in the doldrums, and prices vary almost from day to day.

Wet Salted Steer Hides.

No. 1 heavy hides, 55 lbs. up, 14c; do, medium, 45 to 55 lbs., 15c; do., light, 30 to 45 lbs., 15c; do, native bulls, 12c; do, center branded hides, in all grades, 2c less than base price, and No. 2 center branded, 3 class.

No. 1 wet salt kip, 15 to 30 lbs. 16c; No. 2, do, 14c; No. 1 wet salt calf, trimmed, 24c; do, untrimmed, 19c.

Wet Salted Horse Hides.

No. 1 large, skinned to hoof, $4@6; do, medium, $2@3; do, small, $1@2.50; do, colt, 50c@$1.

Special Livestock Market Report

San Francisco, July 14, 1920.

CATTLE—The reluctance of the consuming public to pay the prevailing scale of beef prices, together with a rather free run of cattle in the local market, have conspired to depress quotations an average of about ½c. The medium grades seem to hold up best in the downward trend. The market remains weak at this writing. In the large Eastern markets conditions have latterly been very discouraging.

Steers, No. 1, 1000-1200 lbs..... 9½@10c
do, 1200-1400 ..... 9 @ 9½c
do, 2nd quality ..... 7 @ 8c
do, thin ..... 6 @ 7c
Cows and Heifers, No. 1 ..... 8 @ 8½c
do, 2nd quality ..... 6 @ 7c
do, thin ..... 2 @ 4c
Bulls and Stags, good ..... 4 @ 5c
do, fair ..... 3 @ 3½c
Calves, lightweight .....10½@11c
do, medium ..... 9 @10c
do, heavy ..... 8 @ 8½c

SHEEP—Live muttons also suffered a decline this week, though lambs, both milk and yearling, held their own, owing to steady local demand. In the East the decline in mutton values has been decidedly marked, so much so as to affect unfavorably the demand for both breeding and feeding stock. The heavy importations of New Zealand frozen lamb doubtless have something to do with this situation.

Lambs, milk .....11@11½c
do, yearling ..... 8@ 8½c
Sheep, wethers ..... 7 @ 8c
do, ewes ..... 5½@ 6c

HOGS—A scarcity of supplies in the live hog market has stimulated an advance of ½c all along the line. Stock 250 lbs. and under seems most in favor, though there is a disposition to force the heavier weights on the market.

Hard, fat, grain-fed, 100-150 lbs.....15½c
do, 150-225 lbs. 16c
do, 225-300 lbs. 15½c
do, 300-400 lbs. 14½c

DRESSED MEAT QUOTATIONS.

Steers, No. 1 .....17@17½c
do, 2nd quality .....15@17c
Cows and Heifers .....14@15c
Calves, as to size, etc .....14@22c
Lambs, suckling .....24@26c
Sheep, wethers .....17@19c
do, ewes .....14@15c

Los Angeles, July 13, 1920.

CATTLE—There is little difference if any in this market from last week. Offerings continue good of both steers and cows with fair demand reported. If anything, the tone of this market is just a little weak, but prices show no change from those of a week ago.

Per cwt. f. o. b. Los Angeles:

Beef steers, 1000@1100 lbs. ....$8.50@10.50
Prime cows and heifers .....$8.00@ 8.50
Good cows and heifers .....$7.00@ 7.50
Canners .....$4.50@ 5.00

HOGS—Receipts in this market continue to be light. There is a good demand and prices remain firm and unchanged from last week. Recent offerings are of good quality, it is said.

Heavy, averag'g 275@350 lbs. $12.00@12.50
do, 225@275 lbs. .....$14.00@14.50
Light .....$15.50@16.50

Rough docked 20 lbs. piggy sows 40 lbs. and stags, 40 per cent.

SHEEP—Lambs are in very good demand today and they have been wanted all during the week. Ewes are also in fair demand with prices steady and unchanged. Very little call for wethers at present.

Prime wethers .....$6.00@ 9.00
Yearlings .....$6.70@ 7.00
Prime ewes .....$8.00@ 9.00
Lambs .....$12.00@13.00
Spring lambs .....$10.00@12.00

Portland, Ore., July 13, 1920.

CATTLE—Steady; receipts, 78. Choice grass steers, $10@10.50; good to choice, $9.50@10; medium to good, $8.75@9.50; fair to good, $8@8.75; common to fair, $6.75@8; choice cows and heifers, $7.50@8; good to choice cows and heifers, $6.50@7; medium to good, $5.50@6.50; fair to medium, $4.50@5.50; canners, $3.50@4.50; bulls, $5.50@6.50; prime light calves, $11@12; medium light, $9@10; heavy, $7@8.50.

HOGS—Steady; receipts, 203. Prime mixed, $16.25@16.75; medium, $15.75@16.25; smooth heavy, $13@14.75; rough, $10@12; pigs, $12@14.75.

SHEEP—Steady; receipts, 244. Valley lambs, $10@10.50; east of mountain, $10.50@$11; culls, $7.50@8.50; ewes, $2.50@6; yearlings, $6.50@7.75; wethers, $6@7; ewes, $2.50@6.25.

EASTERN.

Chicago, July 12, 1920.

CATTLE—Receipts, 17,000; yearlings and desirable handy-weight steers, firm; others mostly steady; bulks, $13@16.50; butcher stock steady; bulk cows and heifers, $7.25@11; bulk canners, $4.25@4.75; bologna bulls, strong; bulk, $6.15@7; calves, slow, practical top, $14; best stockers, strong; others slow to steady.

HOGS—Receipts, 42,000; better grades, steady to 10c lower than Saturday's average, others mostly steady; top, $16.35; bulk light and light butchers, $15.80@16.25; bulk, 250 pounds and over, $13.60@15.75; pigs, 25c higher; bulk of desirable kinds, $13.25@14.

SHEEP—Receipts, 15,000; strong; first sales, strong to 25c higher; top native lambs, $16; bulk, $15@16; western held higher; top ewes, $8.50; bulk, $7.50@8.50.

LOS ANGELES

Los Angeles, July 13, 1920.

BUTTER.

Butter receipts show a decided increase over those of last week, the excess being 241,000 pounds. The demand is as good as ever, the exchange reporting all being taken that is coming in. Prices continue steady and are unchanged. Receipts for the week ending today were 588,000 pounds. These prices represent those paid the producer.

California extra creamery.....58c
do, prime first 56c
do, first 55c

EGGS.

Fresh ranch extras are up 1c and pullets 3c above last week's quotations. Receipts are showing up somewhat; however, they are slightly in excess of those of the previous week. Demand is holding up very well. Ending today, receipts for the week were 1,344 cases. Prices quoted are those paid producer.

Fresh ranch, extra 51c
do, case count 48c
do, pullets 46c

POULTRY.

Receipts in the poultry market during the week, ending today, were only fair. Broilers, fryers and heavy hens in light supply, but all reported to be in good demand.

Broilers, 1 to 1½ lbs. 24c
do, 1½ to 1¾ lbs. 28c
Friers, 2 to 3 lbs. 32c
Hens .....18@28c
Roosters (soft bone), 3 lbs. and up..... 38c
Ducks .....17@20c
Turkeys .....40@44c
Geese 25c

VEGETABLES.

Potatoes in good demand and higher. Onions slow sale but market is steady. Lettuce in fair demand and firm. Cabbage steady and selling fairly well. String beans pretty dull and a good many coming in. Peas slow sale and a little higher. Cucumbers dull and lower. Tomatoes in very good demand and firm.

Potatoes .....$5.00@5.50
Onions, Stockton, yellow, cwt. ..$1.40@1.50
do, Coachella yellow, cwt. ....$1.40@1.50
do, local, crate .....40@50c
Cabbage, per 100 lbs. .....$2.50@3.00
Lettuce, crate .....55@70c
Rhubarb, per 30-lb. box .....50c@$1.00
Peas, lb. .....7@9c
Carrots, doz. bunches .....30@35c
Summer Squash, local lug .....40@50c
String beans, green, lb. .....2@3c
do, wax, lb. .....2@3c
do, Kentucky, lb. .....3@4c
Cucumbers, lug 35c
Tomatoes, basket, large .....$2.75@3.00
Peppers, Bell, lb. .....15@17c
do, Chile, lb. .....7@8c

FRUITS.

Offerings very good and all choice fruits in good demand. The market is steady today. Poor stock having very little call. Cherries selling fairly well; that is, choice, but poor grade not wanted and selling below quotations. This year's crop of apples now appearing and selling at $2.75 per box.

Cherries, Black Republic .....18@20c
Apricots, lb. ..... 4@ 5c
Plums, Beauty, lb. .....6@7c
do, Santa Rosa, lb. .....7@8c
do, Simons, lb. 6c
do, Tragedies, lb. .....6@6½c
Peaches, lb. ..... 4@ 6c
do, extra, fancy clings, lb. .....10@12c
Figs, black, lb. .....10@12c
do, green, lb. .....10@12c
Crabapples, lb. ..... 8@10c
Apples, Red and White Astrachan, box..$2.75

BERRIES.

There is a splendid demand in this market for all that is coming in. Prices show no changes, however, from last week's quotations. Receipts are reported fair.

Blackberries, 30-basket crate ....$3.00@3.50
Raspberries, 30-basket crate.....$3.75@4.00
Loganberries, 30-basket crate ....$3.00@3.50
Strawberries, 30-bkt crate, fancy $3.50@3.75
do, poor to choice, 30-bkt crate $3.00@3.25

MELONS.

Cantaloupes in fair demand and quoted lower today. Quality of offerings not quite as good as they should be. Honeydew melons also lower, in sympathy with cantaloupes. Not many watermelons coming in at present and market is higher.

Cantaloupes, standard crates ....$2.25@2.50
do, flats $1.00
do, pony crates .....$2.10@2.25
Honeydew melons, standard crates $1.75
Watermelons, lb. .....1½@2c
Casabas, lb. .....2@2½c

HAY.

The demand for hay was very good all through the past week. Choice alfalfa made an advance. Lower grades still reported dull. Receipts somewhat improved but not excessive. Grain hay still very slow sale.

Barley hay, ton .....$23.00@25.00
Oat hay, ton .....$25.00@28.00
Alfalfa, Northern, ton .....$30.00@32.00
do, local, ton .....$28.00@33.00
Straw .....$14.00@16.00

BEANS.

There was no marked improvement in this market for the week ending today. Prices continue to hold firm, and it is said that dealers are looking for a fair demand little later in the season.

Limas, per cwt $10.00
Large white, per cwt. .....$5.25@5.50
Small white, per cwt. .....$5.25@5.50
Blackeyes, per cwt. .....$6.50@7.00
Tepary, per cwt. .....$3.00@3.25
Pink, cwt. $6.75

The Sacramento Chamber of Commerce has interested itself in behalf of the rice growers in their contest with the city of Antioch, Contra Costa County. Resolutions were adopted condemning any order restraining the water users in the northern section of the valley and demanding that no action be taken by any court until "the equities in the case have been fully settled."

MARKET COMMENT.

Dried Apricot Market.

There is little activity in the dried apricot market notwithstanding the tonnage will fall short of previous years. Unlike former seasons, when the crop was practically disposed of before it was taken from the dry yard, dried apricots are being offered sparingly if at all, for shipment out of this year's crop. The growers are demanding excessive prices, which has caused buyers to hands off. The association has withdrawn from the market, which leaves speculative activities at a standstill; however, there should be no uneasiness on the part of the producer as to future prices. The stock is not here, consequently those who want dried apricots will be forced to pay for them at the price that will be finally fixed by the association who has the matter well in hand.

Dried Apple Market.

There has been no change in the dried apple market during the past week. There is a big holdover of last season's dried apples, and the chances are that there will be a large tonnage dried this season, as the standardization of the apple pack is going to be watched more closely than ever before, so naturally there will be a large tonnage that will necessarily have to go to the cider press and evaporator. We cannot offer any flattering inducements for the immediate future of the dried apple market. Prices are at present as follows: Choice, in 50 lbs., 11½ cents; extra choice, in 50 lbs., 11¾ cents; fancy, in 50 lbs., 13 cents per pound.

Fruit Crops Below Average.

According to the monthly report of the Department of Agriculture, issued for the month of June, the 1920 fruit crop will not equal the record yield of last year. This is largely due to drouth, wind, rain, and frost at blossom time; also pests and plant diseases have figured largely in the matter of decrease in tonnage, according to E. E. Kaufman, of the Department of Agriculture. Peaches are making about the best showing, the condition being 88 per cent of a normal crop, as compared with 100 per cent a year ago. The crop is forecasted at 397,000 tons, against a total yeald of 440,000 tons in 1919.

Opening Price of Gravensteins.

The Apple Growers' Union of Sebastopol have started the ball a-rolling by establishing the 1920 price on Gravenstein apples. The San Francisco wholesale fruit dealers have been notified that the opening price fixed by the Union is $2.75 per box. This figure, as we understand it, is for the initial shipments, and that prices will be reduced at the end of the current week. The 1919 season's opening price was a little higher, but the heavy crop of this season will proising heavy yield while others reing of prices.

Dried Fruit Inactive.

There is very little activity in the prune market, either for spot or future delivery. As we stated in the last issue there will not be much doing until the Prune and Apricot Growers, Incorporated, name the price. They have the situation well in hand and are in no ways uneasy as to future conditions of the market. The government report shows a decline of 3 points in condition since June 1, being now 73 per cent of a normal crop as compared with 100 per cent a year ago.

Bean Crop Below Normal.

The bean crop of the State, according to a statement of the State Bean Growers' Association is 35 per cent of normal. The conditions in the Stockton district are normal. In the Sacramento Valley 20 per cent of normal. It is too early to figure on prices for coming crop, but owing to the small holdover, and shortage in this season's production prices should rule above those of last season.

Watermelons Plentiful.

The watermelon season is now in full blast, and the local market is well stocked with the Imperial Valley melon at prices around 3 cents per pound. They will not reach a lower level until the San Joaquin melons begin to arrive. Weather conditions have been very favorable and a splendid crop is expected.

Apple Outlook at Watsonville.

Reports reach us that the apple outlook at Watsonville is unusually promising, as the crop is heavy and the quality good. Belleflowers are heavily loaded and condition of fruit is good. Newtown Pippin crop is promise heavy yield while others report light production. As yet no prices have been named.

Turlock "Megs" on the Market.

The first contaloupes from Turlock have made their appearance on the San Francisco market. The first shipment was by express. Notwithstanding the fact that the melons were small and of poor quality they sold at $4 for standards and $3 for ponies.

Strawberries Higher.

As it is kind of between seasons as a natural consequence, strawberries are scarce and the price on the local market has advanced. Peninsular, 12-ounce drawer, $1 to $1.15; 8-ounce drawer, 75 to 90 cents.

South Devon cattle of England are the largest breed of cattle known. One recently attained the weight of 4,000 pounds. They are classed as a dual-purpose breed.

PRUNE AND APRICOT SITUATION.

According to H. C. Dunlap, of the California Prune and Apricot Growers, Inc., the prune and apricot situation may be viewed as follows: "As a result of the recent extreme hot spell, the apricot crop has been severely damaged in our Northern California districts. In the early ripening districts, sunburn has caused the rejection of a great deal of fruit offered for cannery delivery. Through Santa Clara valley and nearby districts, the fruit is just now approaching harvest, and growers have experienced considerable loss because of a premature fall in non-irrigated sections. Here, also, the heat and drought has also stunted the development of the fruit. Even though canners have set a price of $110 per ton, many growers are still holding on, hoping for better prices in view of the very short crop. It is altogether possible that a slightly better price may develop before the canneries have covered their requirements. The growers generally are comparing the opportunity of cannery sales with the possible returns from dried fruit. The Association has not to date considered it at all advisable to make opening prices on dried fruit. At the present time, it is positively impossible to determine the prospective tonnage handling in dried apricots; therefore we have little basis for the establishment of prices. Our price must be one in which the trade will take an interest in the resale and distribution of the fruit, and finally one in which the consumer will be induced to purchase in competition with other cured fruits. The loss of export is quite an item. A year ago, the cured and canned fruit producers and packers were selling through numerous domestic export concerns and today we have but few in the field. Our association has already contracted for future delivery to many foreign points, but almost entirely this is due to direct connections and not at all through the agency of the many big firms in the field last year. Similar to apricots the prune market has not shown any great activity to date.

"The Association has made sales of futures subject to opening price up to a conservative limit. We are not at all pessimistic as to the certainty of good general returns to producers. Merely find market a little more conservative, and this possibly will make for most healthy conditions throughout the season doing away with wild out the season, doing away with wild

PATTERSON FAIR DATES ADVANCED.

Owing to scarcity of large tents it has become necessary for the Patterson Fair management to advance their dates to August 19, 20 and 21. All take due notice and govern yourselves accordingly. Do not forget the dates.

There are twice as many horses in Merced County this year as there were ten years ago, according to the county veterinarian. Subdivision of big ranches creates demand for more horses on the same acreage, and there is a marked increase in the number of colts to be seen.

Special Citrus Market Report

Los Angeles, July 14, 1920.

Owing to the unprecedented offerings of oranges on the New York market, amounting to 52 cars, the largest offering for any one day during the season, the market today broke from $1 to $1.25 per box. Range as to quality and condition was as follows, $3.25 to $8.50 for 100s; $3.20 to $9.00 for 126s; $4 to $9.06 for 150s; $4.60 to $9 for 176s; $4.85 to $9 for 200s; $5 to $9 for 216s; $5 to $9.50 for 250s; $4.75 to $9.50 for 288s; $4.75 to $9.25 for 324s.

Little demand for California lemons, ranging from 50c to $1.00. Boston: Valencias, $6.50 to $8.05; lemons, 85c to $1.80. Philadelphia: Valencia, $4.35 to $8.35; lemons, $1.20 to $2.50. Pittsburgh: Valencias, $3.50 to $7.10; lemons, 90c to $2.40. Cleveland: Valencias: $5.20 to $7.45; lemons, 60c to $3.55. Cincinnati: Valencias, $3.80 to $6.05; grapefruit, $1.40; lemons, 80c to $2.65. St. Louis: Valencias, $4.75 to $6.55; lemons, $1.60 to $3.05. Baltimore: Valencias, $6.20 to $7.65; lemons, $2.35 to $3.05.

Foreign lemon sales in New York: Firsts, 800 size, $2.50 to $3.30; seconds, $125 to $2.30. Firsts, 360 size, $3.00 to $3.60; seconds, $1.60 to $3.25. Citrus shipments to date: oranges, 24,107; same date last season, 26,827. Lemons to date, 6,234; same date last season, 7,540. There are at the present time, 85,000 boxes of domestic and foreign lemons on the New York market unsold. The extreme low sale of some lines of California's is due to poor condition; however, the lemon market is very weak.

Special Deciduous Market Report

San Francisco, July 15, 1920.

Skyrocket prices still prevail in deciduous fruit circles. The usual break following the 4th of July failed to put in its appearance as the sales reported for the balance of that week are by far the best of the season, as shown in the following auction sales, coming from the Fruit Building at Sacramento. New York: ½-boxes, Clapp Favorite pears, $4.65; Burbank, $3.75; Climax, $4.50; California Blue, $4.50; Bartlett pears, $7.25. Chicago: Santa Rosa, $3.00; Blue figs, $2.35, 2 layer; Burbank, $2.65; Wickson, $2.65. Cleveland: Royal Apricots, $3.50; Tragedy, $4.00; Santa Rosa, $3.00; Climax, $3.70. Philadelphia: Abundance, $2.25; Hale's Early peach, $1.15. Climax, $3.75; Tragedy, $4.50; Santa Rosa, $3.40; St. Louis; Tragedy, $2.50; Burbank, $1.95; California Blue, $2.50; Climax, $2.50. Pittsburgh: Black figs, 2.85, 2 layer; Tragedy, $3.05; Burbank, $3.10; Climax, $3.75; Wickson, $4.00. Boston: Climax, $3.30; Formosa, $4.25; Wilder pears, ½-boxes, $3.30; Blue figs, $2.50; Burbank, $3.50; Tragedy, $3.80; Santa Rosa, $4.25. Baltimore: Tragedy, $3.40; Santa Rosa, $3.70; Royal Apricots, $1.95. Minneapolis: Triumph peach, $1.35; Climax, $2.75; Santa Rosa, $3.00; California Blue, $2.90. St. Paul: Climax, $2.85; Tragedy, $2.70; Royal 'Cots, $2.55; Burbank, $2.57

Classified Advertisements.

Rate, 3½c per word. Cash must accompany all orders.

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LAKE VIEW CUTRUS FARM
10 Acres $2200; Easy Terms.
Dandy little farm, pleasantly located, only 200 yards lake, fine fishing, boating, bathing; fruited 80 orange and grapefruit trees; remainder land high state cultivation, big crops, ideal for poultry; good 5-room house, barn, large new poultry houses; owner has larger farm, offers this beautiful little place low, $2200, easy terms. Details this and another with 13 acres oranges, grapefruit, Page 52, Strout's Catalog Orange Groves and Other Semi-tropical Farms. Just out. Copy free. STROUT FARM AGENCY, 503FA, Wright-Callendar Bldg., Los Angeles, Cal.

FOR SALE—About 50 acres of deep mellow land, all under irrigation canal. All kinds of hardy fruits, grapes, walnuts, chestnuts, figs, and berries, potatoes, alfalfa and vegetables grow to perfection. In warm belt close to paved highway, trolley and steam lines. Good buildings. Inquire, J. H. Gassaway, R. D. H., Box 2, Grass Valley, Cal.

80 ACRES—Honey Lake Valley, good location, near county seat, schools, banks, S. P. station. Good improvements. Good irrigation system. Raise fine alfalfa seed, hay and grain. $16,000.00 cash. A good buy. Box 280, Standish, Lassen Co., Cal.

FOR SALE—100 acres nice level land. No waste land on it, 13 miles N. W. of Chico, Cal., ¼ mile of Cana on S. P. For particulars address, Owner C. L. Vanschoiack, R. F. D. 4, Chico, Cal.

RANCH FOR SALE—With stock, implements, orchard in bearing. Will not trade. Write to C. G. Brochu, Placerville, El Dorado, Cal.

MISCELLANEOUS.

OPPORTUNITY FOR DAIRY FAMILY!!

Connection desired with Dairy family who can milk, pasteurize, bottle and deliver in town the product of sixty cows in large town of northern Sacramento Valley. Owner furnishes cows, barn, feed, delivery truck, etc. Division on a percentage or share basis with guaranteed minimum. Only responsible parties with experience need answer, who desire to make permanent home for themselves and will enter into long term contract. Answer under Box 2090, Pacific Rural Press.

WANTED—A number of experienced men to cut grain with old-fashioned cradles. Will pay 75c per hour. Six weeks or 2 months' steady work. Apply C. S. Jurges, Willows.

AGENTS WANTED—To sell seeds, plants, trees, spray, garden supplies, etc. Large firm, liberal commission. Be the first to apply from your town. Give age, reference, photo, etc. Fine opening for young man or lady. Boys and girls can make good money during vacation and after school. I send you the packages of seed free—you pay as sold. Write at once to Wm. E. Dart, Box 414, Santa Rosa, Cal.

REMANUFACTURED PIPE.
All sizes standard pipe and wrought iron screw casing. All kinds of fittings. Guaranteed good as new. Write for prices. Weissbaum Pipe Works, 160 Eleventh street, San Francisco.

BIG MONEY AND FAST SALES—Every owner buys Gold Initials for his auto. You charge $1.50; make $1.35. Ten orders a day easy. Write for particulars and free samples. American Monogram Co., Dept. 11, Glen Ridge, N. J.

CORN HARVESTER—One-man, one-horse, one-row, self-gathering. Equal to a corn binder. Sold direct to farmers for twenty-three years. Only $28, with fodder binder. Free catalog showing pictures of harvester. Process Corn Harvester Co., Salina, Kan.

FOR SALE—A practically new Russell Special Rice Thresher, 24x43—been used only 3 weeks threshing rice and grain. Price, $1500. This is a bargain for anyone wanting a good machine. Geo. Boock, Los Molinos, Calif

50,000 FLORIDA Sour Orange Seed Bed Trees; 100,000 California Sweet Seedling Orange Seed Bed Trees. Southland Nurseries, 1941 East Colorado St., Pasadena, Cal. Phone Colorado 6352.

PARTIES INTERESTED in securing plans for the best and cheapest evaporator of large capacity on the market will find it to their interest to communicate with **F. C. Chapman, Modesto, Cal.**

RELIABBLE CABBAGE SEEDS—I grow them. You want them. Let's get together. Write for special offer on what you need. Isaac F. Tillinghast, 32 Podel St., Santa Rosa, Calif.

ALL SIZES OF PIPE and screw casing, both new and second-hand, dipped and undipped. Guaranteed. Prices right. Shecter Pipe Works, 304 Howard St., San Francisco.

FOR SALE—Alfalfa meal in carload lots; quality guaranteed. I raise the alfalfa and wish to deal directly with consumers. Address D. Power Boothe, Ceres, Cal.

BEACH ALMOND HULLER in good condition run by 2½ horsepower. Phone or address, O. N. Featherston, Route C, Box 173, San Jose.

WANTED—Married dairyman, expert feeder and calf-raiser. Experienced in A. R. O. and fitting for shows. Sunnybrook Ranch, Willits, Cal.

CROLEY'S BALANCED HOG FEED—The cheapest feed to fatten hogs. Write Geo. H. Croley, Townsend St., San Francisco, Calif.

FOR SALE—Portable Smalley Alfalfa Cutter, 26 inch, with mealing attachment and sacker. Box 2080, Pacific Rural Press.

WANTED—Portable saw mill in good condition. State make and full particulars. C. C. White, Sheridan, Nevada.

WANTED IMMEDIATELY — Experienced budders and tiers. Address or phone, Kirkman Nurseries, Fresno.

FOR SALE—Star drilling rig, No. 4. Must sacrifice; $1200. Also tractor, $200. W. P. Vestal, Water, Cal.

PUMPKIN SEED — Mixed pumpkin seed. Good germination, 25c per lb. Aurora Seed Mill Stockton.

BIG DEMAND FOR HORSERADISH.

Big money made in raising Bohemian Horseradish. 50 root sets with full information for $1.00. Special price given on large orders. Big surprise free, extra with every order.

THE SAFETY SEED CO., 837 53rd St., Oakland, Calif.

Five Million More Tires than last year
How much More Tire Economy

The driver of the car in the foreground probably does not realize that by rounding the corner too quickly he may be taking as much as a thousand miles out of his rear tires.

A great deal of tire trouble can be avoided by slowing down to a reasonable speed in negotiating corners.

IT IS interesting to watch a car owner gradually becoming conscious of his tires. If his first tires don't give him what he has been led to expect, you will see him going back to the dealer for an allowance.

Finally he reaches the point where he prefers to shoulder his losses himself rather than argue the matter out with the dealer.

Meet him a year later and you will probably find him with two or three different makes of tires on his car.

* * *

There is less conviction in the minds of motorists about tires today than about any other subject connected with motoring.

Despite all the claims, all the allowances, all the selling talks that are presented for the motorist's consideration, he goes along in his own way, seeking the tire that will give him the greatest economy.

Often you see him running foul of the irresponsible dealer.

But sooner or later he finds out that claims and allowances and selling talks can never take the place of performance.

* * *

More and more motorists are coming to realize that the only way to tire economy is through *better tires.* Avoiding the dealer whose idea of business is merely to fill the eye or to supply a market and going direct to the *merchant who deals in quality.*

Never has the United States Rubber Company's policy of *quality first* been more thoroughly justified or widely appreciated than it is today.

Discounting, as it does, every temptation to force production in favor of a highly specialized, wholly standardized product.

* * *

Even when the production of U. S. Tires has reached two or three times its present figure, the test will still be not how many tires—but *how good.*

United States Tires
United States Rubber Company

Fifty-three factories

The oldest and largest Rubber Organization in the World

Two hundred and thirty-five Branches

VOL. C—No. 4 Fiftieth Year

THE PACIFIC RURAL PRESS

SAN FRANCISCO JULY 24, 1920 LOS ANGELES

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"THE WORLD DO MOVE," quoth Galileo, and it has and will so continue forever. Better men and women, better homes and environment always improved and improving. Is it any wonder then that the domestic animals are coming up out of the ruck and chaos of the dim and distant past along with their masters into better types, leaving behind the useless and developing the necessary characteristics? In line with this thought, about two decades ago, an admirer of the Hereford decided the weapons of this great breed were superfluous, and proceeded to eliminate them by mating those few to be found that were naturally polled, and thereby developing a strain of hornless Herefords. Recently this polled type of Herefords was imported into California, and the above picture shows Cliff Durant, the noted aero as well as auto racer, and G. W. Emmons holding two fine specimen bulls kept on the Diablo stock ranch in Contra Costa county.

Q and A About Threaded Rubber Insulation

This trade-mark is branded in red on one side of the Still Better Willard—the only storage battery with Threaded Rubber Insulation.

THREAD-RUBBER INSULATION Willard STORAGE BATTERY

Q. What is Threaded Rubber Insulation?

A. A storage battery insulating material made up of **rubber** pierced with thousands of tiny **threads.**

Q. How does it differ from other battery insulation?

A. Ordinary insulation is wood, cut in the form of thin sheets, and is neither as uniform nor as durable as Threaded Rubber Insulation.

Q. Why is insulation so important?

A. Because battery life depends largely on insulation, and because any defect or weakness of insulation is quickly evidenced by buckled plates, short circuits, failure of the battery to hold its charge and so on.

Q. What has this insulation to do with battery shipment?

A. The kind of insulation determines whether the battery must be kept wet, or can be shipped in "bone dry" condition. Wood insulation must never be allowed to dry out, hence makes necessary wet or partially wet shipment. With Threaded Rubber Insulation the battery can be shipped absolutely "bone dry."

Q. Why is "bone dry" shipment and stocking preferable?

A. Because it is the only method by which chemical action in the battery can be entirely held up, so that the battery reaches the buyer in truly brand-new condition.

Q. Why does wood insulation need to be replaced?

A. Because wood insulation, being soft, wears out more rapidly than any other part of the battery. It is also subject to cracking and checking, which, if allowed to go too far, seriously damages the battery.

Q. Why does Threaded Rubber Insulation outlast the battery?

A. Because the basis is hard rubber, which resists wear and does not crack or check.

Q. How can I be sure my battery has Threaded Rubber Insulation?

A. Look for the red Thread-Rubber trade-mark. It can be found **only** on the Still Better Willard Battery.

Q. How many car and truck manufacturers have selected Threaded Rubber Insulation?

A. 136 in all. The complete list is printed at the right.

Willard Service

136 Manufacturers Using Threaded Rubber Insulation

Acason
Acme
All American
Allis-Chalmers
American LaFrance
Apex
*Apperson
Armleder
Atterbury
*Auburn
Austin
Bacon
Bell
Belmont
Bessemer
Betz
Biddle
Brockway
Buffalo
*Buick
Cannonball
Capitol
*Case
*Chevrolet
Clydesdale
Cole
Collier
Colonial
Comet
Commerce
Commodore
Cunningham
Daniels
Dart
Dependable
Diamond T
Dixie Flyer
Dodge
Dorris
Fargo
Fergus
Ferris
F W D
Franklin
Fulton
Garford
G M C
Giant
Glide
Great Western
Hahn
H C S
Hurlburt
Hawkeye
Haynes
Henney
Highway
Holmes
Holt
Hupmobile
Indiana
International (I H C)
*Kissel
Koehler
Lancia
Lexington
*Liberty
Luverne
Madison
Marmon
Menominee
Mercer
Mercury
Meteor (Phila.)
M H C
*Mitchell
Murray
McFarlan
*McLaughlin
Napoleon
Nash
Nelson
Nelson & LeMoon
Noble
Northway
Ogren
Old Hickory
*Olds
Oneida
Oshkosh
*Paige
Parker
Peerless
Peugeot
Phianna
Pierce-Arrow
Premier
Preston
Ranier
*Reo
Republic
ReVere
Riddle
Rubinann
R & V Knight
Rowe
Sandow
Sayers
Seagrave
Selden
Service
Shelby
Signal
Singer
Southern
Standard B
Standard
Stanley
Studebaker
Stutz
Sunbeam
Tarkington
Tiffin
Titan
Tow Motor
Transport
Traylor
Ultimate
Velie
Vulcan
Ward LaFrance
White
Wilson
Winther
Winton
Wolverine

*For Export

Willard STORAGE BATTERY

HORTICULTURAL JOTTINGS.

The first crate of Turlock cantaloupes sold at auction in Detroit for $100. The first crate sild in Chicago for $25.

C. E. Sullivan, Farm Advisor of Sutter county, has received twelve entries in the Sutter County Cling Peach Contest.

The California Packing Corporation are making preparations to pack 200,000 cases of peaches at Yuba City, employing 500 people.

The first grapes to go from Vacaville were shipped by A. Caligiuri, through the Vacaville Fruit Growers' Association on July 17.

W. Luckhart, owner of ten acres of prunes in Santa Clara Valley, has sold his entire crop of Imperial prunes for 29 cents per pound.

The large canning plant of Pratt-Lowe and the Co-operative Canneries are now operating full force at Modesto, employing 1,000 operatives.

The Turlock plant of the California Peach Growers' Association expect to handle 1,000 to 1,200 tons of dried peaches during the present season.

Pajaro Valley apricots are ripening fast. Picking is now under way. The fruit is of fine quality. As it is to be dried "orchard-run," the grade should rank very high.

During the past month many prospective buyers of fruit lands have been looking over the Salinas Valley with the view of securing apricot and prune orchard sites.

P. Spiva of Sutter county has sold his ranch, consisting of 21 acres of peaches and Thompson's seedless grapes to F. W. Crannacher of Sutter county for $21,000.

E. D. Seaton of Sant Rosa, who recently invented a pasteboard carton which will keep dried fruit for any length of time, will be in the market for 3,000 tons of fruit this season.

Indications are that the commercial apple crop of Oregon, as a whole, will be about 60 per cent of last year. On that basis the commercial crop of 1920 should be about 2,500,000 boxes.

Watsonville has made the first export shipment of dried apples. This was the first movement for many weeks. This is encouraging to those who have last season's dried product in storage.

Orchardists of the Brentwood district report that their crops this summer will equal those of other years, because they have been able to obtain a sufficient amount of water for irrigation purposes.

The plum market in the Fresno district has been very satisfactory the present season, as expressed by the shippers. Plums sold at from $3.50 to $4 per crate, which is equivalent to $200 per ton.

The Oroville Dredging Company has sold to J. D. Meredith of Sacramento 1,000 acres of land on both sides of the Bear river in Placer and Yuba counties. The land is to be developed into fruit growing.

The great fruit interests of San Luis Obispo county are being further promoted by the building of a $25,000 dehydrating plant at Arroyo Grande. The building is rapidly approaching completion.

"It's an ill wind," etc. F. L. Kent, field agent for the Bureau of Crop Estimates of Oregon, states that the peach crop has never before been so near a failure, except in the Ashland and Grant's Pass district.

Hodge and Gorton are erecting a large packing-house at Exeter, 84x200, with a basement 54x100 feet. It will be equipped with the latest improved machinery for the packing of both green and dried fruits.

By an intensive campaign of the Merced Chamber of Commerce the Peach and Fig Growers' organization has been put over by having secured close to 100 per cent of the 6,000 acres of figs in the county.

Niegal Brothers, famous dry land orchard in El Dorado county, yielded 4,000 boxes of cherries this season. The entire crop will average better than 35 cents a pound. One lot of Bings brought $6.67½ per box.

K. H. Cotton, of the First National Fruit Exchange, states that Modesto is fast becoming one of the largest fruit centers in the San Joaquin Valley. Fruit shipments will be 40 per cent larger than any previous year.

Libby, McNeill and Libby shipped the first two cares of cling peaches from Sutter county, Encinal district, to their cannery at Sacramento. The fruit was grown by Peter Williams, Charles Weis and Stilwell Brothers.

The Fowler Fruit Growers' Association, a new organization, has planned for business the present season, and will ship green fruit for its members. It is a co-operative organization of which G. A. Bassett is general manager.

The Turlock canneries have finished their three weeks run on apricots. They expect to begin on Tuscan clings this week. More than 500 people worked on the apricots, but a larger force will be required on the peach run.

After a careful survey has been made, it is expected that the Tokays in the Lodi district will be ready for shipment on or about August 5th. The damage done to the grapes by the recent hot spell was less than one per cent of the total crop.

The State Department of Agriculture has completed a survey of the California grape industry for 1919 with a forecast of crop and conditions for 1920. Copies will be sent postfree upon application to the Director of Agriculture, Sacramento.

Fresno county has made her first arrest for violation of the fruit standardization law. Members of a Los Angeles commission house were arrested for shipping Thompson seedless grapes, which tested three to four points below the standard.

The bottom has dropped completely out of the lemon market. The growers of lemons in the State are receiving the lowest price on record for merchantable stock, is the statement made by the Southern California Fruit Growers' Exchange.

With the fruit crop of the San Joaquin Valley showing a little below average yield and the car situation better than last year and the labor market appearing fairly stable, the fruit shippers expect what they believe will be a banner year for the valley.

The Fresh Fruit Shippers' League, a non-profit, co-operative corporation with no capital stock, has filed articles of incorporation in Fresno. The purpose of this organization is for the general welfare of employer and employee and to intervene and arbitrate differences.

The president of the Brown's Valley Irrigation District of Yuba county states that fourteen Iowa farmers have purchased a large tract of land in the Brown's Valley District, on which they intend planting Thompson seedless grapes and other varieties of fruits.

The Peach Growers' Association at Clovis are making extensive improvements in their packing house. The building is 50x160 feet and 24 bins, 8x10 feet, are being built in. The graders have already been placed. A 100-foot loading platform is being erected along the Southern Pacific side track.

The car conditions in the San Joaquin Valley seem to be much more encouraging than a year ago. Better co-operation has been promised with the shippers and growers by the railroad companies. Cars will be returned to California empty, which will cut down the time by one-half. Former time for round trip was in the neighborhood of 60 days.

Pear blight, practically unknown in the Santa Clara Valley, is now causing uneasiness among the pear growers, so much so that the board of supervisors of Santa Clara county have been petitioned to take the matter in hand by having a thorough inspection made of the pear orchards of the county. The matter was referred to the county horticultural commissioner with instructions to report conditions at the next meeting of the board.

AGRICULTURAL NOTES

Cotton crop of Imperial Valley is said to be only 80 per cent normal.

Santa Barbara county has harvested the heaviest hay and grain crop in many years.

The Chamber of Commerce at Perris, Riverside county, is discussing the need of a co-operative gin at that center.

The Federal and State field agents will join hereafter in issuing monthly crop reports instead of getting out separate statements each month.

Potato growers of the San Bernardino Valley recently perfected a marketing organization, which is affiliated with the California Vegetable Union.

A severe wind and rain storm that swept over the State of Washington a few days ago, resulted in damage to crops, estimating from $250,000 to $400,000.

Out of a total commercial cantaloupe acreage, as forecasted by the Federal Bureau of Markets for 1920, of 70,820, California is credited with 32,600 acres.

The Glenn county rice growers have decided to employ six aeroplanes to chase the ducks from their rice fields this fall. Two machines were of service last year.

Butte county, for the first time since 1917, will be represented at the State Fair. County Horticultural Commissioner Earl Mills will be in charge of the exhibit.

S. R. L. Morehead, Marysville district manager for the California Bean Growers' Association, has announced that all business for 1919 will be settled for within 60 days.

The Paradise farmers have been denied a reduction of the assessed valuation of their lands from $40 to $20 per acre, following a hearing before the State Board of Equalization.

Investments in American agriculture amounts to 80 billion dollars, and last year the value of crops and livestock aggregated 25 billion dollars, according to Secretary of Agriculture Meredith.

According to Durst Brothers, who operate hop fields in the Wheatland district, the harvest of the 1920 crop is scheduled to commence about August 5. Prospects for a good yield are favorable.

Merced has harvested the biggest crop of onions this season that ever grew in that district. Several early cars sold at $4 down to $2, but the rest are not paying cost of production and marketing.

The Canadian wheat crop of 1920 will be marketed by pre-war methods, the Dominion Government having decided that the present wheat board no longer shall function as far as this crop is concerned.

Seed men of the eastern states and Europe have selected California peas in preference to those of other states, and the export demand for them is in excess of the supply. These peas are all raised on reclaimed lands.

Articles for incorporation for a cotton mill company to establish the long-awaited industry in San Diego, have been filed and the amount of authorized capital is fixed at $1,200,000 It proposed to erect a cotton textile mill of not less than 20,000 spindles and 500 looms.

J. S. Townsend of Bakersfield states that the local Pima Egyptian cotton crop will be one of the finest in the county. He is now constructing the Arvin cotton gin so as to be in readiness for the coming crop.

According to M. J. Goodheart of Ducor, grain prices are off. Wheat is holding just about four cents per pound, while barley is off the market for the present. The Ducor warehouse is filled to overflow with grain.

Farmers under the Modesto Irrigation District ditches will receive water up to August 1, according to a report of the chief engineer, P F. Jones. This will mean another crop of alfalfa. Last season the water lasted until July 15.

Fred Noyes, the newly appointed squirrel inspector of Sutter county is giving the squirrels a merry chase in the section of the Buttes. H. P. Stabler, County Horticultural Commissioner, says, he intends to clean up the whole county.

The supervisors of Stanislaus county have donated $1,000 for the county exhibit at the State fair in Sacramento, in September. The total cost of the exhibit is expected to be far more than this. County Horticultural Commissioner A. L. Rutherford is in charge of the exhibit.

A new high record in grain production was established in the Tulare Lake district, when the first thousand acres of barley harvested on the Ridge-Lewis and Wright tract, yielded an average of more than 50 sacks per acre. A field of wheat averaged more than 30 sacks per acre.

The United States Department of Agriculture reports that the "level of prices" paid farmers for principal crops decreased 1.7 per cent during June. On July 1, however, the report added, the index figure of prices paid farmers was still more than 20 per cent higher than a year ago.

Experiments with Mariout barley, which have been made by a number of prominent Stanislaus county farmers this year, are proving to be a great success. The Mariout barley is a new variety which has been developed by the United States Department of Agriculture after many years of experimenting.

Restrictions on future delivery business in wheat on the Chicago Board of Trade, which have been in existence as a war rule since August 25, 1917, have expired. The big gong was answered by an ear-splitting yell from hundreds of brokers, and the war rule instantly ceased to operate one day last week.

Plans of the State Reclamation Board to take care of the drainage water accumulating east of the Sutter By-pass during the rainy season by the means of three pumping stations, have been approved in a report just filed by a board of consulting engineers composed of F. C. Herrmann, B. A. Etcheverry, Max W. Enderlein and T. W. Ransom.

Though California is somewhat shy on alfalfa, grain and hay, and many other farm products, it is gratifying to learn from H. F. Alps of the Weather Bureau in Reno, that the State of Nevada will produce a bumper crop of hay, alfalfa and potatoes this season. All except two counties, Pershing and Humboldt, report conditions at present better than the average.

Announcement has been made at the office of President David P. Barrows of the University of California of a bequest by Jas. Horgan to the University, the income of which is to be devoted toward the promotion and development of agriculture, particularly to the purposes and work of the University Farm at Davis. Approximately $1,000 each six months will be received by virtue of the bequest.

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EDITORIAL

PIONEER SUBSCRIBERS.

WE ARE THINKING about an appropriate celebration of the fifty-first birthday of the Pacific Rural Press, which will occur on the first of January next. There are a few readers, still hale and hearty, who began to travel with this journal at the very beginning of its career. We wish to hear from all of them as soon as convenient. They will be the Guests of Honor at our celebration! As they stood godfathers at the christening of this journal a helf-century ago, so we wish them to stand at its re-christening next January—with more confidence and assurance now, perhaps, than then, but with the same good will and eagerness to co-operate in the attainment of that which they honestly approve and commend. We hope all who were "first nighters" as the films began to move in January, 1871, will write us about it and what the fact suggests to them that it is worth while for the present generation to know!

THE AGE OF WISDOM.

There has probably always been a temptation to believe that if the human life-span were longer all men might get more wise and that problems now constantly arising in the experience of mankind might have been solved long ago. The Scriptures do not warrant such assumption, for the records show that men did at one time live to be nearly a thousand years old and yet kept on being just as big fools as the kids of their tremendous households in their personal conduct, and they surely did not work out much in public affairs or else their descendants would not have just as much trouble with what we have come to call the science of economics and government, as Methuselah probably did when he cast his first vote. We imagine that a life-span of a thousand years did not help a man much—except perhaps in the art of lying around comfortably, nor did it help posterity much, for the payable total of a grocery bill is still the sum of all the items thereof and with all the adding machinery of the present day, we do not get off a cent cheaper than Noah did when he was provisioning his ark. It is true, of course, that lying around a thousand years apiece by our remote ancestors did seem to facilitate star-gazing and though they did give lovely Arabic names to many of the stars, and though they made star-maps, which may be still useful in descriptive astronomy, those millennial loafers could not save their descendants from the belief that the earth is flat and the moon is made of green cheese. In fact, as we look back to those old patriarchs who lived long enough to pull the ears of their descendants to the twentieth generation, we cannot see that their great age did much for the world, except, perhaps, in the line of population at a time when there was great need of it, and we are quite sure that if any such patriarch should return and attempt to play such pranks at the present day, some youngster would shoot him. No; it is probably true that a much later conception of "a short life and a merry one" is better for the human race—both individually and in the aggregate. But, of course, this conception has only been half attained thus far; we have the brevity all right; perhaps posterity will add the merriment. The present verdict seems to be: such as it is, this life is long enough!

WHAT HAS THAT TO DO WITH WHEAT?

It is this way: For a good many decades there has been a prevalent conviction that if the wheat trade could be so regulated that all speculation would be knocked out of it, the grower would be better paid, and the consumer would be better fed. Current experience is that both expectations were wrong and illusory. We have had speculation suppressed and several unexpected things happened. It is only worth while to cite two:

1. Fixing the price of wheat at $2.26 per bushel was conceived to be a glorious assurance of profit to the grower, which would induce him to fill the world with wheat, but the facts soon demonstrated that limiting the price to $2.26, or its local equivalent, did not return to the grower what the wheat cost.

2. Although fixing such a price may have immediately prevented the cost of bread from rising higher to the greater distress of the consumer during the war and to this date, it looks very much as though he would lose all that he thus saved and more, because forcing sale of wheat below cost has reduced the farmers's ability and desire to grow wheat. Therefore, the consumer having saved at the spigot will now lose at the bunghole.

It seems fair to conclude that if the desire to grow wheat had been fostered by allowing the grower to get continually a little more for it than the increasing cost of production as well as by patriotic propaganda, the present enforced reduction of the product might easily have been avoided. But with a price acting as a maximum, which should have acted as a minimum, the old idea of excluding speculation to protect the grower did really help the grower and fatten the consumer no more than the long-lived star-gazers of the Chaldean plains did prevent the foolishness about a flat world and a cheesy moon. A man really has to see the monkey to count the rings on his tail!

SPECULATION MAKES A SLOW START.

The same fact seems to have been demonstrated by the attitude of the buyers when their freedom to speculate in wheat was returned to them. It is true that this picturesque announcement was made:

CHICAGO, July 14.—Restrictions on future delivery business in wheat which have been in existence as a war rule since August 25, 1917, will expire tomorrow. The big gong of the Chicago Board of Trade will clang at 9:30 a. m., be answered by an ear-splitting yell from hundreds of brokers, and the war rule will instantly cease to operate here and at other grain-trading centers in the United States. Tonight the commission houses throughout the Chicago Board of Trade district had either completed or were busy completing their individual arrangements for renewal of a form of commercial life that involves transactions daily aggregating many millions of dollars. Everybody in the district appeared in festive mood over the fact that the restraint of nearly three years was at last to be dispelled.

But the reopening of the old business at the old stand had none of the spectacular features which the announcement anticipated. Because of the known facts about recent wheat growing, wheat has been selling above the fixed price for some time, but the uncertainty about what might come out of the fact that much wheat is under control, prevented jumping at futures and the prices paid for them up to this writing have been: December, $2.60; March, $2.64, while cash wheat was at $2.86 and $2.88. Of course, many things are likely to happen, and political uncertainty will be influential for several months, but the best promise that we can see of having enough white bread is this country lies in the fact that growers will have a chance to cover all the increased cost of labor and other items into their selling price and that is about the only chance there is that any farmer can afford to grow wheat. And the same surety is the only thing that will make it safe for him to grow anything.

HOW MUCH WHEAT PER DAY?

If we remember correctly how things went in the famous western New York wheat region before the Civil War, the price of a day's harvesting was a bushel of the wheat gathered. The work was cradling and the day was all the day light. The cash value of the wheat then was about one dollar. If we escape the question of the shifting value of money and stick to the wheat and make the value of it what the government fixed, viz., $2.26, why is not that the worth of a harvest hand now as then—disregarding also the fact that the harvest hand worked from 50 to 100 per cent longer and as much harder then to get his bushel? The other day a dispatch came from Washington that an army of harvest hands gathered by a government agency from the Alleghany region was working in the wheat fields at Oklahoma and Kansas and would move northward as the wheat ripened, receiving from the farmers the uniform wage of $7 per day. If a man can still earn a bushel of wheat for his day's work he should receive the value fixed for wheat, viz., $2.26. But we are not writing in condemnation of the fact that the harvest hand now gets $7. He is entitled to get all he honestly can. The point we make is that the wheat grower can not pay what he gets for three bushels of wheat for a day's work, which earns one bushel. If he has to do that he cannot grow wheat very long. With those facts in mind one is not surprised that the grain growers of the Middle West have been in rebellion against that fixed price of $2.26 (locally much less than that) and have been appealing to Congress for the last two years to raise the limit or set wheat free to get what it is worth in open trade. This latter condition has now arrived and we shall see whether a bushel of wheat will go to its equivalent in labor at current wages, viz., $7 per bushel, or what else will happen.

THE WHEAT GROWERS' JOY IN LIVING.

Surely the wheat farmer can have no desire to return to the thousand-year life-span. One or two years ought to feed him up on terrestrial joys, and such indeed seems to be about the size of it. A Chicago journal is seen to be credited with this statement:

From the condition of 1919, in which the American people spent $22,000,000,000 for luxuries (diamonds, automobiles, summer furs and jewelry) to the situation today, in which credit curtailment has crimped extravagant purchasing, is a brief period in time, but marks a wide departure in the financial habits of the people. There is "a decided feeling of unrest" on the part of farmers, because they have been denied participation in the pleasures and pastimes of extravagant living, and have not been able to decorate their wives and families with Oriental splendor, nor yet purchase costly automobiles nor other panoply of affluence. So sore are the farmers at this discrimination of fate against them it is said, that they are withdrawing from surplus production, to compel advanced prices of their commodities and thus even up the score.

Of course, that is the way a non-agricultural commentator is likely to put it. The view which appeals to him is that the farmer is not getting fair play in the line of sumptuousness. Of course, the real thing is worse than that. As a rule farmers do not care over-much for sumptuousness; possibly, not as much as they ought to. The farmer generally will give up anything to come out ahead, but he actually cannot get ahead that way. He does not get anything to give up!

THE RUSH TOWARD FRUIT.

California about doubled her wheat production in 1919 over that of the preceding year, but did not enjoy anything but the great idea of patriotism and humanity which was involved in it and is likely to swing to alfalfa, rice, cotton and fruits, because they are the products which have not been interfered with in the salutary operation of bringing back the added money-cost which their production has called for—and of these alfalfa and fruits seem to have fewer problems than the other two. It is probably true that there is not a fruit-optimist who thought his favorite would run so much

like a thoroughbred, and there are no fruit pessimists now alive—they were all drowned beneath the waves of the 18th amendment, under which they were trying to submerge the wine-grape industry. Judging by their recent experience and their present outlook, all wine-grape growers ought to have joined the Anti-Saloon League instead of condemning it. With the wine-grape grower it does not seem to be so much a question of alcohol-content as of water-content—that is, the greatest number of gallons of anything wet which he can get out of the ground. And here again, there is proof that long life is not productive of infallability. Old Noah grew to be nearly a thousand years old, and yet he never could learn that the alcoholic content of the grape was not worth going after. And yet, the great surprise of the last year or two with the wine grape is not much greater than the surprise about other fruits. It makes us sad to remember the fine old pessimists we have known, who wasted so much time and good feeling in drafting resolutions and trying to make demonstrations that California fruit growing was hanging on the verge of ruin because of galloping production for which there could not be any equally speedy consumption. If any such old party is still dreaming his life away on the interior plains, he had better sell out and forget his dreary past in the gleam of the gold which the fruit property which he so freely discounted will now bring him. We are rather proud of the record we have made in these columns during the last forty-five years by declarations that California never could grow too much good fruit to sell it profitably—though we do admit that, once in awhile, we had to whistle a little to keep our courage up. The situation is the same today as it always has been. The great area of the United States is largely comprised of land which cannot sustain great commercial fruit enterprises, for lack of adaptation and safety. The great preponderance of the people of the United States cannot grow fruit successfully, from lack of knowledge or of environment, or from other disqualification. Fruit-growing is a safer and saner business in California now than it has ever been in the past, because two generations of Californians learned how to grow fruit, preserve it and commercially handle it, and the present generation has the courage and energy to embody all such experience in great enterprises. There are, of course, close economic calculations to be worked out. We are not sure, for instance, that fruit trees and fruit land will pay out ten per cent on the valuation at which both are now being sold—largely on the basis of what has recently been taken from the former. We are not sure that the costs of production will decline in proper ratio with any drop in selling value of the product which may be encountered. And California fruit growers never have been sure of these things. They are the things which have clouded the eyes of the pessimists all the way from the beginning. If Californians had not brushed them away and always clearly seen the sunrise, California would still be in Mexico. The way to go with fruit is to go ahead. If we need slowing down a little the nurserymen will do it for us. They are doing their best both for quantity and quality of trees to plant, but we have to doubt if they can possibly grow enough to supply the planting demand this year. They are in danger of spending all their profits in hiring stenographers to answer buyers' letters and return their checks. We are planning to get our share of the business by charging nurserymen advertising rates for announcing that they have nothing to sell. We have raised the price of our book, "California Fruits and How to Grow Them," to $4 per copy, to get ourselves off the trail to the poorhouse. The fruit industry is going ahead; if you wish to go with it you had better get your stuff aboard early!

QUERIES AND REPLIES

By the Editor.

Inquirers Must Give Full Name and Address.

Answered questions also on other pages.

Pruning Old Apricot Trees.

To the Editor: I have lived and ranched in the Sacramento, Santa Clara and San Joaquin valleys, but around Selma is the only place that I have lived where they do not prune apricots. I have an apricot orchard of six acres and the trees resemble weeping willows. They are set in rows 20 feet apart and some of them are 30 to 35 feet high. Last year I took 17 tons of dried apricots off the six acres, which was the only crop it ever had. This year I had half a ton. The crop generally runs from one-half to two tons for the six acres. What do you advise in the way of pruning to get a larger crop? Some people tell me they allow the trees to grow that way so the frost wont hurt them. We use smudge pots. Is there any other reason why we should not prune apricots the same as peach trees? If I pruned back, lots of the limbs of 2 and 3 inches in diameter would have to be cut off. Do you advise painting the sawed limbs and with what?—C. W. C., Fowler.

You will average more apricots from trees which are not pruned like peaches, and there is not the same reason for cutting back apricots, because the fruit comes all along the old wood as well as on new growth, while the peach bears only on new wood, and therefore you need to keep growing it. Besides, the apricot wood is stronger, and although branches will break off the tree will not often fall to pieces as a peach is apt to do. As for getting the fruit above the frost by growing high trees, that is an old doctrine in some parts of the San Joaquin, and they have plenty of time to try it out. We presume there is truth in it—in places where flow of cold air hugs the ground and is quiet about it. We are not sure that such trees as you describe are the best trees to have, and we would not be inclined to start an orchard toward such trees, but having them we should not try to get them into another style by cutting back too much. We should thin out branches where they are too entangled and too many to be thrifty, or where we could give a younger and stronger one the right of way, and we would cover all large cut with asphaltum Grade D. In the case of a heavy crop we would use props unless you can get price enough to enlarge the fruit by thinning. It is, of course, possible to give old apricot trees new heads, but it takes a lot of labor to reform them and keep the stubs from rotting and the trees from becoming too thick. We cannot say how long we would be growing apricots where we only got a whale of a crop once in a life time—but that is another question.

Summer Topping of Raspberries.

To the Editor: I have a field of thrifty Cuthbert raspberries. Last fall, shortly after the first rain, about the middle of September, I cut off all the tops of the new canes just above the old canes. These new canes put forth numerous branches which grew six to ten inches before severe frosts stopped further growth. On account of a severe winter (17 degrees below at one time for three days) these new branches (not the new canes) were killed. This season the growth of new canes from the ground seems to be more numerous and thrifty than ever before, and the canes have grown higher. I do not know whether the topping last season or the severity of the winter is the cause of this. The berries are forming now, and the indications are that the crop will be about the same as last year. Can you inform me whether it is good to top the high canes now so the sap will go into the berries and help fill them out, or defer the topping until the time of trimming next February?—G. W. M., Portland, Ore.

It is a good idea to top new raspberry canes to get a growth of laterals which will give more fruiting surface and get it nearer the ground, to be more easily carried, and avoid long canes bearing near the ends and to be wind-swept. In frostless places in California such laterals will bear a crop at the holidays and a spring crop also, and then they are cut out. This would be impracticable with such winter temperatures as you have, but the promotion of laterals by topping would be still desirable for greater and more easily handled spring bearing. The topping should be done by pinching out the tip when the new shoot has reached the height desired so the force of the plant should go at once to making laterals. It is a waste to top off a lot of new cane and it might keep the plants active too late for frosty conditions. If the laterals get to growing too long, pinch the tips and get more laterals from them.

Collaring Gophers.

To the Editor: I have lost six or seven plum trees about six years old lately by being girdled by gophers. Part of them I discovered and put in bridge grafts, which apparently are keeping the trees going, but I am thinking about some way to prevent the gophers doing the damage. I read in the Press some time ago of a method of preventing complete girdling by nailing stripes of galvanized iron about two inches wide around the trunk just below the surface of the ground. Would a collar of earth saturated with say one-half crude oil and one-half asphaltum, placed around the tree below the ground and in contact with the tree, injure the tree? I think it would discourage the gopher.—W. E., Colfax.

If we wished to put on galvanized strips to prevent a gopher from "completely girdling" the tree, we would make them longer and nail them on up and down and not around. This would not endanger the growth of the tree and it would keep the gopher from going around the tree above or below the two-inch band. One cannot know just what would happen to the tree from such an asphaltum garter as you propose without actually trying it, nor does an abstract opinion of the attitude of the gopher towards it amount to much. Trees can be protected by enclosing the root crown and bottom of the trunk in a cylinder about a foot in diameter, made of 1 inch mesh chicken-fence—cutting 2-foot fencing in two lengths down the middle, leaving the cut-ends of the wire jagged and putting them at the bottom to keep the gopher from digging under—and burying the selvage top just below the surface. This will do it, but it is rather expensive.

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Precocious Potatoes.

To the Editor: We bought American Wonder seed potatoes—inspected seed. We dipped them in corrosive sublimate and planted on May 30. We have about 95 per cent of a stand, about 3½ inches high, and they are blooming. What is the cause of this, and is it harmful?—W. M. R., Sebastopol.

Our guess would be that the ground is too dry to carry normal growth, and they do what all weak plants are disposed to do—that is to break bloom. If the ground is not too dry, never mind the bloom; they will get over it. If it is dry, water is the only cure.

Thorny Thornless.

To the Editor: I planted four "Thornless Mammoth" blackberries. One has turned out to be thorny. Should this be removed; that is, will the others go back to thorns if it is left near by? I presume fall would be the best time to transplant.—E. N., Martinez.

No; the thorny habit is not catching by other of the same generation. Let them grow as they are until you get fruit (or do not get it), and then dig up whatever is not worth while keeping. Fall and winter are the best times for transplanting in California.

New Potatoes for Seed.

To the Editor: Are new potatoes all right for seed for late crop, or does it require last year's potatoes.—P. H., Vina.

Yes; if the new potatoes are well matured, as shown by the formation of good eyes. In using such seed it is desirable to expose them to the light in a partly shaded place until the eyes start short sprouts and the skin-color becomes greenish. They can be spread in the sun if lightly covered with straw to prevent sunburn, which is undesirable.

CALIFORNIA WEATHER RECORD

The following rainfall and temperature record is furnished the Pacific Rural Press by the United States Department of Agricultural Weather Bureau at San Francisco for the week ending July 19, 192.

Stations—	Rainfall Past Week	Rainfall Seasons To Date	Rainfall Normal To Date	Temperature Highest	Temperature Lowest
an Francisco	.00	.00	.01	67	50
acramento	.00	.00	.00	88	52
ed Bluff	.00	.01	.00	90	54
ureka	.09	.12	.11	64	50
San Jose	.00	.00	.00	80	48
Fresno	.00	.00	.00	96	55
San Luis Obispo	.00	.00	.01	78	46
Los Angeles	.00	.00	.00	88	58
San Diego	.00	.00	.00	78	61
Winnemucca	.00	.00	.00	92	46
Reno	.00	.00	.00	90	44
Tonopah	.00	.00	00	88	52

Power, Dynamite and Figs on Hardpan Land

Written for Pacific Rural Press by R. E. Hodges.

Four years ago a barren, disheartening "hog-wallow" area, covering thousands of acres made a monotonous ride for the traveler northward from Fresno. It was all underlaid with hardpan four to fourteen inches thick and averaging about 42 inches to the bottom. The thin covering of soil had grown grain, but had lost its fertility and never did have enough moisture-holding capacity for any but winter-growing annual crops.

Today, 9,000 acres of that hogwallow hardpan land comprise what is probably the largest fig orchard in the world, growing thriftily and in a perfect state of cultivation, being all perfectly leveled for irrigation.

Hundreds, perhaps thousands, of homes will ere long grace the once-desolate landscape; and at least one new town is already laid out in the center of the tract. Three thousand acres more are to be planted to figs, all on adjoining land. Four thousand acres were planted last spring; one thousand will be planted next spring.

Dynamite and power machinery of many kinds have made the transformation possible. J. C. Forkner and his associates furnished the capital. W. M. Bacon, Prof. Ira S. Condit, and their associates furnished the experience, supervision, and technical knowledge. Mr. Bacon has been leveling hogwallow land for 25 years. In the past 15 years he has leveled 15,000 acres. He has tried every available leveling device and has designed some of his own. He has tried at least a dozen different kinds of tractors for power. The beautiful vistas of fig trees extending in all directions from headquarters bear ample testimony to the wisdom and efficiency of his work. Prof. Condit specialized on figs while he was connected with the University of California; and probably no one else knows more about their peculiarities and requirements. Still there is much to learn about possible new varieties and their adaptation to California conditions. He is therefore charged with the duty of digging up all the new ideas he can, testing out untried methods and propositions, and in all ways improving the fig industry as it applies to Fresno conditions and American markets.

Dynamite and Power Machinery.

'Twas a big enough job faced five years ago by Mr. Bacon. He was to level 2,000 acres, dynamite holes for somewhere near 100,000 trees, and get them planted so they would thrive throughout the future. The trees were to be a monument to his faithfulness in performance of duty, even to the third and fourth generations after he shall have completed his task. Surely he must do it well!

The four or five seasons of work have developed operations in power farming to a magnitude probably unequalled elsewhere. Sixty tractors have been used this season on the 9,000 acres. Ten hole-drilling machines operated by gas engines have been used to prepare for the blasting. Something like fifty tons of dynamite have been well used this year alone. Half a million trees are growing in nurseries in the Tulare county frostless belt, to be planted in the future. An experiment station in charge of Prof. Condit occupies ten acres and over one hundred varieties of figs collected from all parts of the world are growing here. Eighty per cent of the commercial planting is of the well-proved Calimyrna variety, most of the remainder being of Kadotas. A permanent water right for irrigation has been secured from the Fresno canal. The entire 9,000 acres has been sold except 1,000 acres, which the company intends to keep permanently. Most of it was sold before the trees were planted. The sales system was to require a certain payment down, after which no more payments of principal or interest are to be made for five years. During the following five years the fruit is expected to take care of payments. Meanwhile, most of the new owners are paying the company for preparation and care of the orchards on annual contracts. Very few individuals could do the leveling, planting, or even the cultivating as cheaply as they can employ the company with its fleets of tractors and other power equipment and regularly employed labor.

Tractor Leveling Most Economical.

Leveling cost averaged about $35 per acre four years ago. It now averages $50; though economies have been worked out. Big tractors and power levelers were tried at first; but on this hummocky land they proved unable to turn quickly enough, according to Mr. Bacon; and on the short hauls needed here, even horses and Fresno scrapers proved cheaper per acre (when they were available). But Mr. Bacon has for many years been seeking something better for leveling than the four-horse scrapers. After all of his scheming and trying out of every method that might prove better, he is now convinced that with a fleet of small fast tractors, followed by Fresno scrapers, assigned to one field, and four-horse Fresno scrapers assigned to another, the tractors would get the work done $5 an acre cheaper than the horses. It has proved so in his experience on the J. C. Forkner Fig Gardens, in spite of the fact that two men are used on each tractor outfit and only one on a horse outfit. The tractors work fast, their drivers take more pride in the work, the scraper men have to keep humping in the dust, but are paid enough to keep them satisfied, and the tractor drivers frequently change off with them. The tractor outfits have proved not only cheaper and steadier, and able to turn as short as a team, but under present feed, horse, and labor conditions there is a definite value in the surety of getting the work done on time. Each fleet of six to ten tractors is under charge of a field foreman, who has an important duty in keeping them all productively busy without waste motion and without getting in each other's way.

"Powerful" Fast Dynamiting.

After leveling and cultivating the fields, they are staked for the trees and power drilling machines make holes for blasting. Each machine is built on a wagon, which also carries a gas engine to furnish power for the drill. The auger is raised and lowered by a hand lever, operated by a driller. He can tell by the feeling and the speed just when the auger breaks through hardpan. He then raises it out and proceeds to the next hole. When no delays are encountered, one machine can drill 60 holes per hour, but in practice anywhere from 200 to 500 holes are drilled per day. The driller, knowing conditions of auger and soil, judges how much dynamite is needed for each hole and drops it there. Never less than a pound of 20 per cent dynamite is used in dry weather. One and a half pounds are frequently used. In wet weather Mr. Bacon says they use equal amounts of 25 per cent dynamite. Enough dirt falls into the holes so it needs no filling generally to place dynamite halfway between the top and bottom of the hardpan. The dynamite pulverizes the hardpan in a hole about four feet across and cracks it in a radius of a dozen feet so that tree roots can go through.

The blaster lets no grass grow under his feet. He shoots the holes as fast as they are drilled. He carries capped fuses 18 inches long in his belt. The cap is inserted in one of the sticks of dynamite, the hole is tamped, fuse lighted, the next hole set tamped, and lighted, and the blaster is at the second hole away by the time the first shot explodes. He always aims to get there, too.

Trees Well Started Downward.

After blasting, the chunks of hardpan are dug out; and if the job has not been well done, it is drilled again by hand and shot a second time. Blasting is started in August or September. Planting is done from late in the following January to the middle of May. Meanwhile dirt in the holes has been well settled by rain and irrigation so the trees will not settle afterward.

Though canal water costs the same whether used or not, the trees are irrigated only the first year, when they need help getting a start. Some trees on a hardpan knoll of this orchard have made a "marvelous" growth with never more than a bucket of water applied to them. Their roots are under hardpan.

"I don't consider the surface soil of any food value to the trees," says Mr. Bacon. "It has been thoroughly demonstrated all over this country that figs stay green the year around and produce big crops only after their roots have gone deep. Generally unthrifty trees will be found to have roots only in the surface soil. But I have found fig roots 20 feet deep in the ground through holes blasted in hardpan; and those roots were from three-year-old trees! A fig tree has no tap root, but has many spreading roots which will go far if moisture and soil conditions permit. Under our hardpan there is a 16-foot depth of moist red loam. After the roots get into that, the trees grow right off. That is why we withhold water but give good cultivation for two or three years after the first season. It makes the roots go down through the cracks and holes in our hardpan. After they become well established below, the trees thrive even though irrigation and cultivation might be neglected. However, a fig tree responds to cultivation; and enough moisture without making the ground soggy is necessary after they come into bearing."

For irrigation of the newly set trees, a tractor ridger runs a levee close as convenient on each side of each row, and water is turned in. When it has run to the far end, a levee is shoveled across by the irrigator back of each tree, thus making basins which are successively filled with water. The trees must not and do not stand long in open water.

Plenty of Caprifigs.

Every plot of five to ten acre of Calimyrnas has 4½ per cent of caprifig trees. Planting the capris separately is considered to make less work in caprification than to graft branches of capris into the Calimyrnas. This is because not all of the trees carry over their mamme crop, and there would be no surety of caprification without inspecting every tree. It is easier to gather all the caprifigs that are needed and systematically place a handful in a basket in each Calimyrna tree.

Kadotas Heavily Planted.

The Forkner people are enthusiastic about Kadotas. One 500-acre tract close to Fresno was planted with 50 Kadota trees per acre and sold within 90 days in acre tracts to Fresno people as a suburban subdivision. It has irrigation water piped to each acre under pressure, and attractive homes are being built on it. The townsite of Fig Gardens laid out around the headquarters, also contains 200 acres of Kadotas. Other small tracts of this variety are already in bearing and the first crop was just being finished when we called in mid-July. These figs are especially designed for shipment and for preserving.

Fleets of Tractors for Cultivation.

Owners are of course at liberty to do their own cultivation, but most of them prefer to pay the company for it. Two years ago the company charged $20 per acre per season and lost money. Last year the charge was $25. This year it is $30 per acre. Mr. Bacon feels assured that this will cover the cost; and he states that it will all be spent for the purpose. The company owns no tractors, but employs them, as many as sixty this year, all under direction of the field superintendents, of whom there are eighteen the year around, each having responsibility for cultivation of a square mile of orchard or thereabouts. Each superintendent is assigned enough tractors to keep his tract in the beautiful condition which the writer recently observed. If, by reason of superior ability of his drivers, he gets his section into first-class shape while another Superintendent is having trouble, some of his tractors are shifted to the belated section; and thus, due to the big organization, the whole project is kept in fine tilth. No larger tractor than 25 or 30 horsepower is used in the cultivation, and no bigger implement than a ten-foot double disk.

Ranch Experiment Station.

We have mentioned Prof. Condit's experimental work. Of the ten acres at his experiment station on the ranch, five are set aside to test out new varieties. Many such may be found with certain qualities better developed than our present commercial varieties. There is much for America to do in improving quality, pack, etc., in order to compete in American markets with figs produced around the Mediterranean by cheaper labor under less sanitary conditions.

Kadotas are planted 15x20 feet on the experiment station to be budded over to all sorts of varieties. Over 100 varieties obtained from Government agents and various other people are being grown in nursery rows. Many capri varieties are being tried out on the same five acres besides a special 20-acre capri-orchard. It is easy to discard some of these; but it will take several years' trial to determine the peculiar values of others. Fifteen rows of Calimyrnas on the experiment station are reserved for pruning experiments, high and low, and none at all, winter-pruning and summer-pruning. Fertilizers are to be tested in a small way to indicate the desirability of larger experiments on the main orchard. Darkling ground beetles have been contrarily attacking the green fig leaves on young replants; so grasshopper poison is being tried on them. A couple of weeks in July are being spent studying root growth of the orchard trees, both above and below the hardpan. Moisture conditions especially with reference to irrigation are being studied in this connection.

How to Ship Fresh Figs Long Distances.

One of the baffling problems which it is very important to solve is that of packing fresh figs for long-distance shipment. Mr. Bacon says that a large part of the crop can be marketed fresh in the east if suitable packages and transportation facilities can be obtained. Prof. Condit has packed some figs with the Sykes cardboard partitions. He is holding some and shipping some.

Thus in a big specialized way the problems of the whole industry are being studied at this commercial plantation. The development of raw hogwallow hardpan land into highly productive fig orchards is a worthy contribution to the future happiness and prosperity of the State.

SAN LEANDRO'S NEW CANNERY.

San Leandro has entered the field with another up-to-date cannery, built at a cost of $150,000. It is now under full operation packing apricots. A public dance celebrated the opening. L. J. and Julian C. Toffelmeier organized the new industry. They are associated in the new and promising industry by Mayor Pelton of San Leandro and J. E. Faustina.

The Peach -- Its Enemies and How to Get Them

Written for the Pacific Rural Press by W. S. Killingsworth.

The prospective orchardist who has decided to specialize on peach growing without having first familiarized himself with some of the important points to be considered, may find that he has taken upon himself a contract that will require more than a passing thought. The peach, to those who know it best, is a target for practically all the ills, ails, pests and insects that any member of the horticultural family is heir to. The numerous casualties so often found in their wake constitute an important obstacle to the profitable cultivation of the peach. This is true not only in the large commercial orchard, but also in the small home orchard, consisting of only a very few trees. Wherever the peach is grown, there may be found one of its worst enemies, the borer; no root-crown or root is too hard to prevent the "diamond point" of this horticultural burglar's entrance. The next to do its "bit" in the line of destruction is the scale insect to be found on the trunk and branches of every orchard throughout the land. There are exceptions as to the amount; where an orchard has been carefully, systematically and annually sprayed, the scale insect is less liable to be found in any quantity, but they are so persistent in their efforts that their hiding places are sometimes overlooked during the process of spraying; like a smoldering fire, the first opportunity there will be an outbreak.

Two Hundred Species to Contend With.

We are entitled to our opinion as to the correctness of any statement. However, we are reliably informed that there are something like 200 species of insects known to feed habitually, or occasionally, just as the notion strikes them, on the peach. Intelligent insects, they know a good thing when they see it. It may be said that comparatively few of this great number of insects are at present seriously destructive, but the ravages of the peach borer, the San Jose and other scales, the peach twig-borer, the curculio, etc., bring about in injury to the tree and fruit a loss in the United States of several million dollars annually. This loss could be reduced to a minimum, as is being demonstrated annually by the experience of numerous individual orchardists, who, by proper care and attention, have materially lessened their losses.

Suggestions for the Uninitiated.

The orchardist who has acted wisely in the care of his trees against insect pests, gives like care and attention to pruning, cultivating and irrigating, where such is practiced. It is to those who are taking the initial step in orchard ownership and care that we wish to reach with the suggestions herein contained, as too much stress cannot be placed on the importance in peach culture—not to overlook other varieties, for our suggestions apply to them as well—of maintaining the tree in a thrifty and vigorous condition by frequent cultivation, fertilization if necessary, the thorough pruning out of dead or otherwise useless wood, and the prompt removal and destruction of diseased and dying trees. Orchard "janitorship" of this character does much to prevent insect injury by maintaining conditions unfavorable to the development and spread of the insect. To those who have had any experience in the handling of Eastern peaches, explanation as to the worm so often to be found is unnecessary. However, it would not be amiss to relate some of the disadvantages of having the peach worm or curculio take possession of peaches, whether the fruit is intended for commercial shipping, canning or drying. The curculio is said to be a native American insect, and was among the first to attract the attention of the early settlers by its depredations on the plum, peach, and other fruits grown in the family orchard. The winter quarters of this crusader is located under trash on the ground in and around the orchard; as a matter of fact, it is at home at any point where weather conditions are favorable, and there remains until the fruit buds begin to swell in the spring. Then they emerge from their winter quarters, awaiting the setting of the fruit; then they begin their attack for feeding and laying of eggs. Feeding and preparations for raising a family continues for several weeks; the number of eggs deposited depends upon climatic conditions and the kind of fruit attacked.

Evolution of the Curculio.

From three to five days, according to temperature, are required for the eggs to hatch. Then the offspring gets busy gaining an entrance into the fruit, where it feeds usually around the pit in stone fruit, until completing its growth. After the peach is formed and begins to take on growth and the ground beneath the trees is covered with young fruit, the indications are that the larva is getting in its deadly work; and much of the infested fruit, if it does not drop earlier, falls later, which is commonly spoken of as the "June drop." This is just about the time the pit begins to harden. When the larva reaches the age of "consent," regardless of its location—in the fruit, on the tree, or on the ground, should it be in the former, it drills its way out out and goes into the ground, where it pupates. Some little time is required for the completion of the pupal stage, at which time a colored beetle puts in its appearance. After the beetle emerges from the soil, it feeds on the fruit and foliage of various fruit trees until "driven to cover" by cold, damp weather. Injury to fruit by this insect is due to the punctures made by the beetles in feeding, and also to the work of the larva within the fruit.

Methods of Spraying.

Should the fruit attain much size before it is punctured, it may remain on the tree, and if the punctures are numerous it may become knotty and misshapen as it grows, making the fruit an undesirable shipper. Often gum may be seen exuding from the punctures. As the curculio feeds freely on the foliage and fruit of the plants used for egg-laying purposes, injury to both fruit and foliage may be greatly lessened by thoroughly spraying the trees with arsenical poisons. However, care must be used in the application of these poison sprays, as there is danger of injuring the foliage to the extent that there may be a heavy drop, thereby exposing the fruit to the heat, which would naturally be injurious and might possibly cause it to prematurely drop. There are cases where the growers habitually spray their trees with arsenical poisons for the curculio; in localities where it has been established that by their use there is no injury resulting therefrom, the practice is to be recommended. Arsenate of lead has the advantage of adhering well to the foliage, and if used, it is likely to be less injurious. To be reasonably effective in killing the beetle, it should be used at the rate of about 2 pounds to 50 gallons of water. Should Paris green be used it should not be stronger than 1 pound to 150 or 200 gallons of water. As these poisons are thoroughly charged with caustic properties, which are liable to scorch the tender foliage, it would be well to reduce that action by adding to the liquid the milk of lime, which is made from slaking from 2 to 3 pounds of stone lime; the poison may also be used in Bordeaux mixture, which it is proposed to use in the control of fungous diseases. To control this pest several applications of poison are necessary, as it will be time and material wasted in one or possibly two applications. The first spraying should be applied immediately after the blossom falls, and other applications should follow at intervals of 8 to 10 days. The reference here made to the curculio is not that it is at present a menace to the fruit industry of California, but that it might become so at a moment's notice. Years of experience with its onslaught in the peach orchards in the Eastern and Southern states has prompted the writer to describe its workings and suggest remedies for checking it, should the orchardists of this state be so unfortunate as to be called upon to fight it.

The Peach-Borer an "Undesirable" Native.

In passing we mentioned the peach-borer as a leading menace to the peach industry. Regardless of location, this pest is to be found. More nursery stock, before and after its being regularly installed in the orchard, has found its way to the "crematory" than from almost any other source known. However, the tree is subject to attack throughout its entire life, even when it becomes an ancient relic. The injury is done by the borer, which feeds on the soft inner bark at the crown of the root. The presence of the borer is indicated by the exudation from the base of the tree of a brownish, gummy mass, more or less mixed with soil, which during damp or rainy weather, by the absorption of water, becomes like jelly in formation.

The peach borer, like the plum curculio, is not of foreign extraction. It is a native "animal," appearing in all sections of the United States. We remember, back on the plantation, having noticed its handiwork in the old volunteer stock that stood in the fence "jams" around the garden spot, this gelatinous fluid would exude in large quantities at the base of the tree; and as works on horticulture were yet to be compiled, we knew not from whence it came or what of its injuries. If the tree "sickened" and died we took it for granted that its time had come. Horticultural history records it that until the peach became a universal backyard product, the borer usually dined on the wild cherry and wild plum, but when the peach hove in sight it transferred its affections; hence this "love affair" has cost the peach growers of not only California, but the nation at large, the equivalent of a Liberty Loan. In the construction of their living room they are well protected during the winter months, but when spring approaches their appetite returns and their invasion is resumed.

After the borer is allowed to gain entrance by penetrating beneath the bark the use of washes or sprays is of no avail as the evil is too deep-seated to be disturbed. The old-time process of digging them out is by far the best and most direct measure. When it has been "wormed" out, the danger is over, provided, however, the damage was not too great before the discovery was made. The best time for worming is in the spring or early summer, and often again in the fall. Where a wound of any importance is made in reaching this evil it should be treated with some one of the disinfectants and then protected by the application of soft grafting wax or paint. As a further protection against invasion, the earth might be drawn up around the base of the tree for several inches, forming a mound which in all probability prevents the entrance of any newly hatched larva.

The Widespread San Jose Scale.

The last invader we wish to call attention to at this time is the San Jose scale, and to appreciate what this pest is, what are its accomplishments and how hard it is to abolish, the orchardist must, at some time, have had dealings with it; and if his dealings have proven successful, nothing that we could offer would change his mind as to the course to pursue in ridding his orchard of one of the greatest enemies to horticultural life. We feel that we are safe in the assertion that no orchard is free from it, therefore every orchardist is familiar with its mode of attack and the remedy for attacking it. However, we will here give a formula that is now being universally used, and in its application success is being obtained. It is the well-known lime-sulphur solution. It is to the orchard what Mrs. Winslow's soothing syrup is the family nursery. This spray is applied in the spring before the fruit buds are open, or, in the case of badly infested orchards, both in the late fall and spring. In sections where peach-leaf curl prevails the spring application will almost entirely prevent it.

The Necessity of Systematic Pruning

(Written for Pacific Rural Press.)

A Bartlett pear grower located in the Sacramento Valley has an 8-year-old pear orchard that bloomed profusely last spring, but when the petals fell the young pears followed suit, hence his crop, he claim, will fall far short of normal. This grower, unable to diagnose the cause for such, called at the office of the Pacific Rural Press, and related his misfortune. There is always a reason for failure, whether it be in a fruit crop or in financial circles, and to arrive at the root of the evil an investigation is in order. We were told that at the age of five years the trees matured a crop in conformity with their age. The following year he ran short of water for irrigating purposes and the trees showed the bad effects of such, but prior to the blooming season of this year he gave the trees the necessary irrigation. At the proper time they were sprayed with lime-sulphur solution. There being no invasion from thrips the oil emulsion and nicotine spray was omitted. His "chart" so far was in accordance with the rules governing the care of trees at that time of the year—well irrigated, sprayed and cultivated. There was just one more point upon which this failure to function might hang—pruning. We questioned him on that subject, to find the seat of trouble, but very little pruning had been done; as a matter of fact he stated that the growth was such that a bird would find it difficult to build a nest in any one of the trees. No further explanation was necessary. A fruit tree is a "machine" to produce fruit and not timber, so our advice was, at the proper time next fall—if he was not familiar with the art of pruning, to have it done by some one who knew how, but under no circumstances turn a wood-butcher loose in his orchard. It stands without reason or argument that pruning should be a regular, rather than an irregular orchard operation. This, most successful orchardists know to be true from observation and experience, though the reason therefor may not have been clearly understood.

Trees left unpruned for several years usually seem to demand the removal of some of the larger branches or limbs. Such will stimulate new vegetative growth, rather than invigorating the older fruiting wood; and new vegetative growth in trees of this sort is as apt to increase as to diminish difficulties. If the pruning that is to be offered trees is to be such that will help establish and maintain rather than disturb a proper balance between vegetative and fruiting wood, it must be attended to every year.

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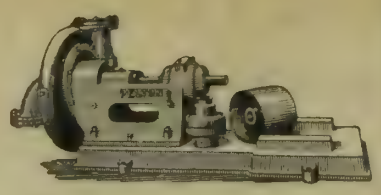

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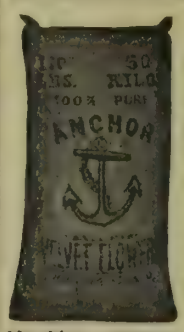

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Here and There in the Fruit Business

Foreign Dried Fruit Holdings.

The report having been circulated that the warehouses in London were filled to their capacity with dried fruits brought about an investigation by the Department of Commerce at Washington, D. C., and through the consular agent stationed at London, there has been published by the Department some very interesting comparative figures. They show that among the stocks of dried fruit on hand April 30, 1920, were: Prunes and plums from France, 1918, 79 packages; 1919, 50 packages; 1920, 1699 packages. From California and Oregon: ½ cases, 1918, 6,861; 1919, 81,319; 1920, 228,443. In packages: 1918, 31; 1919, 2,493; 1920, 10,601. Dried apricots, ½ cases and boxes: 1918, 563; 1919, 23,851; 1920, 36,955. Dried pears, ½ cases and boxes: 1918, 1,591; 1919, 2,111; 1920, 18,073. In addition to the above stock on hand there were 18,029 tons of currants and 183,340 packages of figs from Smyrna and Turkey. It is not to be supposed that a corresponding amount may be found in the other markets of Europe. However, these figures are of not sufficient importance to cause undue alarm.

Turlock Melon Shipments Under Way.

The Turlock melon district is now a busy place. From a few small shipments by express, next came shipments by express cars, and now the freight refrigerator car is in demand in which daily shipments are being made. Last season the first refrigerator car went out July 8, this season the 20th. All of the large shipping firms are busy. Help is plentiful. Shook for the making of crates is on the ground, which relieves the mind of the shippers, as that has been a serious matter the past two seasons. In addition to outside help the boys from the high and grammar schools are assisting in making crates, which they find to be remunerative—$4 to $6 per day. The railroads have increased their crews. The refrigerator car lines are filling the side tracks with cars that there may be no shortage. The estimated crop for this season is 3,000 cars. This means business for Turlock for the next 60 days.

Still a Chance for the Wine Grape.

The wine grape is not so deep in the depths after all. At least, the California Wine Association still has confidence in it. At their extensive plant at Winehaven it is preparing to make grape juice on an extensive scale. A noteworthy improvement is being made in the installation of a refrigerating plant of 2,500,000 gallons capacity, which will enable the association to keep that quantity of juice in exactly the state it leaves the presses by storing it where the temperature is kept constantly at 30 degrees.

Sonoma Apple Picking Rushing.

The Gravenstein apple harvest at Sebastopol is now under full headway. Many of the larger ranches have picked over for the first time, which is a relief to the tree and will enable the smaller fruit to grow. The fruit has colored rapidly and has sized up better than for several years past, and predictions have been made by the growers that this season's crop will be the best ever taken in regard to quality, price and distribution. The Sebastopol Apple Growers have opened their packing houses and with their improved method of sorting and grading they expect to make a record in the efficient handling of the fruit.

Trees on Division Lines.

To the Editor: In your issue of July 3, "A. J. A.," Stanislaus county, objects to a neighbor planting to a his line. For his benefit I will say I recently read in the S. F. Chronicle of a judge in this State (San Mateo county, I think) giving a decision against that practice, as the neighbor had complained that the eucalyptus trees damaged his land. He could get no redress from his neighbor, so at last took the case to court. The judge agreed with him and ordered the trees removed.—T. F. H., San Francisco.

A Real Paradise.

In the southern end of the Santa Clara Valley west of Gilroy and Morgan Hill back of a range of hills lies the Paradise Valley. This little section is about a mile wide and perhaps ten miles of its length is devoted to prunes, walnuts, some grapes. In no section of the state have we seen better cultivated groves and none with better crop prospects. Especially is this true of the walnut groves.

Record Sale on Bartlett Pears.

The first bona fide shipment of Bartlett pears from the State went from Walnut Grove on the Sacramento river and were sold in New York July 9 for $7.25 per box. This is a record sale, but of course it is not expected that such prices will continue, but all indications point to splendid prices throughout the season.

New Method of Drying Berries

Dried berries of many kinds are excellent for pies, puddings and sauce. Select berries which are fully ripe but not overripe.

Berries to be dried should be picked in the early morning hours. Do not allow them to stand in the sun or in deep layers in picking vessels.

No attempt should be made to wash the berries intended for drying, as the wet berries will soften and mat together in the drier. Spread on the trays, holding the vessel of berries with one hand, and, while slowly pouring the fruit, use the fingers of the free hand to spread them in a close, uniform layer one to two berries deep. Protect them from insects. Avoid all unnecessary handling and rough treatment, as crushed berries spoil the appearance of the finished product.

Do not attempt to pick out leaves, bits of stem or green berries. These are readily removed after the berries are dry. Raspberries and Logan blackberries require careful handling, as they are liable to crush or flatten out when first heated. Spread them in thinner layers than other berries.

As rapidly as the trays can be spread, place in strong sunlight if they are to be sun-dried, as they can be in most sections of the United States, or in a warm evaporator if artificial heat is employed. With artificial heat the initial temperature should be from 135 degrees to 145 degrees. This may be gradually increased when the fruit is two-thirds dry to 150 degrees, with any berries except Logan blackberries and red raspberries. These should be started at 130 degrees F.

When the berries have dried sufficiently to be stirred without crushing, go over the trays and break up any thick clumps which are drying too slowly. The fruit is dry when it begins to rattle somewhat on the trays and when the berries no longer show moisture when crushed between the fingers.

When the berries are dry, place in a large wooden or pasteboard box covered with muslin to exclude insects. Pour the warm berries directly into this box as they come from the drier, and every time a new lot is added stir the whole mass thoroughly together. The berries will at first become quite moist, but they will then gradually lose moisture until they become dry and hard to the touch. When ready to be stored permanently, return them to the drier or oven and heat up to 180 degrees for two or three minutes to destroy any eggs of insects which may be present. Place immediately in sealed containers and store in a dry, warm place.—United States Department of Agriculture.

Timely Work in the Orchard

(Written for Pacific Rural Press by W. S. Killingsworth.)

The Sowbug a Menace.

Should any of our readers doubt the existence of the sowbug, we can produce the evidence, and it's not a day's travel from the bay district either. There seems to be an exceptional birth rate this season. We have noticed their invasion in certain localities to be far greater than in years past. Especially is it the case in damp localities where they are found under thick vegetation in the orchard, garden and greenhouses. Their principal place of attack is the roots and foliage where they congregate in large quantities. As a rule, their attack on growing vegetation is of little consequence; however, many plants growing in greenhouses may be attacked. Mushrooms are a favorite with them. In greenhouses the best remedy is a thorough fumigation with hydrocyanic acid gas at the rate of ½ ounce cyanide to every 100 cubic feet of air space. If the greenhouse is very tight the cyanide should be reduced to ¼ ounce to avoid burning the tender foliage. Slices of raw potatoes, carrots, or other vegetables rolled in Paris green and placed in the haunts of this pest will prove effective in the greenhouse, as well as in the garden, cellar or other places.

A Chrysanthemum Pest.

The fanciers of that, the most beautiful of the autumn flower garden productions, the chrysanthemum, have their troubles also. In by-gone days we prided ourselves on having the most beautiful collection of chrysanthemums in our home town, but alas! our pleasure in the production came suddenly to an end, by the appearance of what we afterwards learned to be the spotted cucumber beetle. This pest gained passage into the buds long before they matured into a full-grown flower, to eat out the very heart, which of course destroyed the beauty of what would have been. The adults feed upon the foliage, buds and flowers, riddling them with holes and producing sickly, ragged and unsightly flowers. To control this pest, poisoned sprays should be used. Very effective ones are such as arsenate of lead and Bordeaux mixture, which may be procured ready for use at any one of the flower and seed stores. The pests may be picked off by hand and destroyed, but as they perform the major portion of their work before the bud opens it makes it impossible to reach them in that way. Plants should be sprayed as soon as buds begin to form.

Clean Up the Spray Machine.

Now that the spraying season is over, don't neglect the spray machine by running it under a convenient shade tree, or a lean-to of the packing shed and there allowed to stand until again called into service next winter or spring. There is too much money invested in a good machine to allow it to be put out of commission from exposure. Aside from the exposure the machine should be thoroughly cleaned by uncoupling every joint of pipe, unscrewing every nut, lifting every valve and drawing every rod. Thoroughly scrape and cleanse all particles of lime, sulphur and dirt from every portion of the metal work of the machine proper. When this is done and the parts are thoroughly dry, oil the cylinders, valves, nuts, bolts and rods, then replace all connections, returning the machine to working form, then carefully house it. By doing this, at the commencement of the next spraying season, it is in perfect working order, ready for action at the first turn of the crank.

Thrips Affecting Dahlias.

We notice in many flower gardens where dahlias are being grown they are affected by thrips invasion. The eggs are deposited into the epidermis of the leaves usually on the under sides in the spring. They hatch in about 10 days and there are many generations a year. The thrips chafe the epidermis of the foliage, stunting the plants. They are difficult to control because of their large numbers, exceedingly small size and the tender plants which they infest. There are many sprays that will kill them, but the nature of the plant does not always permit of such treatment. Lime-sulphur or oil emulsions give very good results. One part of "black leaf 40" to 2,000 parts of an oil emulsion or a miscible oil spray will also give good results.

Walnut Assn. Increases Membership

(Written for Pacific Rural Press.)

Voluntary retirement of several independent walnut packers, shippers and brokers, as a consequence of erratic market conditions and the heavy importation of foreign walnuts laid down at prices lower than the cost of producing walnuts in California, is indicated by the recent organization of several walnut growers' associations, affiliated with the California Walnut Growers' Association.

During the present season three splendid new associations have been launched through the membership department of the California Walnut Growers' Association and another is being organized at Santa Ana. Its completion will give that city, which is regarded as the heaviest walnut-producing center of the world—two walnut association packing-houses.

The Contra Costa County Walnut Growers' Association has purchased a very desirable packing-house site in Walnut Creek, on a spur track of the San Francisco and Sacramento Electric Railway. A modern packing-house, similar in design to those long established in the Southern California walnut belt will be erected there in the very near future. This organization has for its officers Frank W. Bancroft of Concord, president; E. A. Smith of Concord, vice-president; A. C. Gehringer of Concord, secretary; G. M. Westcott of Concord and Frank M. Rutherford of Danville, serving as directors with the three officers of the Association. The organization of this association will no doubt stimulate walnut growing in the bay district.

Santa Clara County Walnut Growers have displayed remarkable wisdom is establishing their own association this year, since it will soon no longer be necessary for them to ship their crop to Southern California packing-houses, as many of them have done in the past at a cost of about $15.00 per ton, in order to enjoy the benefit of marketing their walnuts through the California Walnut Growers' Association.

Their association has for its officers: P. J. Martin of San Jose, president; George C. Payne of San Jose, vice-president; C. J. Parks of Lawrence, secretary-treasurer; W. M. Ayer of Mountain View, O. R. Prien of Morgan Hill, J. A. Conner and D. W. Luther of Santa Clara, directors. Secretary Parks states that a surprisingly large number of applications for membership have been received since the organization was perfected.

Walnut growers in Santa Clara and Contra Costa counties, as well as elsewhere in the State, will be interested in knowing that the California Walnut Growers' Association has changed its selling plan, which used to guarantee that the price would not decline for eleven months after prices were named. The new plan provides for a price guarantee only until arrival of goods in buyer's market, leaving the sales department of the association free to follow market fluctuations without facing the bugbear of possible refund.

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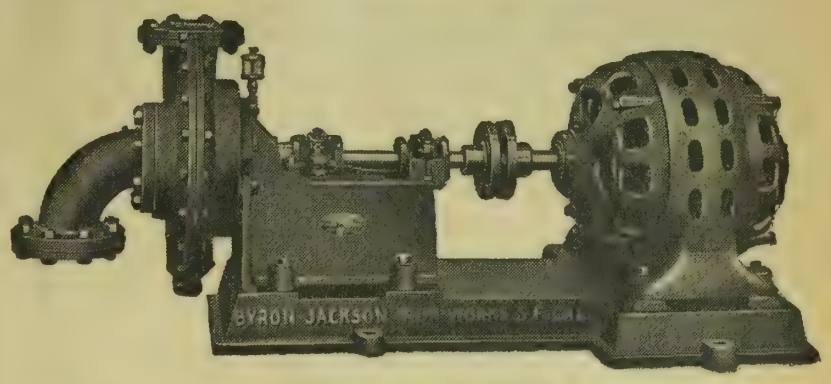

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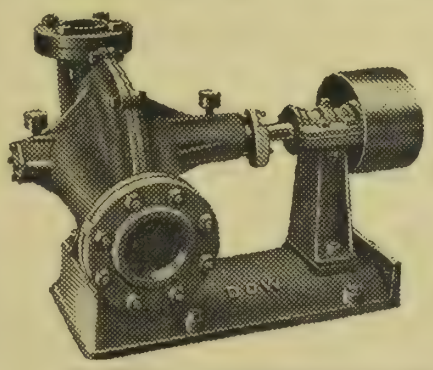

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Federation of American Farmers

(Written for Pacific Rural Press.)

The resolutions of the State Board of Directors of the Federation of American Farmers in the matter of declaring mineral oil and its products a public utility, and placing it under the authority of the State Railroad Commission, seems to have set the spark to the powder of public sentiment all over the State, and press and people have declared a general desire for favorable action in this matter.

Initiative petitions have been hurriedly circulated and widely and numerously signed for the purpose of having the proposition placed upon the ballot at the November election. There is little doubt that the people will have an opportunity to vote on the matter at that time and here is still less doubt that the measure will carry by an enormous majority.

* * *

This federation is in receipt of an increasing number of letters from farmers in other states asking for particulars of the federation's plan of organization, its aims and objects, and what it hopes to accomplish for the good of the farmer and the farming industry. A typical cry for help comes from Montana. It reads as follows:

"We saw your statement in a farm paper relative to the first real FARMERS' Union, which you have organized and have in operation in various counties in your State.

"We would like to have information and particulars as to what your organization is, its purpose and how it is organized. We are up against a great many things here which we want to see righted and from what the paper stated, your organization seeems to offer the best solution as to how we can gain at least some relief.

"We have one of the gratest farming and stock-raising sections here in the United States, but we are the worst handicapped, in more ways than could seem possible to be, but it is so for all that we must find some remedy.

"We would like to have a copy of your constitution and by-laws, any literature you may have and full information as to how we would have to proceed to organize in this territory, similar to or in affiliation with your organization."

The above is a fair sample of the letters this federation is receiving from eastern points and they show conclusively that the farmers all over the country are suffering from the aggressions and oppressions of strong organizations — financial, mercantile, industrial and political, while the farmer, disorganized in a thousand organizations (and this is not a paradox) is helpless in the hands of his exploiters.

* * *

There was a very large attendance at the meeting of the Board of Trustees of the San Joaquin county unit, held on Saturday, July 17th, at which time matters of the greatest importance to the membership were discussed. Invitations had been issued to the country members of the county board of supervisors—Messrs. Stuckenbruck, Ansbro and French—to meet with the board, get acquainted with the trustees, and talk over matters of mutual interest.

The invitation was accepted and on their arrival they were made welcome by Chairman Thomas and were introduced to all present, to many of whom they were already known.

After the meeting was called to order and the roll call had shown a quorum present, Chairman Thomas called upon D. O. Castle, chairman of the committee on roads, to address the meeting and the visiting supervisors.

Mr. Castle opened his remarks by stating that the slight friction which had developed at a recent meeting of the road committee with the board of supervisors, was caused by a misunderstanding of the words of a member of his road committee. He then stated the wishes of the unit in the matter for representation on the so-called advisory board to the board of supervisors on county road matters, and thought it no more than just that the actual working farmers of the rural districts, who composed this federation should be recognized in matter.

Supervisor Stuckenbruck made a brief address, in which he stated that "we are all farmers together and all interested in justice to the farming industry." He thought it no more than just that this organization, composed of working farmers, should have representation on any committee or board having anything to do with the public highways, and that he, for one, would certainly stand ready to appoint representatives of this organization on the advisory board at the proper time.

He was followed by Supervisors Ansbro and French, who contented themselves with endorsing what Mr. Stuckenbruck had said and stating that they would certainly be glad to meet the wishes of this unit in this matter. All of the gentlemen were warmly applauded for their assurances and kind words, and the visitors took their departure.

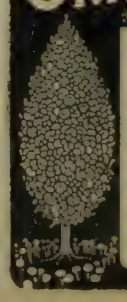
* * *

J. A. Goodwin, field secretary of the San Joaquin county unit, left for Calaveras county Sunday, July 18th, where he will spend a week or longer assisting that unit in its membership campaign. Mr. Goodwin is thoroughly equipped for such service as he is familiar with farm work from long experience, knows the farmers problems and is an enthusiast in the cause of the Federation of American Farmers. While his services are very valuable in San Joaquin county at this time he is loaned to Calaveras for the purpose of starting that county right and breaking in a man to continue the work.

DRIED APRICOT PRICES FIXED.

The apricot growers of the State are to be made happy by prices fixed by the Prune and Apricot Growers, Inc., for the present season's crop—18 to 33 cents per pound. Prices to be paid the growers are according to quality and size: Extra Fancy Moorparks, 33 cents per pound; Fancy Moorparks, 30 cents. Sunsweet quality, all varieties: Extra Fancy, 30 cents; Fancy, 28 cents; Extra choice, 26 cents; Choice, 24 cents. Growers' quality: Fancy, 26½ cents; Extra Choice, 24½ cents; Choice, 22½ cents; Slabs, 20 cents; Standards, 18 cents. Even though there is practically no export demand, the association has been able to name a slightly higher average price for this season's dried apricots than last year. In commenting on this material advance, H. G. Coykendall, general manager of the association, says: "The growers are very fortunate in being able to sell their 1920 crop of dried apricots for an average price slightly higher than the one they received last year. It is entirely due to the association that a market has been developed capable of taking care of this year's crop of dried apricots at the price named." Another feather in the cap of co-operation.

ORNAMENTALS



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Prunes in Lake County

To the Editor: I am directed by the Kelseyville Chamber of Commerce to request that you will amend your statement in the Pacific Rural Press of June 26, that "Lake county is no place for raisins and prunes commercially." There is practically no more loss from early rains than in other sections of the State. Two years ago, when there was so much loss from early rains, Lake county scarcely suffered any loss. Furthermore, Lake county does not suffer from fogs, which entail such labor and expense in stacking and unstacking during the drying season.

The sugar content of all fruits is considerably higher than most other sections (due, it is supposed, to constant sunlight), hence a few points in weight are gained in the dry product. This is especially noticeable in the care of prunes, and has been commented on frequently by buyers. An apparently, by sight, 80 prune, for example go 75 when graded. The saccharine test for grapes normally is 22, rising to 28, and our vintage grapes have been well thought of by the wineries.

Table grapes and Thompson Seedless grow well, but have not been grown to any great extent commercially. John Staheli, of Kelseyville, has built an up-to-date grape drier, and is prepared to dry large quantities of grapes. In these days of commercial driers, the Kelseyville Chamber of Commerce is at a loss to understand why grapes and prunes cannot be grown profitably in Lake county.

The following statistics show the faith we have in prunes, although we are more celebrated for our Bartlett pears: Bearing prunes, 38,500 trees; non-bearing prunes, 98,650 trees; planted this year, 16,200 trees; dried tons, 1920, 1400.

A ten-acre coming 4-year-old prune orchard was sold two weeks ago for $5,800.

In conclusion it is pointed out that F. G. Stokes, Kelseyville, our very efficient Horticultural Commissioner, will be furnished with the work up to date, and correct information regarding fruit-growing in Lake county. —L. B. H., Kelseyville.

To the Editor: I have dried prunes in Lake county for the last five years, and have so far not lost a pound on account of not being able to dry them. The September rain we had three years ago hit prune growers very hard. I had about five tons on trays which I had stacked during the four-days rain and on the fifth day we had the good old sunshine, while in some other places they had fog for another six days, which ruined their fruit. Of course, it is well for all prune growers to prepare themselves with small evaporators, at least ,as we do sometimes get early rains, as well as in other sections, but we are not troubled with the fog that usually hangs on for several days following the rains.

While Lake county is beginning to be known for its famous Bartlett pears, we would be pleased to demonstrate to anyone that prunes or other fruits can be grown equally as well.—W. E. Reichert, Lower Lake.

Why Sugar Beets Looked Patchy

(Written for Pacific Rural Press.)

Driving across the southeast corner of Los Angeles county in mid-July, we noted that nearly every sugar-beet field has patchy spots where there is either no stand or a very poor growth. We asked for a man who had obtained a good stand and an even growth. We were referred to Louis Krukenberg. On the way out we passed two acres of his beets, which really did beat any others we had seen. But Mr. Krukenberg has about thirty-five acres all told; and part of them are not much better than the others we had seen.

"What makes the difference," we asked.

"The good beets are on new ground, rotated in previous years with other crops," said he. "I have ten acres on land that has raised beets annually for eight years. The growth on that piece is not half so good now as on a three-acre piece that raised lima beans last year. But it takes just as much labor and land to raise a poor crop as a bumper crop. Over 75 per cent of people grow poor crops year after year on the same land.

"Irrigation makes a remarkable difference. Half of my beets are not irrigated; the other half are. You can tell to the line by the difference in growth. Last year I got eight tons per acre where I did not irrigate and twelve tons where I did. Four tons of beets per acre would pay profits on a lot of irrigating; though it is not all profit, for the sugar content was about two points lower in the irrigated crop. Irrigation made more hauling, and a lower proportion of sugar but more of it; and the expense of topping was less per ton."

Though Mr. Krukenberg and his neighbors could afford to irrigate several times, once per season is a plenty on good land, while twice is enough on old land, which has borne five or more crops of beets consecutively.

Subirrigation from furrows between the rows would be preferable; but would require good leveling previously. In practice the furrows overflow and the beets might as well have been planted flat, checked and flooded. This bakes the soil more or less, but very few fields are level enough to irrigate gate by furrows systematically.

Mr. Krukenberg irrigated after the crop was laid by in June five months after planting. On the old land, he says water should have been applied a month earlier also. Harvest will begin about the middle of August. Irrigation should precede digging by at least a month to allow the soil to dry off properly. Generally areas of poor growth are due to lack of moisture at the beet roots.

But poor stands are largely due to alkali. Last winter Orange county received not enough rain to wash the alkali down and to distribute it through the soil. Thus it was too much concentrated at the surface in various areas to permit the beet seedlings to become established. Rotation with other crops, more uniform moisture in the soil, and better alkali control, seem indicated as necessary to make beet fields generally as good as the two acres noted above.

Nepaul and Common Barley Compared

To the Editor: (1) What are the analytic contents of the barley?

(2) Has flour been made of it. If so, what quality of flour does it make?

(3) What is its food value for stock and poultry, and for human beings?

(Answered by Prof. Geo. W. Hendry, Asst. Professor of Agronomy, Univ. of Calif.)

In answer to the questions proposed in your letter of July 3rd, I would say: (1) the average chemical compositions of common barley and Bald or Nepaul barley are as follows:

	Common barley	Nepaul barley
Water	10.08	10.00
Ash	2.44	2.44
Crude Protein	10.69	11.97
Fat	2.13	2.50
Nitrogen, Free extract	69.89	70.08
Crude fiber	4.05	2.83

(2) Nepaul barley has been ground into flour and has been found to be in no way superior to common barley for this purpose. It contains no gluten, and, consequently, cannot be utilized for the making of light breads.

(3) In regard to the feeding value of Nepaul barley, the analyses show that it contains approximately the same amount of total animal food as does common barley, and that this amount is closely equivalent to the food material in wheat or corn, but is slightly more than either bran or oats. Nepaul barley contains slightly more bone- and muscle-producing feed than common barley, and for the production of fat in full-grown animals the analyses show Bald barley, common barley, wheat and corn to be practically equivalent. Ground Nepaul barley fed to young growing pigs has produced about one-half better gains than unground Nepaul barley. Ground Nepaul barley produced the greatest growth when fed to young pigs at the Colorado Experiment station of any of a number of feeds and one pound of growth was recorded for each 3.6 pounds of grain, and .8 quarts if skim milk. In the same experiment ground corn required one-half more food than ground Nepaul barley to make a pound of growth.

In feeding tests with lambs it was found that Nepaul barley made slightly more growth than corn when given in moderate feeds, but when the amount was raised above one pound per day per head, the lambs were unable to digest it and went "off feed."

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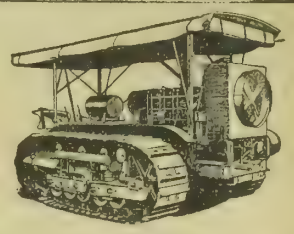

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Significant Agricultural Pointers

Turlock Field-Crop Acreages.

Some rather startling crop-acreage figures are given for the Turlock Irrigation District this season by Manager D. F. Mahaffey and Asst. Mgr. R. T. Farthing of the T M & G, Inc., The district had 23,875 acres of barley, which yielded a maximum of 40 sacks of heavy grain per acre. There were 1,495 acres of wheat, 2,894 oats, and 1,579 rye. There were 14,373 acres of white Egyptian corn and milo. Beans of the first crop occupy 4495 acres, and plans are made to plant 7,835 acres of beans on grain land. Not all of these were in yet early in July. Originally 7,571 acres of cantaloupes were planted; but this figure was reduced to about 5,000 due to the backward season, wind blowing the sand, etc. Casabas and honeydews are losing popularity. Only about 318 acres were planted. Sweet potatoes increased to 4,523 acres, but a great many plants died, so the 20 per cent reduction is now in corn. Perhaps the most spectacular increase is in alfalfa, which now occupies 30,144 acres, an increase of eight or ten thousand acres over last year. A lot of melon land was put back into alfalfa.

Squash Bug Easily Checked.

The squash bug is an ever-ready pest, putting in its appearance in the early advanced stages of the squash plant. The young and adults work on the young plants. They also attack the young foliage on the older plants. In the process of piercing the tissues, these bugs are carriers of fungous diseases, inoculating healthy plants from diseased ones. Most of the members of the squash family, including the pumpkin, squash and gourd, are attacked by the bug. To control them, picking early in the spring, as soon as the adults appear and begin egg-laying, is recommended. The vines are so tender that spraying is impracticable. The bugs may be trapped by placing in the garden boards, pieces of bark, or similar material, under which they may find shelter. They may then be captured early in the morning and destroyed. Thoroughly fertilizing and watering the land may so stimulate plant growth as to make the attack of the bug of little avail.

New Dry-Wheat Yields High.

Thirty sacks of Sperry No. 1 seed wheat were sown in 1918 by W. D. Cardwell of Madera county. This produced 457 sacks in 1919, averaging 151 pounds per sack. Last fall Mr. Cardwell planted about 325 sacks at the rate of about 65 pounds per acre on average sandy loam fallow. This crop is being harvested early in July and is running ten sacks per acre, weighing 138 pounds per sack, as stated by E. B. Young at the warehouse. It is lighter in weight this year, but is giving double the yield of Early Baart and Club wheat planted along side. It would have yielded a great deal more had not hot winds pinched it early in May, when it was in the dough. Some winter-sown Sperry No. 1 is yielding four sacks per acre, while Baart adjoining is yielding nothing at all.

Some More Hull-less Barley.

Hull-less barley claims attention sporadically here and there. Just now some interest is noted in Madera and Merced counties. A criticism heard in the latter county is that the heads break off too readily. In the former county one man planted 1½ sacks and harvested 35 sacks, averaging about 135 pounds as against 100 pounds for common barley here. The kernels are of bluish color and somewhat resemble wheat. Another man seeded about 60 sacks, but it is not yet threshed. The Globe Mills have been looking into it as a possible breakfast food. Planting is likely to be heavier here next year.

Sugar Beet Tonnage Increased.

Tonnage of sugar beets to be harvested in Los Angeles and Orange counties, beginning about August 1, will be easily 25 per cent greater than last year, as estimated by a representative of one of the big factories. Acreage is increased and crop conditions are better than last year. The Southern California Sugar Company of Santa Ana, which did not operate last season for lack of beets, will handle a good tonnage this season. Prices for beets are based on net sugar prices to be received by the factories, so the growers are morally certain to be more highly paid per ton.

Alfalfa Notes.

Alfalfa in Tulare county has been yielding heavy tonnage and returns, as told by J. I. Sheets of the Tulare Board of Trade. He visited a rancher early in July while the latter was cutting a two-ton crop. Prices have ranged from $18 loose in the field to $25 and $30 baled. Acreage of alfalfa in Riverside county was not greatly sacrificed to cotton except such as was too old or weedy to do real well, according to Farm Advisor R. E. Nebelung. Heavy yields are being cut here also. But at least one farmer is losing because he cannot get gas to run his pumping plant.

Merced-Madera District Fair.

A Merced-Madera district fair, to be held half-way between the two cities of those named almost on the line between those counties, and half-way between Fresno and Modesto, is the object of the Chowchilla Chamber of Commerce in appointing S. P. Pope to confer with all parties who might become interested. Chowchilla held a very successful local fair last year; and there is every geographic reason at least to hold a district fair here, as neither county has a fair of its own. O. A. Robertson has donated 80 acres for fair-ground purposes so long as it shall be so used.

Squirrels Must Go.

"If you do not clean up the squirrels on your own land," says a letter being sent out by Madera county, Horticultural Commissioner George Marchbank, "please do not be offended or surprised if a man employed by the county does it for you and then charges you the cost." The drive against squirrels in the foothills will close late in August, since nearly all of the old ones hibernate then. The letter also quotes figures placing squirrel damage at one to ten dollars per acre per year.

Cars for Bulk Grain.

No difficulty has been experienced in getting the right sort of railroad cars in which to ship bulk grain, according to H. K. Huls of the Merced Elevator Co. Mr. Huls has had charge of bulk grain shipments from this elevator for several years. He expects this method of handling to increase henceforth on account of the big seaboard elevator at Oakland.

Perris Co-operative Cotton Gin.

This is the first year for commercial cotton in Perris Valley, Riverside county. About 2,000 acres of Durango are showing up a fairly good stand and a good growth. People there are now collecting money for a co-operative cotton gin, asking about $5 per acre. The gin will probably be ordered ere this appears in print.

A short crop of alfalfa has not prevented the Byron alfalfa growers from feeling jubilant over high prices. The crop around Byron and Brentwood is good. In order to conserve the supply for local needs in California, the Alfalfa Growers of California, Inc., are not shipping alfalfa meal out of the State.

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SWEET POTATO CONDITIONS.

(Written for Pacific Rural Press.)

Quality of most sweet potatoes at present produced in California is "bum." And the yield would look awful bum if the total were averaged for the entire area planted. We have it from several authorities, as well as from our own observation, that our Jersey Sweets are run out and diseased beyond all reasonable possibility of economical production. The seed has been home grown, unselected except for inferiority, and disease has done the rest, not only to tubers in storage, but to plants in hotbed and field. Last year's Jersey crop in California went to pieces quickly, as observed by the management of the T. M. & G.. Even with the new process of curing carried out at Turlock, a great loss was encountered. One marketing man figures the trouble is more weakness than disease. But the disease is more evident. Another marketing man speaks of the Jerseys as "too delicate." Plants grown in hotbeds are slender, and they die too much when transplanted, reducing yield per acre by causing poor stands.

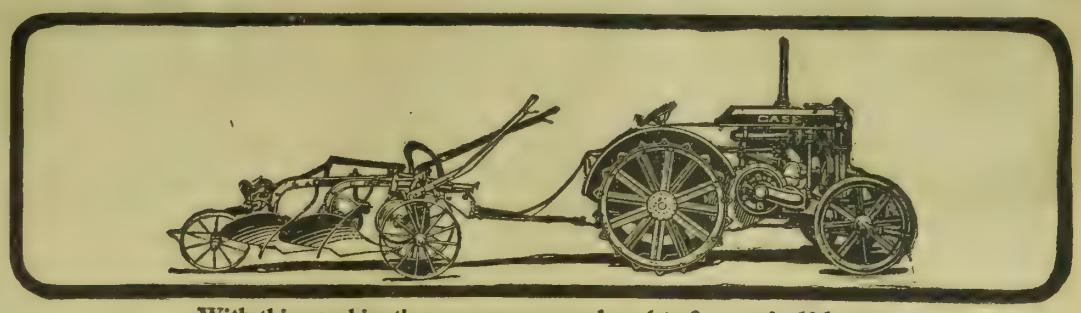
It was a hard job to convince many ranchers last spring that Nancy Hall sweet potatoes of which a few were grown here in 1919 would pay better than the variety they were accustomed to. But two carloads of Nancy Hall seed were brought in from an Arkansas seed specialist—finer and sweeter even than the Nancy Halls grown at Turlock last season. Hunt, Jewett & Bontz, who brought them in, comcontracted for the entire crop to put into storage, this variety having come out of storage last spring in much better shape. Farmers who planted this seed are now all enthusiasm regarding strength of the plants, which, according to G. J. Hunt, were two or three times as thick in diameter as the Jerseys; and practically every plant lived after transplanting. All the seed had been dipped to prevent black rot, and is being planted on disease-free land.

About 3,000 acres of common sweet potatoes are estimated by a cannery man at Atwater to have been planted in that district, not including Livingston, where additional acreage is growing. Last year the price of sweets too small to ship was $25 per ton for canning purposes. This year there has been no future buying; but several canneries are in the field and competition will be lively along in August. One cannery puts up only whole potatoes. Others mash them first. The consuming demand is increasing, especially in the Middle West. Hotels and restaurants are using more as they get more accustomed to them. Canned sweet potatoes have no more trouble with spoilage than do fruits.

ORANGE CO. POTATOES SHORT.

Potato shipments of the Orange County Produce Growers' Association were remarkably short this year, being only 20 cars, as against 116 cars in 1919. If the acreage had equaled that of last year and the yield had averaged what it has this season, the association would have shipped 200 cars in the season just closing as estimated by Manager J. W. Wallop. Some blight bothered growers last year; and the high price of seed did the rest in reducing acreage for 1920. Some Burbanks and Red Rose are raised here, but most all potatoes are White Rose.

About 75 per cent of the acreage is signed up in the Association. Potatoes are graded into the U. S. grades and sacked in the field. An association inspector endeavors to secure uniformity and strictness in grading. The potatoes are shipped to the Northwest and the Rocky Mountain States. Each week's shipments are pooled separately and returns go to growers within a month after shipment. The last pool in June sold at $7.75 f. o. b. California, netting growers $7.20. One man was recently paid $2,400 for a carload of about 300 sacks weighing 100 to 122 pounds per sack. But the later pools are averaging down to $5.25 or $5.50.



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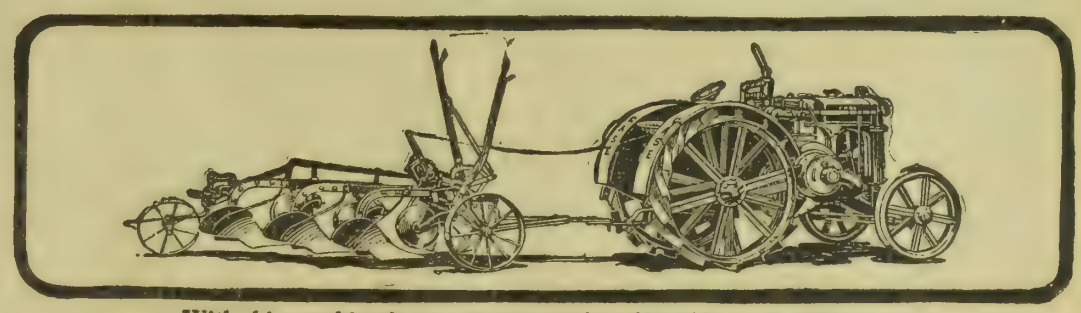
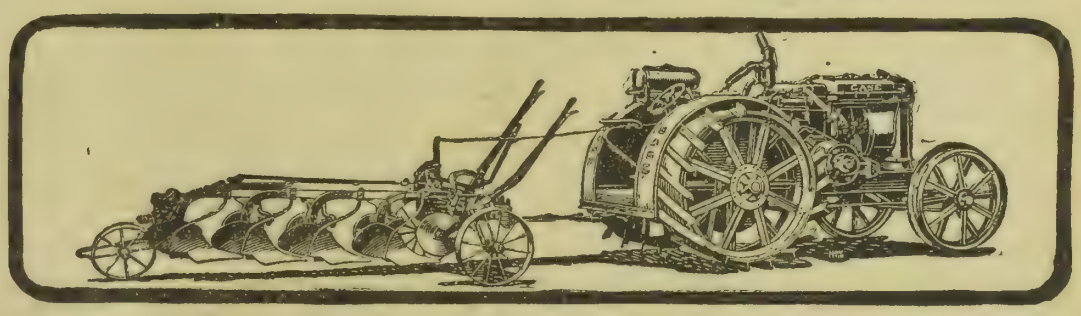


With this combination one man can plow 10 to 14 acres in 10 hours.



With this combination one man can plow 14 to 18 acres in 10 hours.

Relieve Shortage of Farm Help!

GOOD farm help is scarce. Conserve it by making the most of what man-power you have.

A Case Kerosene Tractor and the properly related size of Grand Detour Plow makes farm help more efficient—more productive,—and less costly in proportion to the results accomplished.

Just consider the advantages of having one of these outfits on your own farm. Don't forget the importance of being able to do your plowing rapidly when the soil is in the most favorable condition. Then consult the nearest Case dealer.

Remember, Case Kerosene Tractors and Grand Detour Plows are both built by the J. I. Case Threshing Machine Co., and give best possible results when used together.

Write for catalogs showing our great line of Power Farming Machinery.

Look for the EAGLE
Our Trade Mark

NOTE:
We want the public to know that our plows and harrows are NOT the Case plows and harrows made by the J. I. Case Plow Works Co.

J. I. CASE THRESHING MACHINE CO., Inc.

Dept. V-7 , Racine, Wis., U. S. A.

SAN FRANCISCO: 235 15th Street. Phone Park 4433.
LOS ANGELES: 164-8 North Los Angeles Street. Phone 66437.

CASE
POWER FARMING MACHINERY

To avoid confusion, the J. I. CASE THRESHING MACHINE COMPANY desires to have it known that it is not now and never has been interested in, or in any way connected or affiliated with the J. I. Case Plow Works, or the Wallis Tractor Company, or the J. I. Case Plow Works Co.

THE GASOLINE SHORTAGE

The Standard Oil Company of California last week issued a bulletin covering the question of gasoline shortage and the reasons therefor. Following are extracts taken from the bulletin, which give the facts as seen by this company and which we suppose will be applicable to the other oil companies operating on this coast:

The gasoline shortage is due to the fact that there is not enough gasoline to meet all the requirements of the public; there is not enough gasoline because there is an insufficient production of crude oil; the crude oil production is inadequate because nature has not been kind enough to respond to the unprecedentedly vigorous efforts of the oil industry to get crude from the earth. The shortage is due to no diminished supply of gasoline, but to increased consumption.

What is true today of gasoline is likewise true of fuel oil, and presently the fuel oil situation will also be quite serious.

There is a certain logical sequence of the facts in this matter, which are almost self-explanatory. They trace the situation from the beginning of gasoline—the crude oil supply—to the end—consumption in motor cars, trucks, tractors and gas engines.

1. The Crude Oil Supply: California will this year produce about 100,000,000 barrels of crude oil.

2. Crude Oil Consumption: The Pacific Coast will this year consume about 110,000,000 barrels of crude oil, the 10,000,000-barrel difference being drawn from reserve stocks.

3. The Gasoline Supply: Greatest in history of California oil industry and augmented by the importation of millions of gallons from Eastern and Mexican fields.

4. Gasoline Consumption: In 1915 there were 239,000 motor vehicles on the Pacific Coast, in 1920 more than 780,000; in 1915 there were 3,000 tractors, in 1920 at least 25,000. There are many thousands of gas engines in operation. In 1918 the Standard Oil Company's sales of gasoline amounted to 152,000,000 gallons; in 1919, 193,900,000, while the sales of 1920 will be more than 300,000,000 gallons. So far this year, this company has sold 48.4 per cent more gasoline than for the same period of last year.

These facts prove the situation simply and conclusively. There is much supporting evidence to show the tremendously increased consumption. Take reserve stocks of crude oil: These amounted to 58,500,000 barrels in 1915, to only 26,600,000 on May 31, 1920, a low figure not touched in ten years. Consider Standard Oil reserve stocks of gasoline: On January 1, 1918, 27,000,000 gallons; a year later, 14,300,000 gallons; and this year, 4,400,000 gallons, or but 88,000 barrels, of which ten per cent was unavailable, being in tank bottoms and pipe lines.

* * *

The gasoline shortage will grow less acute as summer wanes; precisely when conditions will be back to normal, and supply and demand equalized, is difficult to foretell. With the lessening of demand at the end of summer and the supply of crude oil constant—and there is every reason to believe that this supply will remain constant for some time, with possibilities of increase—the shortage should not be of great duration, and a steady improvement should be manifest shortly.

BIG TRACTOR SHOW AT LOS ANGELES.

That the Pacific Coast and the West in general is coming into its own from a power farming standpoint, is indicated by the plans of the Tractor and Implement Dealers' Association of Southern California to hold an enormous exhibition of Power Farming Equipment at Los Angeles the week of September 20 to-26. The show will be under the direction of Guy H. Hall, who has gained national recognition as manager of the great Annual National Tractor Shows held at Kansas City for the past five years.

The Los Angeles show will be held in a large sycamore grove, convenient to the heart of Los Angeles. There will be ample exhibition space so that exhibitors will not be compelled to crowd their equipment together. Visitors will appreciate this arrangement as it will mean comfort and convenience in seeing the entire show. It is anticipated that practically every manufacturer of tractors will be represented. All the big implement manufacturers will have exhibits, as well as truck and trailer manufacturers. Unusual interest is being displayed on the part of the manufacturers generally, as well as distributors and dealers.

It will pay any progressive farmer to visit this great show at Los Angeles. It will be a practical education in the rapid development of power farming equipment. The exhibits will represent the most advanced models, and factory representatives will be there to show farmers various points of merit embodied in each tractor, implement and truck.

California and her sister states of the Pacific slope and the Southwest comprise some of the richest farm lands in the world. There are more than 100,000 farms of 100 acres each in this territory and the rural population of the sections directly interested in the Los Angeles show is approximately 4,000,000.

Los Angeles is at its best in September and the location of the city right near the ocean, with marine attractions of all kinds, and the Pacific fleet anchored off San Pedro, will offer many interesting features to visitors who desire to combine business with pleasure.

MOTOR-TRUCK TRUCK FARMING PAYS.

W. H. Porter of Los Angeles county raises 25 acres of crops each year, chiefly potatoes, sweet potatoes, cantaloupes, watermelons, and deciduous fruits. He sells them all in the city, nearly a score of miles away. From June 1 to September 1 each summer, he carries a load of produce averaging about three tons, on alternate days. Many times such a load is marketed every day. Could he do that with horses? 'Twould take his entire acreage and as much more to grow feed enough for all the horses he would have to use. And could he find drivers for enough horses to haul that produce to town? And how fresh would it be when it arrives on the public Terminal Market to compete with vegetables and fruits from nearer ranches? His prices would have to be cut even if he were able to deliver with horses. But 'tis a pleasure to drive his 1½ ton motor truck over the good Los Angeles county roads, carrying three to three and a half tons and getting back for half a day's work at the ranch afterward. Even with the truck, work presses so much in midsummer that Mr. Porter has to call his son home from other work to drive the machine. He has operated this motor truck six years and it still uses one of the original tires. And he says, "Tires have been practically my only expense aside from fuel and oil."

When any machine is delivered, inspect all parts carefully to make sure everything called for in the bill of lading is there.

MIDWEST UTILITOR

Plows Harrows Cultivates Pulverizes Drills and does all Belt Work up to Four Horse Power

When you fully appreciate the many uses of this latest power-farming development you will want one—or possibly more than one—to help you earn more money. Write Today.

GREER-BRASIER-RIKER CO.
3308-3310 Telegraph Ave., Oakland, Calif.

Some territory still open for good live dealers.
See exhibit at local and State Fairs

Dependable Power

THE MISKIN SCRAPER
IS THE BEST SCRAPER ON EARTH
And We Can Prove It. Write for Circulars.

The above is a cut of the Famous Miskin Scraper, which in operation, easy draft, greater capacity, and better work, has many advantages over common Fresno and wheel scrapers now on market. Made in 2-horse, 3-horse, and 4-horse sizes. The four-horse size can be operated by small tractors from the tractor seat, by tractor driver.

SEND FOR DESCRIPTIVE CIRCULARS WITH PRICES. WE PAY THE FREIGHT.

MISKIN SCRAPER WORKS. UCON, IDAHO

Special Offer COUPON

The E. W. ROSS CO.,
515 Warder St.
Springfield, Ohio

Please send literature describing Ross Ensilage Cutters—also details of your Special Proposition

Name

Address

EVERY farmer who takes the trouble to clip out this coupon—or to write a card or letter *this week*—is going to get—A Special 30-day Proposition on the simple, powerful, clean-cutting

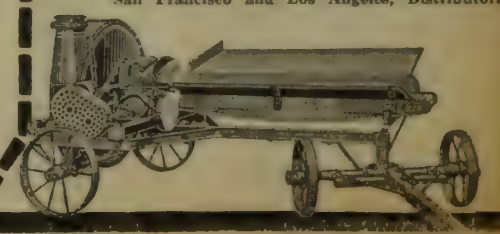
Ross Ensilage Cutter

Quick action is necessary. *You must write at once* if you want to take advantage of our Special Offer.

And, what is most important, you cannot afford to delay a moment if you want to be sure of getting the *most reliable cutter built* in time for use this fall

Ask for full proof of Ross Superiority. No obligation on your part. Write today for the facts in full.

THE E. W. ROSS COMPANY 515 Warder St., Springfield, Ohio FAIRBANKS, MORSE, & CO., San Francisco and Los Angeles, Distributors



What Modern Power Farming Means

(Written for Pacific Rural Press by N. C. Wilson.)

Prof. L. J. Fletcher of the University Farm School at Davis, chairman of the California Tractor and Implement Association Demonstration Committee, will conduct a free "School of Operation" for power-on-the-farm equipment at the California State Fair. The State Fair will be held at Sacramento, September 4-12. Eight acres will be filled with power-farming machinery.

The readiness with which he seizes upon power machinery is a characteristic of the American farmer. Long ago discarding the use of simple human muscle for that of oxen, and more latterly for that of horses, he was ready to seize upon the possibilities of gasoline the minute they presented themselves.

Today, although other farmers may excel him in the amount produced per acre—strictly intensive farming never having become a necessity in America—your Yankee farmer stands supreme in the amount he produces per man. Nobody can beat him. Nobody can even tie him. And today he is standing on the threshold of further achievements—achievements in which modern power farming will play the principal part.

Labor Shortage Viewed Complacently.

Because of his confidence in overriding all obstacles, American farmers face the growing labor shortage with considerable calmness. They know they will come out all right. Never mind if labor has flocked to the cities. Never mind if the price for what is left has soared out of sight. I don't mean that all the operations on a farm can be handled by machinery—not by a jugful. There are plenty of problems which the power-farming inventors haven't solved yet, by a long way. Every year finds the domain of hand and horse labor encroached upon more and more, but the steep hillside, the hayfield, and a few other spots are baffling still to the power farmer. The picking of fruit still has him licked. And there are other details. But the farmer knows that power machinery will reduce the general run of farm work by such an immense bulk that what is left can always be handled.

Power on the farm helped out a veteran stockman in one of California's coast valleys in a recent dry winter. His feed was gone on the range. His stock, several hundred head, had been brought down to ranch headquarters for winter feeding in corrals. And the hay was very low in his barn.

Got It Out of the Hole.

This stockman remembered that a dairyman of his acquaintance had a silage cutter. He towed this machine for forty miles behind an automobile, landed it at his stock ranch, and chopped all the hay. That pretty nearly doubled its lasting qualities, besides rendering a lot of old, foul stuff palatable as well. On his way back with the silage cutter, the stockman noticed a half-acre filled with standing corn stover. The stover was in a depression fifteen feet below the highway. The ears had all been harvested, but feed was feed and the stockman wanted those corn stalks.

"Anybody can have 'em who can get 'em out of that hole," said the owner cheerfully. And he added with a grin, "But I want to see him get 'em out of the hole." The stockman did it, all right. He backed a wagon up to the hole, got the silage cutter and engine down in there, and chopped and blew the stuff up out of the hole into the wagon.

Twenty years ago that stockman was a teamster, and swore as gasoline vehicles began to appear on the highways that never would he surrender horseflesh or muleflesh for a choo-choo buggy. But it is different now. Gasoline and a little ingenuity, of which the above are but two examples, pulled him out of a hard winter and put him on easy street. He still has the horses and mules—always will have them—but he has a lot of respect for power on the farm and what it will do. No doubt about it at all! The farmer is "sold" on power equipment.

Matilda's Settlement Work.

A family in Sacramento recently engaged a young country girl to do housework. There were children to take care of, and cooking and sweeping and washing to be done. The Sacramento family had a nice little bungalow and a small automobile and congratulated the girl on having such a nice home. One Sunday they chanced to do a bit of touring out in the countryside, and came upon her home. The country girl's father had two automobiles, a truck and a tractor, a farm-lighting plant, a dairy equipped with milking machines, a power cultivator, and a motor boat.

Turning to her husband, the Sacramento housewife murmured: "Dearie, I wonder if Matilda didn't come to town to work for us because she thought she was doing settlement work?"

The trend of the times toward power farming is making itself felt in farm homes, too. When the plowing can be done in less time the day needn't be so long for the housewife. And that farm electric lighting plant—what a miracle it is! The automobile, the truck—which renders a start for town before daylight no longer necessary—all these things have helped to improve the lot of the farm woman. Power on the farm means comfort and relaxation in the home. Farm life is distinctly on an upward trend.

Big Money Boring Wells

Have water on your own farm. In spare time make wells for your neighbors. It means $1000 extra in ordinary years, double that in dry years. No risk—no experience needed.

Outfits for Getting Water Anywhere

Earth augers, rock drills and combined machines. Engine or horse power. *Write for easy terms and free catalog.*

LISLE MFG. COMPANY
Box 712 Clarinda, Iowa

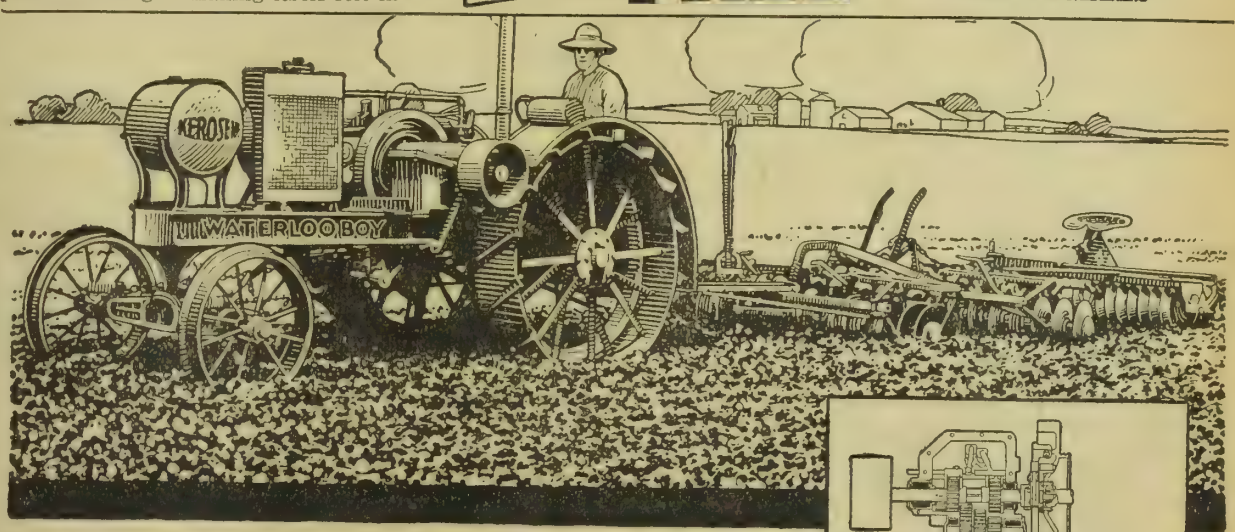
This Folder Tells You How To Make Your Idle Land Earn Money

This is the day and age when you should make every foot of land produce profits for you. If you have any size tract ranging from 80 to 5,000 acres in the Western States that need development you should send for this book at once It tells you the way to develop your property through the use of Hydro-Electric plants, gravity irrigation systems, pumping plants, grading, and buildings; in fact, it points out the various essentials that are necessary to make your ranch a producing property.

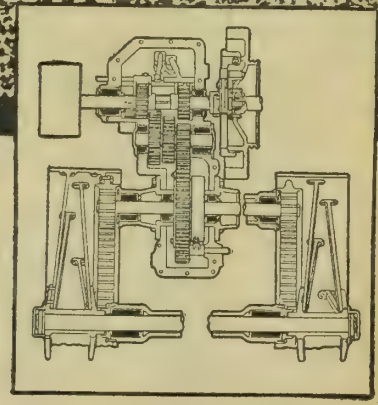
Now is the time to act, so that you can get a crop from your land next year. It is a certainty that crops will bring good prices next year, so take advantage of this condition and get your land under cultivation now.
Write today, stating location of land and number of acres.

Send for Your Copy Today FREE

Ranch Development Co.
Engineers and Contractors
435-36-37 I. W. Hellman Bldg.
LOS ANGELES



Why the Waterloo Boy Gives Maximum Power At Drawbar and Belt



The engine of any tractor will deliver its maximum power only when shaft and axle bearings run without friction. Friction means wasted motor energy.

The Waterloo Boy Tractor is equipped with heavy-duty roller bearings. Friction is reduced to the minimum. Engine efficiency is increased. Maximum power is delivered at drawbar and belt.

The small shaded portions in the above illustration show the exact location of the heavy-duty Hyatt bearings on the Waterloo Boy. They reduce friction, thus giving maximum drawbar and belt power. All the gears shown above are enclosed in a dust-proof case, and run in oil.

WATERLOO BOY
BURNS KEROSENE COMPLETELY

Eleven Hyatt roller bearings are used on the Waterloo Boy. Three are on the engine extension shaft which operates the belt pulley, and carries the high and low speed gears. Two are on the intermediate shaft, whose gears transmit tractive power to the differential. Four are on the differential shafts, which drive the tractor, and two on the rear axle, carrying the rear weight of the outfit. These particular bearings have an established reputation for their special ability to reduce friction and conserve power.

The Waterloo Boy engine is placed crosswise on the tractor frame. This eliminates bevel gears. Bevel gears cause friction. Waterloo Boy drive is direct through straight gears, another power-conserving feature.

There are many other superior features of Waterloo Boy construction and operation. Its simplicity and accessibility, its powerful 12-25 H. P. engine, its ability to burn kerosene and burn it right, a pump, fan and radiator cooling system, all contribute to make the Waterloo Boy an especially good tractor for your farm.

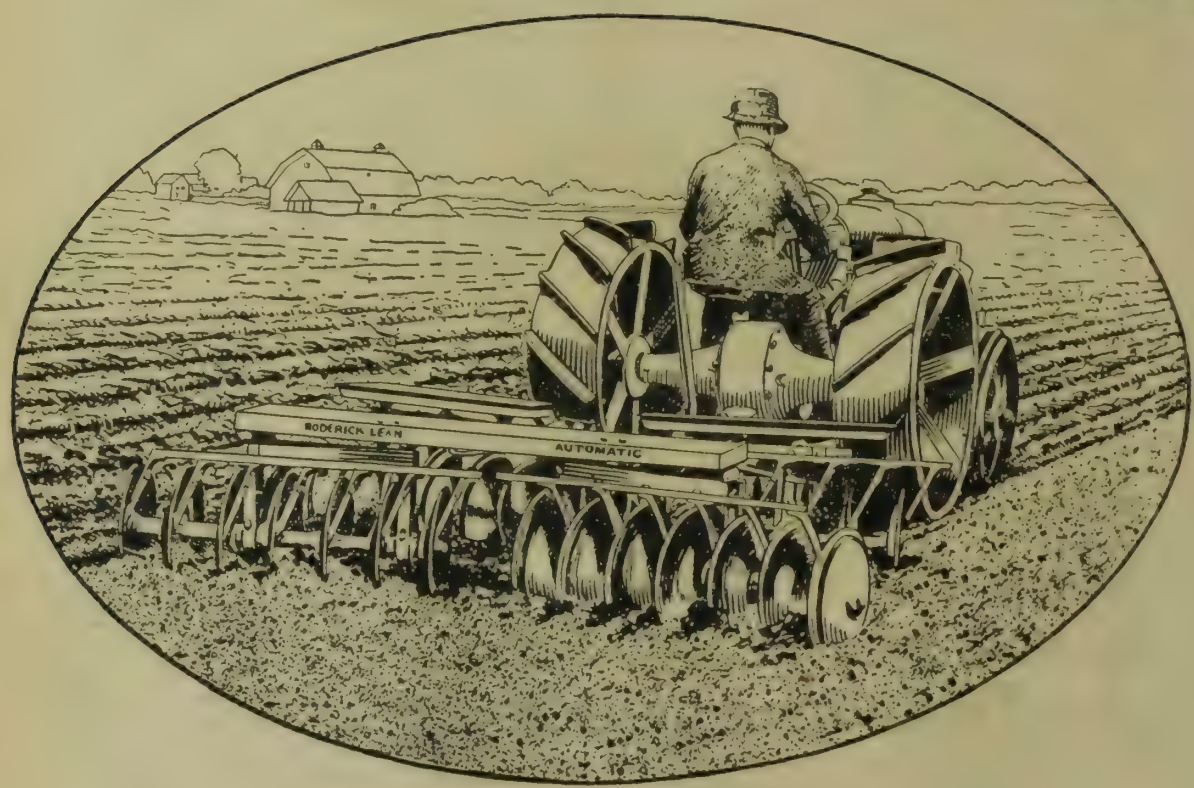
John Deere Implements, and Waterloo Boy Tractors and Kerosene Engines are distributed from all important trade centers. Sold by John Deere dealers everywhere.

We have a booklet describing the Waterloo Boy fully. You will want to read it. Address John Deere, Moline, Illinois, and ask for booklet WB-7 38

JOHN DEERE
JOHN DEERE MOLINE, ILL.
THE TRADE MARK OF QUALITY MADE FAMOUS BY GOOD IMPLEMENTS

WITH THE FORDSON TRACTOR THE OLIVER No.7 PLOW

An Oliver Plow for every farming need also has been designed for the Fordson.



WITH THE FORDSON TRACTOR THE Roderick Lean DISC HARROW

Built in seven foot size. Other sizes for special conditions. Complete line of specialized tractor spike tooth, spring tooth and orchard harrows.

WITH THE FORDSON TRACTOR THE AMSCO TRACTOR DRILL

MADE BY AMERICAN SEEDING MACHINE CO.

Furnished in plain grain or combined grain and fertilizer styles, and with wood or steel wheels.

Power Farming
Brings the Greatest Profit

The farmers of America are appreciating more fully each day the increased profits that come from power farming. The army of Fordson owners now numbers 100,000 and is continually growing in size.

Fordson farming is profitable because it is practical—because the implements are designed for the work which they must do. Whether it is plowing with an Oliver mouldboard or disc plow, discing the stubble and the plowed field with the Roderick Lean Automatic Disc Harrow, or seeding with the Amsco Drill—these specially built tools serve best the needs of Fordson farmers.

Throughout the country more than 8,000 Fordson dealers can supply you with these specialized farm implements. The service which they offer you is secondary in value only to the implements themselves, for it is your assurance of the continuous successful operation of your power farming equipment. There can be no costly delays in your farming program with such a nationwide service at your call.

See the Fordson Dealer in your town.

Distributor Fordson Implements

William L. Hughson Co.

Authorized Sales and Service - Since 1903.

San Francisco and Los Angeles, Calif.

First Annual California Dairy Council Convention

Written for Pacific Rural Press by Ralph Newman.

The first annual convention of the California Dairy Council came and went at Hanford, July 14 and 15.

Now there are a lot of dairymen in this State to whom that statement doesn't mean anything. Asked what they think of the Dairy Council, a great many dairymen answer that they do not think about it at all. Their attitude is one of indifference. Why? Well, there are always some men who are indifferent toward any movement, but this fact will not account for a good deal of the apathy toward the Dairy Council. Let's be frank about it. As I see it, after talking with a great many dairymen all over the State, there are two main reasons for this indifference which, by the way, seldom develops into opposition.

In the first place, the California Council came into being just when the dairymen of the State were struggling for organization along commercial lines. They believed that the most fundamental need of the dairy industry was a commercial need—the ability to do what other business men do with the stuff they have to sell, insure its disposal at cost of production plus a reasonable profit. There is no denying the fact that the Dairy Council has fought shy of this issue and has stressed other phases of the dairymen's problem. Prof. C. V. Castle of the Bureau of Animal Industry, U. S. Department of Agriculture, seemed to voice what I am driving at. He let his youthful enthusiasm run away with his judgment and made some statements that the Council may hear from. He said dairymen were more inefficient than men in any other branch of industry. He said if dairymen were efficient they would get their profit from lowered costs of production and not from advanced prices. He plainly implied that any dairymen who cannot get by under present conditions has poor cows, is a poor feeder and a poor business man, and he intimated that dairymen who are not making a profit should be summarily dealt with in the interests of a consuming public for whom he seemed especially solicitous.

He left us in doubt as to whether he would have these dairymen shot at sunrise or just let them starve to death. Now we realize that this young man was talking nonsense, but he was doing it as a government representative and under the auspices of the Dairy Council. We know that his charge of inefficiency will apply with greater force to railroad management today than to dairy management. Yet the government guarantees the railroad a profit. We know perfectly well that no matter how efficient a dairymen is, or how good his cows are, or how well he feeds, there is no money in the dairy business—that is, in milking cows—in the crisis that is upon us. You haven't heard of the government or any one else guaranteeing the dairy industry a profit, have you? One of the most successful breeders in the State, who grows his own feed, does most of his own work, and who has cows away up toward the head in production, recently told the writer that if he paid himself $3.00 a day for his work and insisted on 8 per cent on his investment, he would be insolvent. The other day, among 500 dairymen at Modesto, not one could say that his milk check covered his bills. And I am thinking you will look a long time before you find a more efficient lot than these dairymen are, or better cows than they milk. When these men, and thousands of others like them, ask for a higher price for their products, they are asking for what is absolutely essential to save the industry, and they are not, as Prof. Castle categorically stated, asking the public to pay for their inefficiency. Because hosts of dairymen feel that the Dairy Council has at least been lukewarm about this fundamental economic demand of the dairymen, and has little help to offer them in their struggle for economic freedom, a good many dairymen have shied at the Council.

A second reason for indifference has been the official make-up of the Council itself. Not because these men are not considered perfectly efficient and perfectly sincere, but because of the middlemen who, with professional educators, have seemed to dominate the council, a good many hard-headed cow milkers have wondered if it wasn't a council about dairymen rather than a council of dairymen.

Now, then, this writer went to the convention as a dairyman, and endeavored to study it through the eyes of the average dairyman in an effort to satisfy himself whether or not the Council is worthy of the dairyman's support — especially the organized dairyman's support. His conclusion, which of course binds nobody but himself, is that the fine work that the Council is doing along educational lines does make it worthy of support regardless of how far off we may deem it to be when it comes to the issue raised by the organized dairymen. I can't see why we should not back our own more or less class-conscious struggle for economic self-determination to the last ditch, and at the same time support the Council in its fine educational program, which coincides exactly with our own ideas and ideals, and which it certainly is putting across. Working together for the things we do agree about, in time we may come to agree about more things.

The educational program of the Council is twofold. To educate the public to the supreme importance of milk as a food and thus increase its consumption, and to educate dairymen in ways to reduce the cost of production.

With exception of an occasional break like Prof. Castle's, and an occasional slight tendency to patronize dairymen, the addresses were strong, inspiring and contained much that the most touchy dairyman could have commended.

As illustrating the two phases of the Council's work, the outstanding addresses were those by Dr. Beach of Los Angeles and Professors Voorhies and Van Norman.

Dr. Beach gave an analysis of figures obtained in the recent Los Angeles School Milk Survey, a survey inaugurated and backed by the Dairy Council. This survey, scientifically conducted, reached the conclusion that milk in large quantities is absolutely essential to the best development of children. The work has attracted wide attention and the conclusions reached will be of inestimable value in creating a greater demand for milk.

Prof. Voorhies gave a plain and convincing talk on "Feeding Dairy Cows for Profit." It ought to be repeated before dairymen all over the State. His statements were based on practical experience and his conclusion was that it will pay any dairyman to feed silage, while the use even of high-priced concentrates will pay when fed intelligently to cows giving two pounds or more of fat a day.

Dean Van Norman struck an optimistic note. He believes the various agencies at work boosting for the greater consumption of milk will vastly increase the demand, and that there is a good time coming for the dairy business. He urged dairymen to prepare for it now by beginning to breed up the herds. He wouldn't immediately kill off all the inefficient dairymen, or even all of the poorer cows, for that would only create trouble for everybody, but he would have all agencies co-operate with the dairymen in their efforts to breed better cows. His plea also should be carried all over the State now while dairymen are in a receptive mood for just this message. And I am inclined to think that the way for us to get these really fine things spread as we want them spread, is for all of us, forgetting our differences and emphasizing our common interests, to jump in and help.

No one should write of this convention without expressing appreciation of Hanfords hospitality. It was unobtrusive but perfectly efficient, and 100 per cent whole-hearted. Why, even a service-station man allowed us a full tank of gas!

Shorthorn breeders are encouraged to grow more steers. In every herd are bull calves that would make greater profits if grown out as steers. Some may be of undesirable markings, but of great quality. These will attract much favorable attention if finished as steers and give to the owner more publicity than if they are developed as bulls. Steers are handled easily on the farm and never fail to arouse the enthusiastic admiration of those who visit the herd. The American Shorthorn Breeders' Association invites the Shorthorn breeders to consider this advantage which they have in their own hands. Nothing will do more to increase the interest in this breeds than the developing of a few high-class steers in the various purebred herds each year.

Third Annual Public Sale

BUTTE CITY RANCH
Butte City, Calif.

WEDNESDAY
AUGUST 11, 1920

60 Registered Shorthorns
20 Registered Berkshires
105 Registered Shropshires
10 Shetland Ponies

Butte City Ranch has become noted as a source of supply of dependable registered livestock at moderate prices, and this is their most attractive offering to date. Catalog free on request.

MANAGEMENT
CALIFORNIA BREEDERS' SALES AND PEDIGREE CO.

C. L. HUGHES, Sale Mgr., Sacramento, Calif.

AUCTIONEERS
COL. BEN. A. RHOADES, Los Angeles
COL. GEO. W. BELL, Tulare

SELECTED HOLSTEINS AT AUCTION

Following the suggestions of the program of the Extension Division of the National Association

THE STANISLAUS CO. HOLSTEIN BREEDERS' ASSOCIATION

will hold an Auction Sale August 21 during the Patterson Fair

45 HEAD

have been passed on by a special committee appointed by the local association insuring an offering of exceptional merit. This is a real club sale as it represents so many of the herds of the association, no less than 18 breeders consigning.

Watch later issues of the Press for further information and get your name on the list for catalog.

STANISLAUS COUNTY HOLSTEIN BREEDERS' ASSOCIATION
E. M. MORROW, Secretary. MODESTO, CALIF.

Registered Holstein Bulls

FROM 14 GALLON MILK STRAIN

At FARMER'S PRICES

Now is a good time to purchase your fall herd sire while the selection is choicest.

M. M. HOLDRIDGE, San Jose, Cal.

R. F. D. A, Box 437. *One and one-half miles north*

FEEDING DAIRY COWS FOR PROFIT.

(Extracts of Address by Prof. E. C. Voorhies, Univ. of California, at State Dairy Council.)

From an examination of the thousands of records of Cow-Ttesting Associations which have come into the possession of the College of Agriculture, and realizing full well that the dairyman who belong to a Cow-Testing Association is the most progressive dairyman, we are convinced that the average cow in this State produces less than 200 lbs. of butter-fat. We emphasize this fact because there are too many dairymen who are vainly groping about for some new feed, or combination of feeds, to produce desired results, when they should be groping about for better cows.

All of us should remember that there are two main features which control the economic production of milk. One is the adaptability of the cow for the purpose, and this is dependent upon her individuality and breed characteristics. The other main feature is the amount and kind of food eaten. To be able to feed well you must know the individuality of your cow.

The problem confronting our dairymen in this State today is the production of the largest amount of milk and butter at least expense. In most dairies, the largest direct expense is for feed. Some people have gone so far as to say that the average yearly production per cow could be increased 50 per cent to 75 per cent by proper feeding methods. One of the much-mooted questions which come up regarding feeding in this State is the question of whether or not it pays to feed highly concentrated feeds in addition to alfalfa pasture or cut green alfalfa. The answer to this question is yes and no. In the case of low-producing cows, it probably does not pay to feed them highly priced, expensive, concentrated feeds. They will not return enough additional butter-fat to pay for this additional cost of feed. On the other hand, there are cows with such producing capacity that they cannot possibly eat enough of the coarse, rough feed, such as alfalfa, to produce the maximum amount of milk and butter-fat. It is not in the interest of economy to withhold from such cows the additional feeds which can be supplied from concentrates, such as barley, dried beet pulp, cocoanut oil meal, and mill feeds. Mixtures which can be used in connection with green alfalfa or alfalfa pasture are dried beet pulp, barley or wheat bran, and cocoanut meal in the proportions of two to one; rolled barley and dried beet pulp, equal parts, or mixed in the proportions of one to two, or one to three; dried beet pulp, three parts, and cocoanut meal one part; wheat bran, ground milo and cocoanut meal, equal parts by weight, etc. All of these have given good satisfaction.

In addition to a matter of additional milk supply, which a good cow will return in proportion to the amount of feed she receives, there is another advantage which cannot be put down upon paper. This advantage is the better condition which the cow gets into when she has received this concentrated feed in addition to her rough feed. A cow that is fed well during the first lactation period will produce better during the next. This is a point which many of our good dairymen are now realizing and which cannot be put down in dollars and cents.

Another problem which comes up in connection with feeding is the addition of feed to our standard alfalfa hay during the winter time. When the subject of silos was first presented to the dairymen of this State, little was thought of it. At the present time, however, but very few dairymen or others who are at all familiar with the dairy industry, doubt the advisability of using liberal amounts of silage in connection with alfalfa hay in the winter time. It has proved a good investment on the California dairy farms. It enables farmers to secure the maximum feed supply from crops, such as Indian corn, sweet sorghums, grain sorghums, small grains, Sudan grass, rye grass and alfalfa. All of these crops, with the exception of clover and alfalfa, are high in starch content, and supplement nicely alfalfa hay in feeding growing or milk-producing animals. With a silo on his ranch, the farmer can carry the maximum numbers of cows and supply his stock with palatable, sufficient feed of a uniform quality at any time during the year. Where silage cannot be grown successfully, and where silos cannot be easily built, root crops, such as carrots or turnips can be raised. Roots make excellent substitutes for silage, although not so convenient to feed.

The Shasta County Farm Bureau announces a fair for October 1-2. Ina P. Tormey, the secretary writes that the Red River Lumber Company has donated its grounds and buildings in Anderson for fair purposes. The management promises the "best ever," and the prospects are good for their success. Purebred livestock will be an outstanding feature and each Farm Center will furnish one carlot of fat hogs to be sold at auction.

To the Dairymen and Stockmen of California

THE FUTURE holds bright prospects for the man who has the grit and ability to stay in the dairy business.

The world is crying for beef and dairy products. Demand exceeds supply. The price trend is upward Business dairymen will be shrewd enough to grasp this opportunity.

The big problem now, is how to reduce feeding costs. Where there's a will there's a way. It **can** be done.

Confronted by a general hay shortage and unprecedented prices for hay it behooves every dairyman to conserve to the utmost the available supply and **utilize to the fullest extent the feeding value of the entire hay crop.**

Therein lies the key to a reduction of feeding costs.

Last March the University of Idaho completed a series of feeding tests which proved that chopping alfalfa hay increases its feeding value 25 per cent.

The cattle used in the test, which lasted 100 days, belonged to the Lemp Livestock Company and were fed under a guaranteed spread.

Four groups of cattle were fed four different rations in which long hay was used. Four other groups were fed similar rations in which chopped hay was used.

The test proved that 57 tons of chopped hay were equivalent in feeding value to 75 tons of long hay, a saving of 18 tons, or about 25 per cent. The saving in dollars and cents amounts to $450, with alfalfa worth $25 in the stack. It cost only $1.25 a ton to chop it.

We will be pleased to mail a complete summary of the tests upon request.

The future of the De Laval Dairy Supply Co. is inseparably allied with the growth of the Dairy Industry of the Pacific Coast, and while it is the business of one of our departments to sell machines for chopping hay and filling silos (the Acme Cut er), we feel it our duty to give publicity to these reliable feeding tests that all dairymen may derive full benefit from them and each apply the results to his own work if he is so disposed.

The cost of the machine is soon recovered in the saving effected by chopping the hay. The Acme Cutter is a general purpose machine—a combined silo filler, hay chopper and alfalfa meal machine. Request for description of the Acme Cutter and suggestions for handling chopped hay incurs no obligation. Yours truly,

DE LAVAL DAIRY SUPPLY. CO.,
61 Beale St., San Francisco.

HILLCREST STOCK FARM

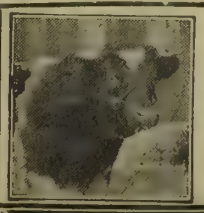
Shorthorn Cattle

Shropshire and Merino Sheep

RAMS AND BULLS FOR SALE

Single or in Carload Lots

T. S. GLIDE, Prop. Davis, California



Mr. Shorthorn Breeder

Why don't you try growing out a few purebred Shorthorn steers? Castrate some of your less desirable bulls and give them good care. You will be surprised what good steers they will make—and at the profits they will show. Once you try it you will keep up the practice. Shorthorn steers pay.

AMERICAN SHORTHORN BREEDERS' ASSOCIATION
13 Dexter Park Ave., Chicago, Ill.

THE IMPERIAL HEREFORD HERD—FOR SALE

TEN TWO-YEAR OLD HEIFERS ALL SAFE IN CALF
These Heifers would make an exceptionally nice small herd for a new breeder

HERD HEADERS THAT ARE FIT TO HEAD HERDS

JAS. PRICE, Herdsman. Chualar, Monterey Co.

ROMIE C. JACKS. 614 Hobart Bldg., San Francisco, Cal.

JULY 28 **Winsor Ranch** JULY 28

CALIFORNIA'S GREATEST

Duroc-Jersey

Bred Sow Sale

SALE HELD AT

Exposition Park—Los Angeles

JULY 28th

JULY 28 **Winsor Ranch** JULY 28

BONITA, CALIFORNIA

THE MOST PROFITABLE BROOD ANIMAL
ON THE FARM

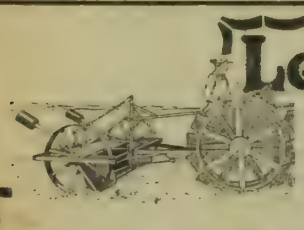
THE OLD RED SOW

She Is No Slacker, but Does Her Bit and Guarantees Returns on the Investment.
SHE IS ALL THIS BECAUSE

The Duroc sow reproduces more rapidly.
The Duroc sow is a good mother.
The Duroc sow is a wonder grazer.
The Duroc sow is a prepotent breeder.
The Duroc sow is an easy feeder.
The Duroc sow is the most popular.

SHE FEEDS THE WORLD, PAYS DEBTS AND MAKES PROSPERITY.

For information relative to DUROC-JERSEY HOGS, write to
S. E. WHITING, Secretary-Treasurer
California Duroc-Jersey Breeders' Ass'n
R. R. 4, Box 810, SACRAMENTO, CALIF.



Level Your Land for Less Money with a Compton scraper

Operated by the tractor driver from the tractor seat—one man does it all. Moves more dirt with less power. The 5-foot size does the work of 3 or 4 four-horse scraper teams. Saves enough time, horse-feed and labor to pay for itself in a few days. A size for every tractor. Prices from $215.00 to $335.00. Send for descriptive circular and price list.

THE WOODWARD COMPANY FRESNO, CALIF. Box 706 A

Duroc-Jersey Hogs for Sale

BOARS AND GILTS
BRED SOWS
SOWS WITH LITTERS

DIABLO STOCK FARM,
E. F. PETERSEN, Supt., Danville, Cal.
G. W. EMMONS, Owner, Oakland.

They are the large type and the best blood strains to be had anywhere.

HERD BOARS AND SOME OF THE SOWS

Lucy Orion's Model
California's Defender
Diablo Orion Model
Defender Colonel 70th
Lucy Orion's Mayflower
Great Wonder I Am Gano
Pathfinder's Queen
Prize of Tulare Belle
Twin Oaks Attraction
Lady Defendress 70th
and 50 others

WEANLINGS, $15.00 EACH AT RANCH.—A large number always on hand to choose from. Crates, $2.50 each, refunded when returned prepaid in good condition.
MAIL ORDERS SOLICITED. SATISFACTION OR MONEY BACK.

OWING TO THE FACT THAT I HAVE SOLD MY CATTLE AND DAIRY EQUIPMENT, I AM OFFERING FOR SALE MY FINE YOUNG HERD SIRE

VALET'S EMPEROR of L.

A. J. C. C. 166002

His Dam: Empress Lass produced 637.10 lbs. fat in 311 days under ordinary dairy conditions. She was Grand Champion at Oregon, Washington, and at California State Fairs; also at A. Y. P. Exposition; a daughter of Gertie's Lad.

His Sire: King's Valet Imp., Grand Champion in Oregon, Washington, Nevada, and in California; also at A. Y. P. Exposition. He is a grandson of Financial King.

FOR FURTHER PARTICULARS, APPLY

WM. A. SAYERS

P. O. Box 12, Bolinas, Calif.

HOME OF $1500 SOW
ORION'S CRIMSON LADY

A-1 Durocs

Best Breeding
Big Type

J. P. WALKER, VISALIA, CALIF.

The Alfalfa Situation Down to Date

(Written for Pacific Rural Press by Ralph Newman.)

At the present writing several things especially impress one who is watching the dairy feed situation from its various angles.

Crop Conditions Improved.

In many sections of the State the second and third cuttings have been better than was anticipated. The third crop especially has been good generally and very heavy in some localities.

In most sections dependent on wells, the prospect is good that the water will hold out and that the usual number of cuttings will be made. In some quarters the wells have actually improved with the advancing season.

On the other hand, in some of the heaviest sections dependent on ditch water, the last of the water is going onto the fourth crop. There may be a light fifth cutting but that is problematical.

Due to the sale and removal of so many cows, the surplus over local requirements is accumulating in some quarters, though it seems certain that for the State as a whole, no more alfalfa will be grown than should be fed within the State, even if that much is secured.

Local Buying Slow.

Speculators are holding off. Every barn was empty and many cows hungry before the first crop was made. That caused an immediate and largely local demand for hay that sent prices skyrocketing. So high did they go, and, on the whole, so high have they staid, that speculators have been afraid to take hold in earnest. If they are doing much buying for storage, they are doing it so quietly that no one seems to have caught them at it.

Dairymen are also holding off. With enough feed for part of the year, but with the certainty staring them in the face that hay must be bought for the winter, they are adopting the policy of watchful waiting. Some, because they haven't the ready money with which to buy, others in the hope that as the season advances prices will drop.

Situation Complicated by Outside Bidding.

With the alfalfa coming on and with local speculators and dairymen holding aloof, something might happen to present prices if the situation were not further complicated. Indeed, it has happened in a small way in some localities with a temporary surplus, where some growers have had to sell quickly to meet pressing needs. At Ripon and Denair at least good alfalfa has been sold in the field at $20, and many dairymen, if they watch out, will be able to pick up more at somewhere near this price.

But the situation is complicated by the fact that outside buyers are in the field, eager for alfalfa to be made into meal for shipment outside the State. Alfalfa is reported shy in Nevada, Utah, Colorado, and you will notice that even the Kansas City market is going strong. Outside interests are here with portable outfits and proposals for mills. Wherever they can find it, they are buying alfalfa in the field and are turning it into meal, right in the field, for export. In some sections they are trying to contract enough alfalfa to warrant the erection of more mills. And they are perfectly willing to pay present prices.

What Is the Grower to Do?

He is just as public-spirited as the dairymen. Knowing the situation as he does, he would rather see the hay going to dairymen than into meal for export, but he must look out for his own interests, and nobody has disputed his claim that he is entitled to all he gets when he sells at present prices. If the dairymen don't buy the grower is going to sell to the man who will buy, and there you are.

This writer is no prophet, and he values his life too much to offer any advice, but the best information he has been able to dig out is that alfalfa will be no cheaper this year than it is now, and that if the dairyman does not care for his needs pretty soon he will have one sweet time doing it later on.

It is a pity that all the dairymen of the State are not hooked up as those in the Los Angeles Milk Producers' Association are. They have a buying organization and are dealing direct with the alfalfa growers, buying their hay in large lots and distributing it among their members at cost. It is too late to line up all the dairymen that way this year, but it is devoutly to be hoped that another season will see an arrangement whereby the organized dairymen can deal direct with the organized alfalfa growers, making it certain that not a ton of hay shall go to the speculators or out of the State until the needs of the dairymen are met on a basis that will give the grower a reasonable profit and the feeder his hay at a price that will not be prohibitive.

The Dairyman Faces a Serious Emergency.

The present price of feed, should it go no higher, as it may not, is still prohibitive to the average dairyman who would keep all of his good cows.

To meet the emergency and help make it possible for their members anyway to carry on, the organized dairymen in some localities are going to raise the wholesale price of market milk. The Northern Association on August 1st will increase the price to dealers from $3.50 to $4.07 per hundred, and the San Francisco Association will go from 35c to 40c a gallon. Whether the dealers can absorb the advance or must pass it on to the consumer, is up to them.

As usual, the housewives' league will investigate. According to the newspapers, Mrs. Robert Dean has been instructed "to find out if the advance is justified." If she will take an auto and spend a few days visiting actual dairies and noting actual conditions with an open mind, and then, if she will consult men familiar with state-wide labor and feed conditions, she will discover that the advance is not only justified but still probably inadequate to insure against a milk famine before next spring.

City Reporters Untrustworthy.

How ignorant and careless the city reporters are! If not that, then how tricky they are! They say the producers will raise the wholesale price 5c a gallon, "and" the "retail" price from 2c to 4c a quart. This last statement is absolutely false. The producers have nothing to do with fixing the retail price of milk. When they deliver the can of milk to the distributor their responsibility ends. And all on earth they are going to do on August 1st is to raise the price to dealers 1¼c a quart. Get that, Mr. City Reporter. If the price to the dealer is increased 1¼c a quart and the dealer charges you 4c a quart, see the dealer about it instead of howling at the producer. When you see the dealer he will probably tell you and tell you truly that you are more responsible for this extra spread than anybody else, for you are the chap who demands "service," and fails to return empty milk bottles, and overlooks the milk bill. The service you demand gives the dealer his reason to advance the retail price beyond the producers' advance. You are not going to paste the responsibility for retail prices on the bent back of the producer and get away with it.

Kerosene emulsion will destroy lice and their eggs on animals.

Dissolve by boiling about one-quarter of a pound of common laundry soap in one gallon of soft water. When the soap has all dissolved and the solution is still hot, pour into it two gallons of kerosene and stir the mixture vigorously.

Take one part of the resulting creamy emulsion and add eight to ten parts of soft warm water. This can be used as a spray or applied by means of a stiff-fibered brush.

STANISLAUS COUNTY HOLSTEIN BREEDERS' ASS'N
A. M. BIBENS, President
E. M. MORROW, Secretary
Modesto, Calif.

"ORMSBY"
Means Quality and Production.
Get a young bull sired by King Korndyke Hengerveld Ormsby 7th.
KOUNIAS REG. STOCK FARM
Waterford Road,
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HOLMES STOCK FARM
Waterford Road, Modesto
REGISTERED HOLSTEIN-FRIESIANS
Prize-winners at all Shows.
Inspection invited and satisfaction guaranteed
Write for prices.
R. L. HOLMES, Prop.

BRIDGFORD HOLSTEIN CO.
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THE CHAMPION SHOW HERD
The herd of high records.
STOCK FOR SALE.
Visitors Welcome.

WALTER K. ADAMS,
Rte. 1, Box 245, Modesto
BREEDER OF REGISTERED HOLSTEINS AND POLAND-CHINAS

A. M. BIBENS
Modesto,
BREEDER OF REGISTERED HOLSTEINS
Some fine young bulls for sale.

BULLS AND BULL CALVES
Sired by SEGIS DUTCH ORMSBY
My 32-lb. Herd Sire
Out of A. R. O. dams.
JOHN SAXER, Modesto, Cal.

H. E. CORNWELL
MODESTO, CALIFORNIA
Prescott Road, 1 mile from Highway
If you want to see some of the best Holsteins in the State, visit my herd.
YOUNG STOCK FOR SALE

YOUNG REGISTERED BULLS
From High-Testing Dams
E. PETERPOSTIN
Route 1, Box 235, Hughson, Cal.

BULLS FOR SALE
FROM 1000-LB. SIRE
Some with three nearest dams averaging 1000 lbs.; two of serviceable age; one with dam's record 30,000 lbs. milk, 1000 lbs. butter.
FREEMAN (E. E.) and EDWARDS
Route B, Box 385, Modesto

REGISTERED HOLSTEINS
Creamcup Herd offers service bulls and bull calves of 34-lb. breeding. Females offered for foundation stock.
Tuberculin tested.
M. M. Holdridge, San Jose, Cal.
R. D. "A," Box 437,
Two miles out North First Street.

T. B. PURVINE & SONS
PETALUMA, CALIFORNIA
Breeders of
REGISTERED JERSEYS
Young bull calves for sale. Fine individuals with Register of Merit backing.

LEONARD FARM JERSEYS
Bulls for sale from Register of Merit Cows.
Write for information.
W. J. HACKETT,
CERES, CALIFORNIA

Certain feeds will cause the milk to have an unpleasant odor; so will filthy containers.

Examine the underside of the seat of a milking stool and you may find one source of milk contamination.

SAN JOAQUIN MARKET HOG AUCTIONS.

(Written for Pacific Rural Press.)

An article in a very recent number of the Turlock Tribune warns the farmers and hog raisers in the vicinity of that thriving young city in no uncertain terms of the danger of losing the benefits of the Farm Bureau hog auctions if they do not list their hogs 5 days before the day set for the sale. This is necessary so that the management may have time to notify buyers and arrange for cars.

It does not seem possible that any farmer or set of farmers who have anywhere from one hog up, to sell annually, could be so blind to their own interests as to refuse to list their hogs only 5 days before the date set for the sale if they understand fully the advantage of selling hogs in this way.

Cars are not the most plentiful things in the world now, and it is necessary that the management have sufficient time to secure them. It seems that some six months ago that co-operative livestock marketing associations of the Middle West had some difficulty in securing the necessary cars to handle their shipments, but at that time no trouble had been experienced in California by the management of the Farm Bureau Marketing Association in procuring immediate transportation, but the demand for cars is so great now the new rule becomes necessary.

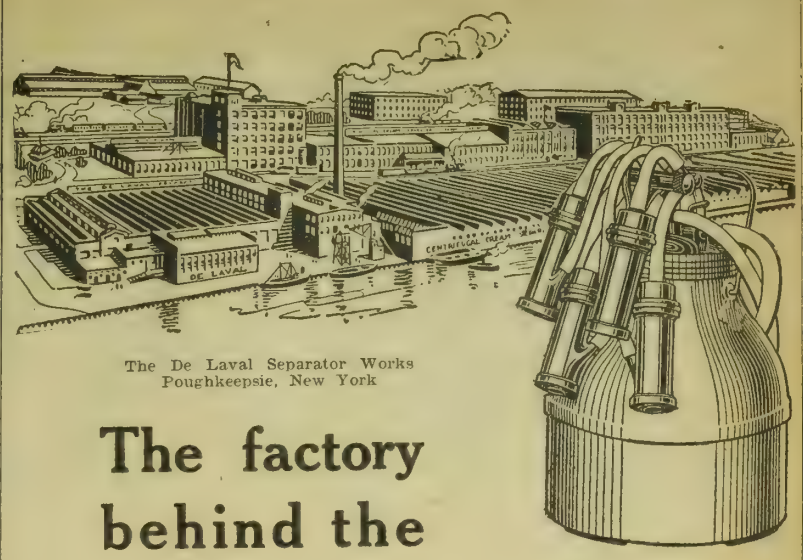
This article will not reach our readers in the Turlock district in time for the sale of this week, but there may be those in other districts that do not fully understand the necessity of the new rule for listing 5 days previous to the auction. Perhaps they do not fully realize the high prices they are obtaining for their hogs through the medium of this method of disposing of them. We are therefore publishing a letter from D. H. Bitner, the Secretary-Treasurer of the Farm Bureau Marketing Association in which he explains in detail the advantage of this system.

"To the Editor: Enclosed please find a list of the sales for the past week for hogs sold through the California Farm Bureau Marketing Association at the towns of Wasco, Modesto, Tegner, Fresno and McFarland. You will note by camparing these figures with the prices that the larger packing houses of San Francisco and Los Angeles are quoting that we are getting the farmer a better price in the country than the packers are paying f. o. b. the packing houses. As it costs about $1.50 per hundred to deliver hogs from our shipping points to the packing houses, that is including freight, shrinkage, etc., the farmer is realizing from one to two dollars more per hundred than they would get if they shipped the hogs direct. As you probably know this Association has been in existence about two years, and although there is a shortage of hogs in the San Joaquin Valley, our sales are larger each month than they were for the same months last year."

We print on the market page a detailed report of the sales of the week referred to in Mr. Bitner's letter.

The advantages of this system are many, but one in particular is of importance in that the association has their own grader, L. C. Trewhitt of Hanford. Mr. Trewhitt is an expert in this line, and as the hogs come in they are turned into the proper class. In this way the man who brings "light butchers" receives the price paid for that class. If he brings "rough, heavy packing," he only receives what such hogs are worth on the days of the sale. If his stock is thin, only half fat and not really fit for market, it goes into the proper class. In this way he receives an education also, and if possible, he brings only those hogs next time that are fit to go in with the "light butchers."

Some bacteria in milk are good for the digestion; some others are innocuous; but when the infectious kind get into your pitcher "you had better look out!"



The De Laval Separator Works
Poughkeepsie, New York

The factory behind the

DE LAVAL MILKER

Wherever cows are milked, the name "De Laval" stands for quality and highest value to the user.

De Laval represents the utmost degree of service-to-user. The De Laval Company recognizes that when a sale is made, its obligation to the purchaser has just started.

These facts are important considerations when buying a mechanical milker.

The man who buys a De Laval Milker can ask for no stronger guarantee that it will give him the service claimed for than the fact that it bears the name "De Laval."

The De Laval Milker is the only milker having an independent pulsation line, making possible alternating action at a fixed pulsation speed. It is uniform in action; and faster, more reliable, and more sanitary, than any other method of milking.

Write to nearest De Laval office for Milker Catalog, mentioning number of cows milked.

DE LAVAL DAIRY SUPPLY CO.

THE LARGEST DAIRY SUPPLY HOUSE ON THE PACIFIC COAST

61 BEALE STREET SAN FRANCISCO, CAL.

Livestock and Dairy Notes

The Dairy.

Milk condensaries, formerly operated at Tempe and Glendale, Arizona, are closed, owing to land previously raising alfalfa now being cropped to cotton.

A two-year-old Holstein heifer, K. S. P. S. Pet Segis, at the Jeffries Ranch, Burbank, has broken the State record for 7 days, producing 21.47 lbs. butter from 632.2 lbs. milk.

Great Britain, during the first four months of the year, imported 23,760,912 pounds of butter from Denmark with imports from the United States and Argentina showed a very great decrease.

Sixty per cent of 71 winners of gold and silver medals, offered at the Milk and Cream show, held in connection with the National Dairy Show, since 1906, were won with Guernsey products, either in pure or mixed form.

High price of feed and shortage of labor caused Judge L. W. Fulkerth of Modesto to sell 22 head of grade Holsteins. This was considered an exceptional herd from the production standpoint; however, Judge Fulkerth replaced them with eight head of registered Holsteins.

Tulare will probably have a condensing and powdered milk plant. Extensive improvements will be started at once in the Carpenter Milk Products Co.'s plant, purchased some time ago by the Nestle Food Products Company, and the plant will be in operation by the 15th of next month.

Directors elected at the annual meeting of the California Dairy Council were: G. M. Brown of Los Angeles, E. H. Webster of El Centro, E. M. Dorman of Los Angeles, W. B. Hopkins of Petaluma, F. A. Robb of San Francisco, W. T. Wilson of Fresno, and J. H. Guinn of Petaluma.

Members of a recently organized calf club at Kenilworth Park, Sonoma county, have received their calves, consisting of registered animals of Ayrshire, Holstein and Jersey breeds.

Purebred calves, donated and sold at auction for the benefit of the California Dairy Council at their recent

LIVESTOCK DIRECTORY.

Rate 3½ cents per word each issue.

SWINE.

Duroc-Jerseys.

DUROC-JERSEY SWINE

JUMBO SENSATION
Our new Herd Boar is one of the largest boars in the world for his age. We have some real buys in purebreds.
WHITLEY
TU-TOCK-A-NU-LA- RANCH
Ventura Boulevard and Hazeltine Ave.
Mrs. R. E. Whitley, Mgr.
Phone 160-J Van Nuys, Calif.

DUROCS—BIG-TYPE—HIGHEST QUALITY—popular blood lines. Herd headed by Johnson's Defender, Jr. and Western Pathfinder. Bred sows and gilts and young boars for sale at moderate prices. Greenwood Farm, Witherow & Stafford, Live Oak, Cal.

A DUROC ON EVERY FARM—I am offering every California farmer a chance to start in registered Durocs at my expense. Write today for details if genuinely interested in real hogs. Geo. L. Horine, Winton, Cal.

BIG-TYPE DUROCS—Herd headed by California Orion King. Am offering excellent young boars at right prices. Inquiries invited. Harvey M. Berglund, Dixon, Calif.

WINSOR RANCH DUROC BOARS—Big-type utility boars for farmer trade; priced to move. R. K. Walker, Swine Dept., Morris C. Allen, Ranch Manager, Bonita, San Diego, Co.

BIG DUROC GILTS — March litter, Orion blood lines; best type. Five for $150, or $35 each. Boar pig, $40. El Dorado Duroc Breeders Association, Placerville, Cal.

JACK LONDON RANCH, Glen Ellen.—Exceptionally good weanlings. Bred sows and gilts. One good yearling boar and one fall boar. Prices reasonable.

ROCSTEIN RANCH DUROCS headed by Lord's Orion Cherry King. Breeding stock for sale at all times. W. M. Way & Son, Rt. 1, Box 320, Modesto.

BARGAINS in bred sows and gilts. Pathfinder and Great Wonder I Am blood. Derryfield Farm, Capital National Bank Building, Sacramento, Cal.

DUROC-JERSEYS — Fine big-type gilts, tried sows and boars. Eastern and California bred. H. P. Slocum & Son, Willows, Calif.

REGISTERED DUROCS—Choice gilts and weanlings, either sex. Breeding and satisfaction guaranteed. H. E. Boudier, Napa.

DUROC-JERSEYS — Am offering registered pigs, April farrow, either sex. Lowell Beaver, R. "C," Box 397, Fresno, Cal.

BIG-TYPE DUROCS — Gilts and boars of Winsor's Giant Orion breeding. Falfadale Farms, Perris, Calif.

DECEMBER AND MARCH DUROC BOARS—Pathfinder breeding. Sterling Smith, Route 1, San Diego.

FOR THE BEST in Durocs, write June June Acres Stock Farm, Davis, Cal.

Poland-Chinas.

TOHOQUA POLAND-CHINAS — Big type. A good big tried sow to sell. Has farrowed two litters of ten pigs each. Bred for August farrow. Also a dandy young boar pig from the Grand Champion sow of Glenn Co. Fair. This stuff is good, fully guaranteed and priced to sell. Ferguson and McKaig, Orland, Cal.

ELDERSLEY AND SHADY BROOK Farms big-type Poland-Chinas that make money for the Feeder, the Farmer and the Breeder. Prices reasonable. J. H. Ware, Brown's Valley, Calif.

BRED GILTS for sale. A few choice ones bred for fall farrow, to a good son of F'Big Jones, the Iowa 1920 Grand Champion. N. Hauck, Alton, Humboldt Co., Cal.

J. F. McSWAIN, Breeder of Poland-China hogs. Herd headed by Big Model Fellow, Reserve grand champion 1919 State Fair. Young stock for sale. R. 3, Merced, Cal.

WAUKEEN HERD POLAND-CHINAS — Home of King's Big Bone Leader. A few service boars for sale. Les McCracken, Ripon.

REGISTERED POLAND-CHINAS — Large type, 3 to 4 months gilts cheap. Satisfaction guaranteed. J. E. Thomas, Gilroy, Cal.

LAKESIDE STOCK FARM—Large, smooth and big-boned Poland-Chinas. Geo. V. Beckman & Sons, Lodi, California.

REGISTERED POLAND-CHINA SWINE—Prize-winners. Finest stock in the State. Bassett Bros., Hanford, California.

BIG-TYPE POLAND-CHINAS—Good as the best. Always glad to show you. Houck & Lewis, Winton.

REG. BIG TYPE POLAND-CHINAS—Service boars and weanling pigs. J. H. Cook, R. 4, Chico.

LIBERTY HERD—Service boars. July weanlings. J. W. Raymer, Soledad.

LARGE TYPE POLAND-CHINAS — Winton Poland-China Farm, Winton, Cal.

POLAND-CHINAS—Strictly large type. J. F. Lehman, Lodi, Cal.

Berkshires.

BRED GILTS.

Sired by Mayfield Rookwood 2d, a Grand Champion Boar, out of 600-700 lb. sows, and actually bred to "ACHIEVER," our English Blood Boar, the Sire that puts more bone and pork-making qualities into his pigs.

Priced reasonably and absolutely guaranteed.
Castleview Ranch, Santa Rosa, Calif.

ANCHORAGE FARM BERKSHIRES
Orland, Calif.
HERD BOARS—STAR LEADER, Junior and Reserve Grand Champion of the World. The Grand Champion carload of barrows, over all breeds, at the San Francisco Live Stock Show, was sired by a son of Star Leader. NATOMAS BARON DUKE, grand champion of California. For sale, bred gilts, open gilts, young boars and weanling pigs. Write for booklet, prices and list of sows.

BERKSHIRES — Purebred registered — 4 bred sows, beautiful animals, will farrow soon; a wonderful "Star Leader" boar—a real show animal as good as any in the State. To close out am offering this choice stock at an extremely low price. A special offer for the lot. Wm. C. Laux, Morgan Hill, Cal.

The only herd of English Berkshires in the West. Bigger, better, stronger litters. More pounds of meat for less feed. Weanling pig, $35. Satisfaction guaranteed or money refunded at once. Sandercock Land Co., 703 Market St., S. F. In charge Natomas Land Sales.

SOW PIGS and Boar Pigs sired by Ames Rival 118th, Ames Rival 70th, Ideal Royal Lee, Champion Masterpiece 8th, Escalon Majestic and Achiever, and out of prize-winning sows. A postal will bring prices. Geo. A. Stingle, Lark Meadow Ranch, El Monte, Cal.

GRAPE WILD FARMS—Berkshires—Guernseys. Big-type Berkshire Boars of serviceable age, sired by Big Leader—greatest son of Grand Leader 2nd. Panama-Pacific Grand Champion. A. B. Humphrey, Prop., Escalon.

BERKSHIRES—We are compelled to reduce our herd, owing to green feed shortage. Write us today. R. J. Merrill & Son, Morgan Hill, Cal.

QUALITY BERKSHIRES — Young stock, both sexes. Calac Orchards, Geo. P. Upham, Martinez.

REAL GOOD BERKSHIRES — Cholera immune. Frank B. Anderson, Sacramento, Cal.

CARRUTHERS FARMS' BERKSHIRES — Cholera immune. Live Oak, California.

Chester Whites.

CHESTER WHITES — E. E. Fulton, Fair Oaks, Cal.

Hampshires.

PUREBRED HAMPSHIRES — The "Belted Beauties"—herd of the Uneeda Hampshire Swine Farm—has been acquired by this corporation and we wish to reduce the stock to some extent before fall farrowing time. We offer 2 four-months-old boars and 4 four-months-old sow pigs at very attractive prices. Rio Hondo Rancho, Compton, Cal.

REGISTERED HAMPSHIRE HOGS—"Belted Beauties" need no apology. Pigs, young boars, gilts and sows for sale. Uneeda Hampshire Swine Farm, Gardena, Calif.

DAIRY CATTLE.

Holsteins.

TOYON FARM ASSOCIATION
UNDER STATE AND FEDERAL
SUPERVISION
SMALL FOUNDATION HERDS,
HEIFERS and BULLS
PERFECT IN HEALTH, RIGHT IN
TYPE, PRODUCTION AND
BREEDING
MILLS BLDG., SAN FRANCISCO
Farms at
BRENTWOOD and LOS ALTOS
350 HEALTHY HOLSTEINS

PALO ALTO STOCK FARM, Palo Alto, breeders of registered Holsteins. Heifers and service bulls. Reasonable prices.

THE LEWIS COMPANY BAYWOOD HERD
Bulls from yearly record stock.
Health under State supervision.
Terms on purchases if desired.
Herd Sire: Ormsby Segis Marie Lad.
Martin Zgragen, Herdsman
Hollister, California
THE LEWIS COMPANY, Owners
The Lewis Building, San Jose

YOUNG BULL by grandson of Tilly Alcartra, out of dam with good record. His half sister milking 68 lbs. per day as senior yearling. Also bull calves. H. M. Cross, Merced.

WANTED — First-class grade or purebred Holstein herd of 15 to 30 cows. T. B. free, to buy or lease on shares. Address direct. Chesson Bros., Durham, Butte Co., Calif.

OAKDALE HOLSTEIN FARM, Pacheco, Contra Costa Co., J. M. Christen, Prop., Breeder of registered and high-grade Holstein cattle and purebred Hampshire swine.

REGISTERED HOLSTEIN-FRIESIANS — Both sexes choice stock; tuberculin tested. Sunnybrook Ranch, H. H. Sisson, Mgr., Willits, Cal.

THE VICTORY HERD—Registered Holstein cattle and Duroc Jersey swine. H. E. Spires, Hillcrest Farms, Caruthers, California.

CREAMCUP HERD — Registered Holsteins. Pontiac bull calves. M. Holdridge, Rt. A, Box 437, San Jose.

REG. HOLSTEINS, both sexes. World's record backing. Kounias Reg. Stock Farms, Modesto, Cal.

REG. HOLSTEINS—A. W. Morris & Sons Corp., Importers and Breeders, Woodland, Cal.

F. H. STENZEL, SAN LORENZO—Breeder of Registered Holsteins. High test producers.

REGISTERED HOLSTEINS — Best blood lines of the breed. R. L. Holmes, Modesto, Cal.

CHOICE HOLSTEIN bulls for sale. No females. Millbrae Dairy, Millbrae, California.

GOTSHALL & MAGRUDER — Breeders of registered Holstein-Friesians. Ripon, Calif.

EL DORADO HERD OF HOLSTEINS — Alex. Whaley, Tulare, California.

Jerseys.

SERVICE JERSEY BULL, bull calves. Financial King blood, Chester White boars, prize winners. Best blood, type, production. N. H. Locke Co., Lockeford, Cal.

REGISTER OF MERIT Jersey heifer to sell. Be three and be fresh and August. Nice family cow, $175. E. W. Doane, Merced.

SUNSHINE FARM JERSEYS—No females for sale. Bulls from high-testing cows for sale. E. E. Greenough, Merced.

JACK LONDON RANCH, Glen Ellen—Two fine Jersey bulls, one ready for service.

Milking Shorthorns.

REGISTERED MILK AND BEEF SHORTHORNS, bulls and heifers for sale; catalogue free. Thomas Harrison, Santa Rosa Stock Farm, Santa Rosa, California.

INNISFAIL HERD MILKING SHORTHORNS—Young stock for sale; both sexes. Owned by Alexander & Kellogg. Leased by J. D. Rowe & Son, Davis, Cal.

BREEDERS OF REGISTERED SHORTHORNS—Milk strain; choice young stock for sale. John Lynch Ranch, Box 321, Petaluma.

Ayrshires.

ELKHORN FARM AYRSHIRES — Choice young bulls at reasonable prices. J. H. Meyer, 440 Montgomery St., San Francisco, Calif.

STEYBRAE AYRSHIRES — Registered; all ages. E. B. McFarland, 414 Claus Spreckels Building, San Francisco, Calif.

NORABEL FARM AYRSHIRES—Le Baron Estate Co., Valley Ford, Cal.

BROWN SWISS.

Fifteen of my full breed cows will calve between now and October 1st. Some are daughters of Swiss Valley Girl 7th, 539 lbs. butterfat; Madame Laughlin, 522 lbs. fat; Molly P., 512 lbs. fat; Laurella, 490 lbs. fat. Some carry strong blood of College Bravura 2nd, 798 lbs. fat; Bertha M, 695 lbs. fat; Merney, 596 lbs. fat. Present herd sire grandson of College Bravura, 798 lbs. fat, and Bertha M., 695 lbs. fat. Good many are grand daughters of Junker, imported, who weighed 2250 lbs. Bull calves from these cows will be offered for sale. Apply M. J. Pedrotti, San Rafael, Cal.

BEEF CATTLE.

SHORTHORNS—The foremost beef breed—Have a limited number of stock for sale, both sexes. If you wish to start a small herd I can probably supply your needs. T. T. Miller, Hollister, Cal.

ALAMO HERD REGISTERED HEREFORDS (founded by Governor Sparks). Herd and range bulls. Reasonable prices. W. D. Duke, Gazelle, Siskiyou county, California.

RANCHO SAN JULIAN SHORTHORNS—Purebred range bulls, unregistered, for sale. Estate Thos. B. Dibblee, Santa Barbara, or Lompoc, Calif., John Troup, Supt.

REG. SHORTHORNS — Good dual-purpose animals raised without pampering. Young stock for sale. Prices reasonable. W. E. Rucker, Willitts, Cal.

HEREFORDS—Sierra Vista Herd, Minturn, California. Over 100 registered animals. Fairfax and Repeater bulls head the herd. On highway.

THE NEVADA HEREFORD RANCH—Jno. H. Cazier & Son Co., Prop., Wells, Nevada. Reg. Hereford cattle. Breeding stock for sale.

JACK LONDON RANCH, Glen Ellen—Shorthorn bull ready for service, and some good bull calves.

ABERDEEN-ANGUS cattle of quality and breeding. Lilac Ranch, Escondido, Cal.

SIMON NEWMAN CO., breeders of Registered Herefords, Newman, California.

HEREFORDS — Mission Hereford Farm, J. A. Bunting, Prop., Mission San Jose, Cal.

REGISTERED HEREFORDS—H. H. Gable, Diamond G Ranch, Esparto, California.

GEORGE CALLAHAN—Breeders of registered Herefords. Milton, California.

GEORGE WATTERSON — Breeder Registered Herefords. Bishop, California.

REGISTERED SHORTHORNS — Fair Oaks Ranch, Willits, Calif.

SHORTHORNS — Carruthers Farms. Live Oak, California.

SHEEP AND GOATS.

FOR SALE—Rambouillet rams and ewes—purebred; the very highest grade of large smooth body; heavy shearers; the wool and mutton type. Immediate delivery of individual or carload lots. You can find none better or of higher grade. Address Glenn, Cal. Location, 8 miles south Hamilton City, 1 mile west Ordbend. Windell Orchards Co.

FOR AUGUST 15TH DELIVERY I offer 100 Rambouillet Ram Lambs and a few yearlings, all from registered rams of most noted breeders of America and from big-boned, smooth, heavy-shearing, purebred ewes. Special rates on the lot; also a 3-year-old registered Butterfield ram for sale. W. H. Guscetti, Loyalton, Cal.

F. A. MECHAM ESTATE, Petaluma, Cal.—Breeders and importers of Shropshire, Rambouillets and American Merinos, both sexes. Also Red Polled cattle. Take electric car at Petaluma or Santa Rosa for Live Oak Ranch.

WRITE ME for early Rambouillet ram lambs, ready for light use, by September 1. Also a few yearlings. Carl Lindheimer, Woodland, Cal.

HARRY L. HUSTON, Winters, Calif.—breeder and importer of Shropshire sheep. Stud and range rams. Prices on application.

FOR SALE — 350 grade Shropshire ewes. Excellent condition—majority under 5 year old. Box 154, Monticello, Napa Co., Cal.

J. B. BLOOM, Dixon, Calif.—Twenty-five years breeder of purebred Shropshire sheep. Rams for sale. Single or carload lots.

FOR SALE—Purebred Shropshire buck lambs and long yearlings. Address C. D. Dean, R. F. D., No. 1, Yuba City.

DORSETS AND ROMNEYS — Dorset ram lambs for sale. John E. Marble, South Pasadena, California.

HARVEY S. VAN VLEAR, Lodi, Cal.—Breeder and importer of Registered Hampshire sheep.

CALLA GROVE FARM, MANTECA, CAL.—Breeders and importers of Hampshire sheep.

KAUPKE BROS., WOODLAND, CALIF.—Breeders and importers of Hampshire sheep.

FOR SALE—600 two-year-old Merino ewes. Swall & Wilson, Box 742, Bishop, Cal.

CHAS. KIMBLE—Breeder and importer of Rambouillets. Hanford, California.

BULLARD BROS., Woodland, Calif.—Breeders and importers of Rambouillet sheep.

MILK GOATS — Selling out cheap. Cash Nursery, Sebastopol.

DR. A. S. ALMEIDA, Dixon, Cal. Reg. Shropshire sheep.

MISCELLANEOUS.

BUTTE CITY RANCH
SHORTHORN CATTLE, SHROPSHIRE Sheep, Berkshire Hogs, Shetland Ponies, Bronze Turkeys, White Plymouth Rocks. Stock for sale at all times. Next sale all breeds, Wednesday, August 11, 1920, at ranch. W. P. Dwyer and W. S. Guilford, Box P, Butte City, Glenn county, California.

FOR SALE—Few graded Guernsey and Jerseys, fresh and coming registered Guernsey bull, 3 years. Address W. J. Rhoads, 15 N. Cal. St., Stockton, Calif.

SIX BORDER SCOTCH SHEEP DOG Puppies, imported from New Zealand. Highly bred stock. Dogs, $30. Females, $25. Ben Shaw, Hollister, Calif.

CHOICE STOCK EWES AND BUCKS. Also herding Collie dogs. John G. Mee, St. Helena, Calif.

animal meeting at Hanford, netted $960.

Arrangements for the Stanislaus County Holstein Breeders' Association sale announced recently are going forward with promise of one of the finest offerings of the breed ever put through a sales-ring. Forty-five head passed upon by the selection committee and not one that approaches inferiority. Go to the Patterson fair on August 21st and buy a Holstein.

Swine and Swinemen.

The well-known Duroc-Jersey breeding establishment, Diamond Bar Ranch, have some young stock for sale that should interest those needing purebred stock of exceptional worth.

The University of Illinois has issued a bulletin interesting to swine breeders entitled, "Variations in Farrow: With Especial Reference to the Birth Weight of Pigs," by W. J. Carmichael and John B. Rice—a publication of value to the breeder of registered swine.

A very attractive catalogue, listing the Duroc-Jersey and Hampshire swine, offered in the Conejo Ranch sale of July 29-30, has just come to the office. Any one interested can obtain a copy by writing the Janss Investment Company, Metropolitan Bldg., Los Angeles.

Fishmeal is attaining prominence as an economical feed for hogs. It is only recently that it could be obtained as such. No doubt considerable quantities were used in compounding feeds, but experiments in feeding showing economical results, have created a demand for it.

The Farm Bureau Marketing Association of the upper San Joaquin valley sends in the report of another very successful week's sales. The top sales were from $17 to $17.85. The sales at the various points were as follows: Visalia, 2 cars, 12 consignors; Tulare, 2 cars, 22 consignors; Hanford, 2 cars, 22 consignors; Corcoran, 1 car, 6 consignors.

Beef Cattle.

Large numbers of cattle are reported as dying from loco weed poisoning in Arizona. In one bunch of 300 only one survived.

With 18,000 head of domestic animals enrolled in the "Better Sires—Better Stock" movement, Virginia leads all states in this line.

Andy Wilson of Inyo county was convicted of failure to retain in his possession for a period of 15 days hides of slaughtered cattle that were removed by him. He was fined $50.

Cattle brands that have been cancelled on the records for non-compliance with the law can be recorded again by the original owner upon application at the office of the Board of Cattle Protection and payment of the $2 fee.

Polled Herefords have increased from 131 in 1907 to 22,945 in 1920; six members of the association in 1907 to 1330 in 1919. There are eight strong state associations working in conjunction with the American Polled Hereford Breeders' Association.

George Russel Jr. of Elko has been elected president of the Nevada Live Stock Association to fill the vacancy caused by the resignation of Jerry Sheehan of Winnemucca. R. C. Turritin of Reno has been elected a member of the executive committee.

Miscellaneous Livestock.

Forest rangers in the high Sierras are fencing certain meadows infested with poison weeds.

Wisconsin has 110 cow testing associations which are actively eliminating the low producing dairy cow.

Sheep have already been brought to the lower pasture lands of Kern County on account of shortness in the hills.

Alfalfa hay in country markets is reported as weaker during the past week by San Francisco hay merchants.

A new grade of alfalfa is now listed on the markets known as "Rabbit Alfalfa." It is the best grade with fine stems and plenty of leaves.

The 10th annual Pacific International Livestock Show, O. M. Plummer, Gen. Manager, will be held at North Portland, Oregon, November 13-20.

Secretary Wayne Dinsmore of the Horse Association of America announces prizes of $50, $25 and $15 to three stallion owners, reporting the largest number of mares bred to registered stallions.

Sonoma County Fair again makes its bow to the public after a lapse owing to stress of war activities. If their fair is as interesting and complete as the premium list they issue, we will all miss it if we do not attend.

S. Moore Gordon of Pekin University, Pekin, China, is in California in the interests of his institution. They expect to establish an Experiment Station, including departments of livestock, poultry, agriculture, etc. Prof. Gordon has been in this country some time traveling among the various institutions and will be here some months longer before his mission is

TWO DAY AUCTION

HAMPSHIRE SOW AND LITTER

Famous Conejo Ranch

Registered

Duroc-Jersey and Hampshire Herds

THURSDAY, JULY 29—

DUROC-JERSEY SALE

FRIDAY, JULY 30—

HAMPSHIRE SALE

For years the Conejo Ranch has been recognized for the high-class pure-bred hogs in both Duroc-Jersey and Hampshire breeds that it has raised. At every stock show for the past few years Conejo animals have been prominent in the championship and first-prize classes. Every-year the standard of the Conejo hogs has been raised, with the result that this ranch today is able to offer a remarkable big type, preferred by all breeders.

Be Sure to Attend

For the first time Conejo Ranch hogs will be offered at public sale. The offerings in both classes will be carefully selected bred gilts and a few tried sows—the kind that make valuable foundation stock for farmers, fancy breeders and pork producers. Make arrangements to take in this sale. Lunch will be served at the ranch.

Autoists' Information

The ranch is located 40 miles northwest of Los Angeles on the Ventura State Highway near Newbury Park. It is situated half way between Calabasas and Camarillo. On the Coast line, go over the Conejo grade and follow road signs. On the Inland route, go to San Fernando, then cross to the Ventura State Highway.

If you come by train, notify our Los Angeles office regarding transportation.

Write at Once for an Illustrated Catalog

GREAT BREEDING

The bred sows and gilts in the offering are bred to our famous herd boars:

DUROC-JERSEY

PATHFINDER'S PRICE, By Pathfinder

GIANT WONDER By Great Wonder

BIG MODEL By Oakdale Model

HAMPSHIRES

CONEJO PRINCE By Duke's Allen

LIBERTY By The Harvester Again

CONEJO RANCH, Newbury Park, Ventura Co.

Los Angeles Address

Janss Investment Company, Fourth Floor Metropolitan Building

PART OF THE DUROC-JERSEY SALE OFFERING

PUREBRED RAMS FOR SALE

RAMBOUILLETS AND SHROPSHIRES

We have a considerable number of rams, one and two years old, raised by us in excess of our own requirements, which we offer at prices guaranteed lower than rams of same quality, of either breed, may be bought for anywhere in the West. Price for either breed, $30.00 per head, f. o. b. cars Los Banos. These rams are from stock equal to the best obtainable and we guarantee them equal to any rams on the Pacific Slope.

MILLER & LUX, Incorporated

Merchants' Exchange Bldg., San Francisco

LIVE OAK STOCK FARM

SHROPSHIRES
RAMBOUILLETS
and
AMERICAN MERINO
SHEEP

We have for sale this season 400 head rams, yearlings and 2-year-olds. All purebred. Will sell singly or in carload lots.

Also 15 Head Purebred Red Polled Yearling Bulls

For further particulars apply

F. A. MECHAM ESTATE

PETALUMA, CAL.

Announcement Extraordinary

FIRST REDUCTION SALE

THE THOMAS BISHOP CO. OF SAN RAMON, CALIF.

Offers for sale

700 PUREBRED (NOT REGISTERED) SHROPSHIRE EWES
with lambs of both sexes at foot

This offering is from the famous (International and Local) San Ramon Flock. They can be purchased as a whole or in lots to suit. Ewes can be seen on pasture, Sargents Ranch, near Bradley, California.

START A FLOCK AND RAISE YOUR OWN BUCKS

Intending buyers should make application for further particulars to

SUPT. FRANK RUTHERFORD —OR— THOS. BISHOP COMPANY
Phone—Bishop Ranch 166 Geary Street, S. F.
San Ramon, Calif. Phone—Kearny 4295

Livestock Queries and Replies

Sorghum Bagasse Silage.—What feeding value for dairy cows, if any, has the crushed stalks of sorghum with leaves left on but with heads removed, stalks to be cut into inch lengths? Wouldn't it make good silage? With alfalfa hay worth $25 per ton loose in the field what would the bagasse be worth at mill? What proportion hay should be fed with it?—L. E. P., Santa Ana.

Exact data as to the feeding value of the refuse from sorghum mills is not available. No digestion experiments have been carried on with it so far as we can discover. Several authorities, including Henry in "Feeds and Feeding," say that the crushed cane and leaves make good silage and it is a mistake to throw it away. In a dry condition we would not expect satisfactory results from feeding it. If put in a silo it would probably be much more palatable, especially if wet down when it was put in if it appeared dry. With sugar content removed we would expect it to have somewhat the same composition as alfalfa, although not so palatable and digestible. We would think, with alfalfa hay at $25, the refuse at the mill should be worth $6.50 to $7.50 per ton. If put in the silo and wet down we would think from 25 to 30 pounds of silage to 15 pounds hay daily. If the sorghum bagasse is cut into 1-inch lengths and fed as it comes from the mill, the addition of some cane stock molasses, say 3 to 4 pounds per head daily, will be of much advantage. The molasses should be diluted with water in the proportion of 2 parts water to one of molasses and sprinkled or poured over the feed.—Livestock Editor.

Hog Watering Trough.—Will you tell me through the columns of your valuable paper how to construct the best kind of a water trough for hogs—one that will keep clean? It must accommodate 75 to 100 hogs.—N. R. R., Lenare.

The best kind has not as yet been invented. During warm weather it is cooler where there is water and hogs will try to get into it or as close to it as possible. One in use and devised by H. Christensen, Poland-China breeder of Arlington, seemed to work well. It consists of a solid block of cement 8 inches high and 12 inches wide, and as long as necessary. Oval depressions are placed crosswise every 2 feet and are just large enough so that a hog can drink easily. These cups are connected by a groove in the center of the block, running lenthwise and extending to one cup outside of the pens, in which is placed a float valve to control the flow of water. These cups must all be placed on the same level. Placed along the center of these cups is a partition or board to prevent hogs from standing or lying down on top of the block of cement—a partition, if the watering device is placed between two lots or series of pens; a board if the device extends out into a large lot. A cement platform on each side of the device is an advantage—the cement trough of some kind or some of the galvanized devices manufactured by some of our advertisers.

Milk House.—Will you kindly give plan for a small milk house above ground? I do not want to have it in form of a cellar. Some place to keep milk from two or three cows so that it will remain sweet.—J. P. D., Placerville.

We suppose from the request that a summer cooler is what is desired. Make a frame of light material, 2x2 will do for posts, 3 feet square and say 4 feet high, with shelves one foot apart. These shelves should be slatted and not solid. The top should be solid. Cover it all with good quality of burlap, making a door on one side. Place on top a small tank for water, preferably the full size of the cooler and 6 or 8 inches deep. Fill tank with water and place in it strips of cloth with ends hanging over the outside of tank and down on sides of cooler. These strips of cloth will act as wicks and by capillarity keep the sides wet or damp. Place the apparatus in the shade, where the air will circulate freely. This will cause the water on the cloth sides to evaporate rapidly and cool the interior. The sides, door and all, should be kept damp all the time. If shade is not available then a shed should be built over the cooler. The construction should be good enough to exclude all insect life. A cement floor on which to place it would be an advantage. Never leave door open in day time and open only when absolutely necessary. Do not let it run dry in the day time.

Another Cow Disease

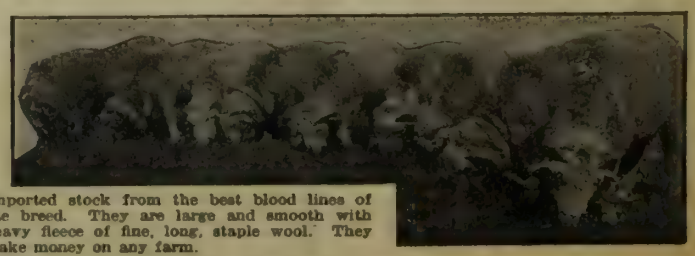
(Written for Pacific Rural Press.)

Here is something more to worry about if you are out of worries. Johne's disease hasn't struck us yet, so far as we know, but they have begun fighting it in the Middle West, notably in Wisconsin, where it has gained a toe-hold.

Apparently it is a bad actor, for the report comes from Denmark that one whole breed of cattle may be exterminated if the disease there is not checked. It is serious enough in Wisconsin to alarm the experts of the College of Agriculture, who are now working on methods of detection and control. They are putting out a substance made and used like tuberculin for subcutaneous injection to detect the disease before physical symptoms are pronounced enough for a diagnosis.

What is the thing, anyway? Well, a bulletin from the Wisconsin Agricultural College gives the following penpicture of it: "It is due to an infection of the walls of the inestines by certain bacteria. Usually the first symptom is a general unthriftiness, shown by loss of flesh and a roughened hair coat. In most cases this is followed by diarrhoea, which may become excessive in time. In later stages the animal becomes thin in spite of a good appetite. The more pronounced symptoms are generally shown shortly after calving, when the milk flow is heavy and the strain on the animal is great."

KIMBLE RAMBOUILLETS



Imported stock from the best blood lines of the breed. They are large and smooth with heavy fleece of fine, long, staple wool. They make money on any farm.

Rams, Yearlings, and Older Breeding Ewes. Call or write for further particulars.
CHAS. A. KIMBLE, HANFORD, CAL., IMPORTER AND BREEDER

Politics vs Simplex Silos

FARMING is the biggest business in the United States. It represents an investment of six billion dollars.

It is the most important business because it is the source of the great portion of the nation's essentials.

Any situation that affects farming conditions must similarly affect the entire nation. For that reason all political parties have plans for promoting farm welfare.

But one Simplex Silo on a farm is ten times as valuable to the farm owner as a hundred page report or a dozen committees in Congress. The Simplex produces results as soon as it is erected—results that mean year after year of savings on feed bills.

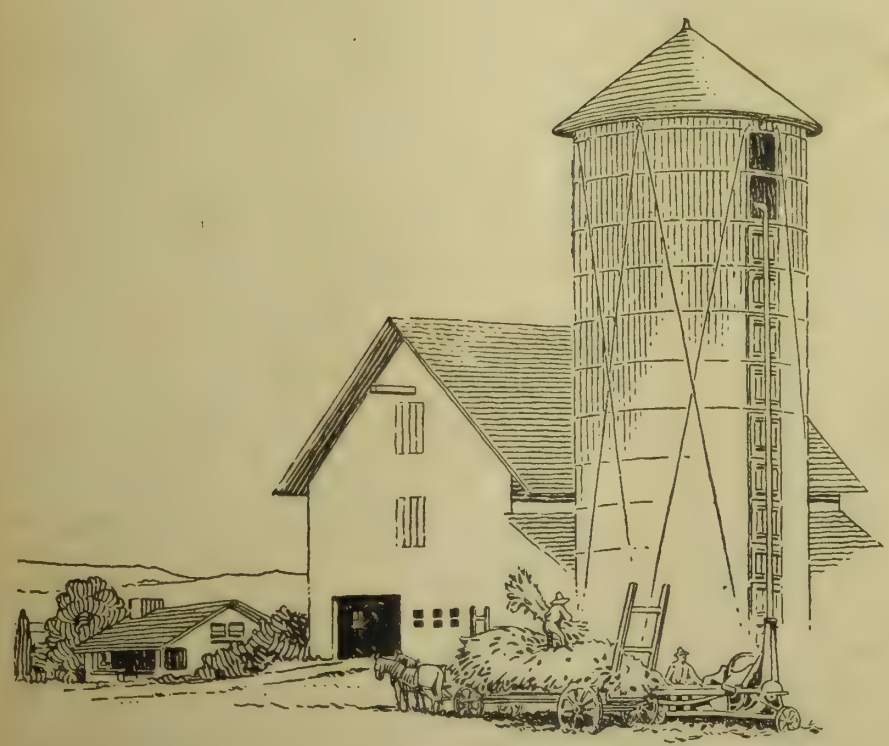
Of course every silo will save the price of feed, but the Simplex goes a step further than that. It saves silage.

Every detail in the construction of the Simplex complies with scientific requirements. The one-piece staves eliminate end-joints and prevent spoiled silage through leakage.

The Clear Oregon Pine from which the staves are cut make the inner wall smooth and perpendicular, insuring against honey-combing and air-pockets, another source of spoiled silage.

The Patented Interlocking Anchorage System, steel hoops, and Crissell Tangent Top adds strength, stability, and perfect roundness.

This year the pressing necessity for conserving feed makes some kind of silo indispensable. Agricultural experts have pronounced the Simplex scientifically correct. This point alone warrants your investigation.



THE COMMON SENSE WAY of determining superiority is by comparison. When you need an ensilage cutter, compare the Papec—part for part—with other cutters. Note the solid semi-steel frame of the Papec—its perfect knife clearance—the 6 fans on the cutting wheel instead of three or four—the minimum of power upon which it operates—the amount of ensilage it will cut and elevate in an hour. We really want you to make this comparison. It is a way that is fair to you and to the Papec.

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Please send me complete information regarding the Simplex Silo and Papec Ensilage Cutter.

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TESTIMONIALS

"Cows increased in one week 3 per cent in milk."
A. L. McCULLOCH, Alpaugh, Cal.

"I never saw hogs do so well or grow so fast as on this molasses ration."
C. H. HARTWIG, Yuba City, Cal.

"It has enabled me to keep my stock in better condition at less expense."
J. M. HENDERSON, JR., Sacramento, Cal.

"Have one calf that refuses to drink new milk—prefers skim milk with molasses. What do you know about that?"
R. HECKLEY, Santa Rosa, Cal.

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"One cow will turn down the choicest handfuls of alfalfa hay unless it has been 'Molassed.'"
REDWOOD AYRSHIRE FARM, La Honda, Cal.

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cheaper than hay, but has same feeding value as corn or barley.

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We offer for immediate delivery, 5 January yearling Boars—splendid individuals, and priced very reasonable to move them. Study their breeding.

Three by Real Sensation, out of an Indicator Lady dam. The sire of Real Sensation was Great Sensation. His dam was Lady Lucy 2d. Indicator Lady's sire was Spotless Indicator. The dam of Indicator Lady was Lucille Wonder. Farrowed January 26, 1919.

Two sired by Real Sensation. Dam, Wonder Girl by Model Chief 2d, out of a Lucille Wonder dam. Farrowed January 26, 1919.

Quality is high and our prices are most reasonable. We will give you the best value you ever saw, backed up by our guarantee of satisfaction. Call or write us.

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Remedies for
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Scouring Calves, Hog Cholera
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Use ANFO-Calf Meal to take the place of milk in calf-raising. Cuts Calf Cost. Raises Sturdy Calves. From Feed Dealers or Animal Food Co., Oakland.

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ROSEDALE FARMS
EUGENE, CALIF.
Offers for sale
20 Registered Yearling Hampshire Rams, all sired by imported rams.
Also
10 Purebred Rambouillet Yearling Rams.
D. E. KELLIHER, Owner

HEREFORDS IN THE HIGH SIERRA.

A trip of the kind mentioned in the following letter by H. H. Gable of Esparto must always be an enjoyable one. Mountain scenery of the most magnificent kind, and Herefords! Well, let the gentleman tell his own story as you will agree he is capable of doing when you read it. Writing to the Rural Press, he says:

"At the invitation of Mr. H. M. Barngrover of San Jose, it was my pleasure to accompany him, together with Mr. Wm. Briggs of Dixon, Alex McDonald of Davis and Mr. Raney of Toll House, all interested in Hereford cattle, to his mountain ranch, Veramont Stock Farm, located in the Indian Valley of Plumas county, about twenty miles north of Quincy.

"Veramont Stock Farm consists of some eight hundred acres, over four hundred of which are meadow land, located in an arm of Indian Valley, one of the prettiest valleys of the Sierras. Through it winds a rushing mountain stream, from which the water for irrigating the ranch is obtained. On these meadows, in addition to the native grasses, alsike and white clover, supplemented by alfalfa and timothy, grow luxuriantly and furnish an abundance of nutritious feed, as is evidenced by the generally sleek condition of the Hereford cattle which were grazing on the pastures.

"Mr. Barngrover has a herd of well-selected Hereford cows, which are being improved by the use of a smooth, thickset bull, Patrician 5th, a grandson of Paragon 12th. This bull is producing some very growthy, well-built calves, and is surely leaving his imprint on the herd. In addition to Patrician 5th, Mr. Barngrover is just bringing into use a two-year-old bull, Don Woodford 4th, a son of Woodford 1st. This bull is of great scale and very smooth for his size. His use will undoubtedly add size to the individuals composing the Veramont Herd. Under the careful supervision of Herdsman Harry Wilson, a number of promising herd-bull prospects, together with those individuals composing the show herd are being rounded into shape for the fall shows.

"After half a day spent in looking over the ranch and cattle, we returned by way of Truckee and Lake Tahoe, all voting the trip a most interesting and pleasant one, and to be long remembered by those who participated."

A SWINE RANCH SUPREME.

Conejo Ranch started in the purebred business about four years ago and year by year the herds of Duroc-Jersey and Hampshire hogs have been improved by some of the leading family strains of the Duroc boar line by Big Model, Giant's Type, Giant's Wonder, Wonder's Choice, Pathfinder's Pride; in Hampshire line, by Liberty and Conejo brands; in sow line in Hampshires, by the famous Florine sows, and in the Duroc line by the famous sow, Model Chief, Spotless Indicator, Chief Invincible, Jr., Inspector, Model King, Golden Lad, Model King, Pathfinder Invincible, J. T.'s Cherry King Orion, Pathfinder's Pride, Inspector. The combined herd have averaged in size from about eight hundred to one thousand hogs. The Conejo Ranch hog improvements have always been made on a permanent concrete basis. In the hog department these consist of a superintendent's house, a large, well-equipped steaming vat to cook the food, fifty outside farrow houses and pens, a great number of runways built permanently, many fields devoted to exercise lots, fattening pens, a large-size field cut up in smaller pens in the alfalfa lot, a large, enclosed concrete floored farrowing house of fifty pens that are equipped with automatic water troughs, concrete feeding chutes and guard rails. Over the ranch feed lots there is clear, cool water running over the entire place to assure an adequate supply of this necessary article. All of the barns and outbuildings are kept in a clean sanitary condition; the buildings are white-washed; there is ample drainage over the entire premises; manure is taken away frequently, and all of the herds are watched closely and are immunized by the double treatment against hog cholera at proper intervals.

The details of a two-day auction sale of Durocs and Hampshires may be found in our advertising columns.

H.G. BALL PLACE TULARE CAL.

Breeder of
Reg. Holstein Friesians and Big-Type Polands
Best Blood Lines
H. G. BALL, Prop.
Tulare, California

Poultry Breeders' Directory

Rate 3½ cents per word each issue.

BARRED PLYMOUTH ROCKS —"Nothing Better in Poultry." Wonderful layers. Choice hens and pullets for sale; also fine cockerels that will improve your flock. Now booking orders for hatching eggs. I have made a specialty of Barred Rocks for over twenty-two years. That's why our birds win at all the leading shows. Catalog free. Chas. H. Vodden, Box 3, Los Gatos, Calif.

SANTA CRUZ CHICKS are in demand. Our hatchery will run full blast this fall, supplying Leghorns, Anconas, Minorcas, Rocks, Reds, and Orpingtons. We also offer W. L. Hyde's cockerels from Pen 1, with trapnest record 236-284 at $5.00. Write for folder with chick price list. B. W. Archibald, Soquel, Santa Cruz Co., Calif.

ATKINSON'S PEERLESS ANCONAS lay more and eat less than other breeds. 50 big husky cockerels, $5 and up; 200 pullets, trios, and pens for sale. Hatching eggs. Catalogue free. J. W. Atkinson, Box B, 130 Willard St., San Jose, Cal.

WHITE LEGHORN BABY CHIX from heavy-laying Hoganized Stock. Safe arrival of full count, live, strong chix guaranteed. Price list and interesting literature on application. The Pioneer Hatchery, 408 Sixth St., Petaluma, Cal.

RAISE FALL CHICKS—We will have them every week. R. I. Reds, Barred Rocks, White Leghorns. Write for special circular. See why they pay. Stubbe Poultry Ranch and Hatchery, P. O. Box 67, Palo Alto.

BREEDING STOCK FOR SALE—Yearling hens, pullets, R. I. Reds, Barred Rocks, Black Minorcas, Brown Leghorns, $2 to $3 each. Fall chicks also. Mission Hatchery, Campbell.

BARRED ROCK, White Orpington, hatching eggs, now $1.75 and $3.50. Breeding Cocks, Cockerels, Hens, Pens. R. P. Lutsi, 1217 20th Ave., S. F. Yards at Los Altos

WHITE ORPINGTON NO. 27 laid 65 eggs in 87 consecutive days. Setting. For sale. White Leghorn cockerels. Mabel Smith, Box 128, Route 2, Hollister, Calif.

GOLDCROFT BUFF ORPINGTONS—Sturdy breeders and young growing stock for sale. Eggs, $3.00 per setting after April. Samuel Abrams, Los Altos, Calif.

CHICKENS, DUCKS, GEESE, GUINEAS, Pea Fowl, Pigeons. Wm. A. French, 545 W. Park St., Stockton, California. Stamps.

BUFF ORPINGTONS, BUFF DUCKS, BOURbon Red Turkeys, White Guineas. The Ferris Ranch, R. 2, 144 D. Pomona, Calif.

BABY CHICKS from selected S. C. White Leghorn hens. Write for prices. Tupman Poultry Farm, Box 7A, Ceres, Calif.

80 FINE S. C. WHITE LEGHORN Pullets, 9 months old, laying, for sale. F. K. Parker, Concord, Calif.

RABBITS AND PIGEONS.

WHITE KINGS — Famous squab raisers. Mated and banded pairs, $5.00. Hicklings, 553 Bancroft Ave., San Leandro.

COULSON'S EGG FOOD
FOR GREATER EGG PRODUCTION
FULL PARTICULARS IN OUR FREE BOOK
"CHICKENS FROM SHELL TO MARKET"
Coulson Co.
PETALUMA, CAL.

GLOBE "AI" FEEDS
—Judge them on Business Principles!
FEED FOR SWINE, STOCK AND POULTRY
ASK YOUR DEALER

Poultry for Profit

THE PRESERVATION OF EGGS.

The housewife who wishes to preserve eggs for use in time of scarcity or advanced prices should avail herself of the best method of egg preservation. Water glass, or sodium silicate, as it is technically known, has been proved a very efficient means of preserving eggs.

Water glass is usually purchased in the form of a concentrated sirupy solution, which is diluted ten times its volume with water that has been previously boiled and cooled. In such a solution fresh eggs readily sink and remain submerged. The silicate seals the pores of the eggshell and this prevents the entrance of organisms and largely retards the passage of gases. Therefore, oxygen is practically excluded.

When the water glass is of a good composition, and the eggs are kept completely submerged, and all is kept in a cool place, no apparent change in weight, composition, or flavor should take place in the eggs for many months. This, of course, will be the case only when clean, sound and fresh eggs are placed in the solution. The preservation of cheap eggs in the home is useless unless the consumer knows for certain that the eggs are strictly fresh. It is not advisable to store eggs in this manner if more than twenty-four hours old. A very good plan to follow is to take your jar or other container having the mixture in it to your poultryman and have him fill it as the eggs are gathered. In this manner you run no risk of delay in delivery. Eggs so packed can be conveyed to your cellar with impunity.

Never preserve a dirty egg since it will be tainted in flavor. Never wash dirty eggs, for in so doing the protective coat is removed and they will not keep. Not only should eggs be clean, sound and fresh, but infertile also, since infertility adds to the keeping quality. Remember that a fertile egg contains a germ which, in hot weather, readily spoils the egg for food. A stone jar or keg is a suitable container. Covers should be fitted to whichever receptable is used in order to prevent evaporation. Containers with contents should be kept in a cool, dark place.

An eight-gallon jar will hold from fifteen to eighteen dozen eggs and will require from three to four gallons of solution depending, of course, on the size of the eggs. The eggs should be so placed in the jar that those at the top are covered with at least two inches of the water glass.

OVERFEEDING TURKEYS.

To the Editor:: I have fourteen young turkeys from two to three weeks old. They were doing fine until a few days ago. A good many of them are troubled with what I should judge is rheumatism. Their toes curl in towards legs. It seems to affect the left leg first and then the right. I feed them chick feed, clabbered milk, onion, and cracked bone. They have all the young green corn and barley they want to pick at. I started them in on cottage cheese, but they finally got so they would not touch it, so I feed chick feed instead. Will you please tell me what is the matter with them and what I can do. And if I am feeding them right and how much to feed at a feeding.—E. B., Sonoma county.

These baby turkeys may be from parents that are not sound and vigorous, or that are closely inbred, which results in much loss and dissatisfaction for the owner. If such is not the case in this instance we believe the trouble is due to overfeeding. Or perhaps they are suffering from the lack of shell, grit, or charcoal. Very young poults eat very little. Nearly all inexperienced people make the mistake of encouraging them to eat more than is good for them. A healthy baby turkey always appears to be hungry. It is difficult to state an exact quantity of feed that is proper—that is to say, the quantity of grains, seeds, or other concentrated feeds. They may have all the bone, greens and cottage cheese they wish to eat, except that if the bone is fresh cut green bone a very little should be fed. If they cannot find bugs it is necessary to supply them with a very little chopped meat when fresh-cut green bone is not to be had. A former breeder of turkeys who sold eggs for hatching, when asked for advice regarding feeding the poults, frequently replied as follows: "Until they are a month old see how nearly you can come to starving them to death without actually doing so."

DOUBLE MATING.

To the Editor: Will you clearly explain what is meant by "double mating"?—H. E. B., Berkeley.

The following is the definition of the term "double mating": "The use of two separate and distinct matings within a single variety, out of which is especially designed to produce exhibition males and the other exhibition females." Except in rare instances, this system of mating is practiced only by those breeders who are striving to produce show birds of an exact color or shade required by the judges at exhibitions in order that they be qualified to win the highest prizes. As an example in breeding Barred Plymouth Rocks it is the tendency of the males to become lighter and the females darker in color than that mentioned in the Standard of Perfection. It is also required that the male and females in a mated show pen be of the same shade. In order to accomplish this result one breeding mating is made up to produce males with plumage of the desired shade, and another to yield the pullets of a shade to match. The first mentioned mating is known as the cockerel mating, and the other as the pullet mating. The pullets that are reared from the cockerel mating are known as cockerel-bred females; the cockerels that come from the pullet mating, as pullet-bred males. These females and males are usually of a shade undesirable for show but in the hands of a skillful breeder are desirable for continuing this line of breeding.

BREAKS A BROODY HEN.

To the Editor: I have a black Minorca hen six years old last spring. She has laid continuously, except during moulting, and has never wanted to set until two weeks ago, and in the last fourteen days before she commenced to cluck she laid eleven eggs. I shut her up as soon as she showed a desire to raise a brood,—just two weeks ago—and today she commenced laying again.—Ed. J. Featherstone, Visalia.

POULTRY PRATTLE.

Who has succeeded in hatching a double-yoked egg?

Bear in mind that gravel not only aids digestion, but supply earth salts, which keeps the gizzard strong and contains a certain amount of shell material.

A new business venture for the rancher is the marketing of surplus eggs and poultry through the creamery or cheese factory. As a rule not all creameries are equipped for the new business but those which have engaged in it find it profitable.

Any active poultry, such as chickens or turkeys, when given the run of grasshopper infested fields, will devour great numbers of this pest. For the best results the poultry should be turned into the infested fields while yet young and before the hoppers have attained their wings, as this is the time when the insects will be reduced with the greatest rapidity.

Home Circle Department

THE MOVIE IS MOVING COUNTRYWARD, BUT—

Some time ago there was laid before our readers a plan for a motion picture service for rural communities. If you remember, a way was there mapped out to secure a service of, by and for ourselves. The State Library, through which we now so efficiently serve ourselves with books,—all the books printed if we want them,—would become the agency for serving and circulating the films while some local organization, logically the farm bureau center, would be responsible for the local equipment.

Decent Movies Demanded.

Frankly the aim of such a scheme would be to furnish entertainment clean and wholesome, but entertainment only. You have heard much of the tired business man and worn-out society woman who must have their musical comedy and matinee as a relief, for overwrought nerves. How about the tired farmer and his wife and children? They are just as much entitled to entertainment conveniently located and easily accessible as are city folks, but I am satisfied that they are not going to get it until they provide it for themselves. Anything we may have handed to us from without is bound to have a string attached to it. It is going to be dominated by the commercialism which is making a curse of the city movie, or it is going to ring in propaganda for the uplift of the farmer and his family. If we can't have in the country a saner, cleaner movie than commercialism has given to the city, then in the name of decency let's go movieless to the end of our days! And if we can't once in awhile go to a community entertainment just for amusement without being bored by some "wise guy," whose hands were never calloused by a pitchfork, attempting to tell us, even through pictures, "how to produce more," or how to further some scheme of some cheap politician, again I say, let's sit on the fence and chew a straw for entertainment.

Candidly Disappointed.

The above somewhat rabid remarks are occasioned by a disappointment. It has been known for some time that a "bureau" was contemplating some sort of movie extension for rural communities. The writer has just seen what may be termed its prospectus and he is disappointed.

But before pouring out the pent-up grief, let me introduce the "bureau." It calls itself the Community Motion Picture Bureau. Its headquarters are in New York, and it claims addresses all over the United States—two in California—and various other parts of the world. It is the accredited agent for the U. S. War Department Motion Picture Service, and has secured, through Secretary Meredith, the loan of negatives of films made by the Department of Agriculture. It is now mobilizing its forces for "patriotic service among the farmers of this Nation." Its service will be rendered through motor trucks equipped with the whole works, from electric generator to screen. It is proposed to districit the country through the farm advisors, and form circuits so that one night a week or once in two weeks the truck will roll in, shoot its charge of film and roll out again. All the farmers have to do is to look and be impressed—unless there are some fees to be paid.

New Project Still in the Dark.

But again, before voicing the disappointment, let it be clearly understood that the writer sees no objection to this scheme if it is a bona fide agent of the government, financed by the Government and is to work with the farm advisors along educational lines. But if it is a commercial attempt to exploit the country along movie lines, or if it is an attempt to patronize country folks by offering them propaganda sugar-coated with entertainment, we at least ought to know it before we welcome it with open arms. And the literature I have seen leaves us pretty much in the dark as to these vital points. There! I have voiced the disappointment in a general way. Now, to be more specific.

Do You Smell a Commercial Rat?

Who is financing this scheme, and for what? Who is to pay for and own and maintain the great fleet of trucks and the vast amount of equipment this plan calls for? Who is going to pay the army of employees, large and small? For what is the investment to be made—philanthropy or profit? If the former, farmers don't want charity. If the latter—well, look what commercialism has done to the city movies. In the city commercialism has made the movie vicious in many instances. In the country dullness might be the main result.

Again, for what is this film-laden truck going to roll in and shoot pictures at us? For entertainment only? If not, then we are through right here unless, as already said, it is to be frankly an aid to the farm advisor's serious work. And this last is not the idea one gathers from the literature. One is led to think that this scheme is coming from without to entertain the farmer a little—that's the sugar coating, and instruct and uplift him a lot—that's the real potent pill. A little vague talk about entertainment is indulged in. I believe the words "comedy" and "drama" are somewhere mentioned once; but when it comes to a "partial list of subjects treated," see what you are to draw.

An Exhilarating Program.

Agriculture — Alfalfa, corn, cotton, clover, grains, fertilizer, irrigation, ditching, tractors and gas engines.

Poultry—Chickens, ducks, pigeons, turkeys, geese.

Livestock—Cattle, sheep, hogs (they left out the goat.)

Dairying — Testing, transportation, creameries, pasteurization.

Then there are subjects too numerous to be mentioned under Orchards, Reforestration, Household Helps, Good Roads, Social and Educational, Production, Distribution and Consumption.

Reads like the curriculum of an Agricultural College. Couldn't you just split your sides laughing over pictures based on these subjects?

The "Bureau" Hasn't "Hit It."

No, brother; I'm inclined to think we farmer folks don't care for your pill, just yet, anyway. We have enough agencies now for the education of the farmer and they are doing very well. If you can get the gas to do it with, roll your truck around to help the farm advisor, but, in the name of tired farmer folks, don't try to disguise it as a circus wagon.

We have not enough of the recreational in our lives and we have not developed enough recreational agencies among us. That's what we need right now. We don't need to work all the time. We want to play once in awhile. And we want the movie to help us play. We are going to welcome the movie when it comes to us in a way to meet our needs. But you haven't hit it—not by a thousand miles!

POMEGRANATE JUICE.

To the Editor: We recently experimented in using pomegranates, and we found they would make a splendid juice, such as grape juice is made. It contains a lot of sugar and would be splendid to make fruit punch, lemonade, etc. We crushed the pomegranate and strained the juice.—M. G. J.

What is that which the postman, the clergyman, the fountains and the wild beasts, all alike say?

Letters, pray.
Let us pray.
Let us spray.
Let us prey.

"THE GLORY OF THE GARDEN."

Then seek your job with thankfulness and work till further orders,
If it's only netting strawberries or killing slugs on borders;
And when your back stops aching and your hands begin to harden,
You will find yourself a partner in the Glory of the Garden.

Oh, Adam was a gardener, and God who made him sees
That half a proper gardener's work is done upon his knees;
So when your work is finished, you can wash your hands and pray
For the Glory of the Garden that it may not pass away. —Kipling.

THE RIGHT ROAD.

Johnny always knew which was the right road! It was the one he didn't like, the one that led to school.

Every morning since he could remember—except the Saturdays and Sundays, of course—he had come along the lane which led from his own back door, to where two roads ran away from each other, just like a big fork with two prongs. One, the narrow one, led down to the schoolhouse, and how well he knew it! The other,—ah! he had never had a chance to walk down it. It was much nicer looking than the school road. The school road was hard and smooth. Johnny heard people with automobiles call it a beautiful road. But he preferred the other, over which nice, soft green grass grew, on the sides of which flowers bloomed.

Well, one morning Johnny was a little late for school, so it came about that he walked up the lane alone. When he came to the two roads, he stopped. The wrong road looked so very nice. The grass was green, the flowers were pretty, butterflies were flitting from blossom to blossom, bees were humming and buzzing after the butterflies, a grasshopper was having such a good time, and Johnny wished there were no other road, and no school, and—well, he even wished there were no teacher.

He put out one little foot, the wrong way!

Then he put out the other little foot, also the wrong way. Only two steps, and there he was on the wrong road!

Johnny drew a deep breath. It was terrifying, but it was delightful, too. He went on and on. Now he would stop to gather a flower. Again, he would be tempted to chase a blue butterfly. And flower and butterfly alike led him farther and farther away from the right road, the road to school, and from doing what his mother certainly thought he was doing.

Presently, his foot stuck in a deep, deep hole, made by a cow's hoof. He had hard work in pulling it up. The next moment the other foot was hard and fast in another hole! And then he saw that all the road was mud,—black mud and nothing else. Before he had floundered along much farther he had both feet fast in the black, soft mud.

But Johnny was a brave little boy. He stood still for a minute, shutting his eyes very fast and then opening them, and wondered what he could do. And then he knew, and did it!

He turned right round and began to go back the way he had come. It was hard work. His feet stuck fast in the mud, and he had, at the last, to leave one shoe behind him!

On and on Johnny struggled. At last he came to where the two roads forked, and once more the choice was his to make.

He would go on to school. Mother would be sorry enough to see him looking as hs looked without being shocked by seeing him come home in the middle of the morning.

But was anything harder than going into school? Every one looks at you, when you're late, even if you have both shoes.

However, teacher was better than he felt he deserved. She did not say much, and she spent recess in tidying him up. More than that, when he told her the truth, she sent a big boy after the missing shoe. So, after all, mother didn't have to be so terribly shocked!

But it was a great comfort to tell her all about it. He wished he had told her how he wanted to see the wrong road, for then she would have told him that it led to the pigsty.

And Johnny learned two things that morning. First, that it is better to keep to the right road, for the wrong one may take you to a pigsty. Secondly, that, if you find yourself on the wrong road, the quicker you turn right back, the better.—Frances Harmer, in Sunday-school Times.

COOKING SUGGESTIONS.

Chocolate Icing.—To ½ cup confectioner's sugar, add 6 tablespoons of cocoa, 3 drops of olive oil, a pinch of salt and ¼ teaspoon of vanilla. Add sufficient boiling water to make a thick, smooth paste and spread on the cake.

Washing Vegetables.—When washing lettuce and spinach, it is much better to use lukewarm water. With spinach, the lukewarm water washes the sand off very quickly and it is not necessary to wash the spinach so many times. With lettuce, the lukewarm water washes off any insects or dirt; but the lettuce should be wrapped afterwards in a towel and crisped on ice, or placed in cold water to freshen.

A Novel Garnish.—An attractive garnish for cold meats or salads may be made by rolling tightly several large lettuce leaves and keeping them in a cool place until needed. When ready to serve cut the roll into ½-inch pieces and pretty light green rosettes will be the result. These add greatly to the appearance of the dish.

Baking Fish.—When baking fish, place under it several strips of clean, white cloth wrung out of cold water and extending a little beyond the fish. It is then easy to lift it up to the hot platter when ready to be served, without the fish getting torn or broken apart. This suggestion is also good for a meat loaf. Strips of cloth, fitted in the pan, some of them crossing at right angles, will assist in bringing the loaf out safely.

ART IN DRESS.

Of art in dress, there is a multitude of definitions, but only one criterion—the correct line of the individual figure. The designer who best comprehends lines, creates the most beautiful productions.

There are no two trees exactly alike; no two faces absolutely similar and no figures having identical lines.

In dress, as in life, there is an eternal fitness of things—a short woman needs straight lines, while a woman of unusual height needs the draped lines.

To study your lines is to master your figure.

Now, when there is so much confusion regarding skirt lengths, every woman should study her specific requirements, by reference to her personality and individual figure.

More Light Than 20 Oil Lanterns

AT LAST—the light of lights! A lantern that lights with common matches just like the old style oil lantern, but makes and burns its own gas from common gasoline, giving a brilliant, steady, white light of 300 candle power.

Most Brilliant Light Made

Brighter than the brightest electric bulb. More light than 20 oil lanterns. Cheapest and best light made. Costs less than one-third of a cent per hour. Safer than the safest oil lantern. The

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Because of the advance in cost of everything used in its manufacture, we are no longer able to furnish our book, "California Fruits and How to Grow Them," at the old price of $3 per copy. We are forced to advance the price to $4 per copy. We regret this necessity, but the advance is unavoidable and at the new price the book will be sold for less than is now current among publishers for books requiring similar labor and material in its publication. We must either make the book less satisfactory and valuable or charge more for it. We trust the alternate of making the price cover the cost without sacrifice of contents or quality will be acceptable to purchasers.

CALIFORNIA AGRICULTURAL BOOKS

THE SIX BOOKS listed here were written and published to help the grower solve the problems incident to farming in California, where conditions and climate are different from those obtaining in other sections. These books are by the best authorities and are largely used as text and reference books in schools and libraries, and should be in your library for quick reference.

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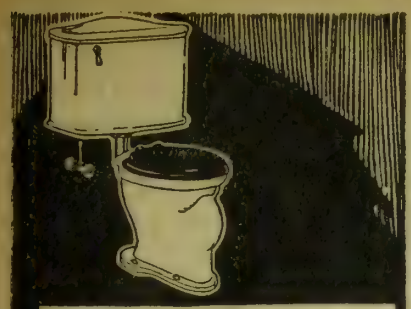

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3. Cancer begins as a small local growth which can often be entirely removed by surgical treatment, or, in certain external forms, by using radium, X-ray, or other methods.
4. Cancer is not a "blood" disease; there should be no thought of disgrace or of "hereditary taint" about it.
5. Cancer is not a communicable disease. It is not possible to "catch" cancer from one who has it.
6. Cancer is not inherited. It is not certain even that a tendency to the disease is inherited.
7. The beginning of cancer is usually painless; for this reason its beginning is frequently overlooked, and is too easily neglected. Other danger signals must be recognized and medical advice asked at once.
8. Every persisting lump in the breast is a warning sign. All such lumps are by no means cancer, but even innocent tumors of the breast may turn into cancer, if neglected.
9. In women, continued unusual discharge or bleeding requires the immediate advice of a doctor.
10. Any sore that does not heal, particularly about the mouth or tongue, is a danger signal.
11. Persistent indigestion in middle life, with loss of weight and change of color, or with pain, vomiting, or diarrhoea, calls for thorough and competent medical advice as to the possibility of internal cancer.
12. Radium is a useful and promising means of treatment for some kinds of cancer. No medicine will cure cancer.
13. Open warfare by open discussion will mean the prevention of many needless deaths from cancer.
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Those women who use the food or meat grinder freely feel that it is one of the most important labor-saving devices in the kitchen. If there are any readers who still use the wooden bowl and chopping knife, let them be advised by their more progressive sisters and discard the old utensils and purchase a grinder.

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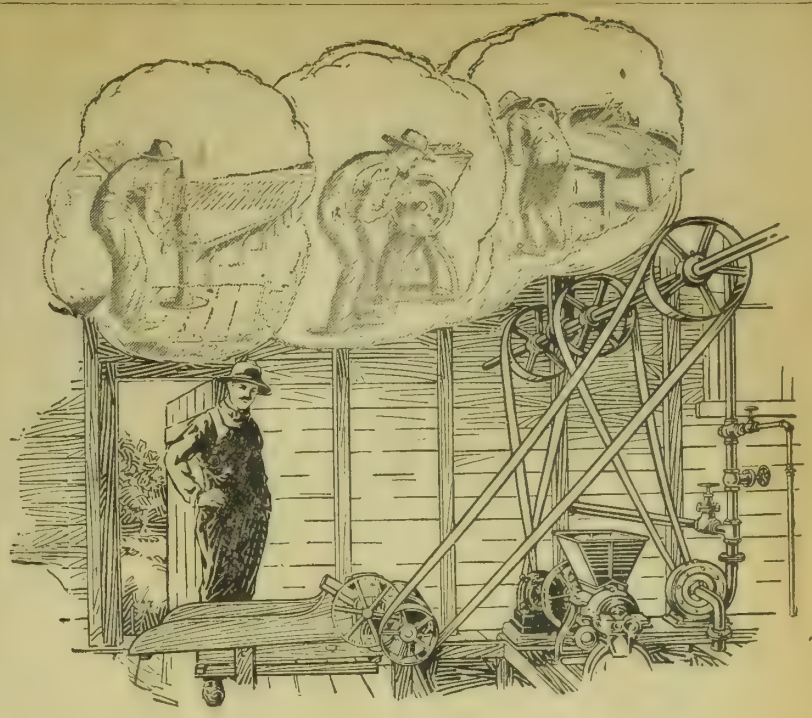

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THE MARKET REPORTS

Compiled from Independent Sources.

SAN FRANCISCO

San Francisco, July 21, 1920.

WHEAT.

There is beginning to develop a little trading in future wheat, and it is expected quotations will probably be made within a day or two.

BARLEY.

The approach of harvest and lack in demand has forced barley down again this week, feed barley being quoted 15 cents lower

Feed	$2.75@2.85
Shipping	Nominal

OATS.

The oat market has also developed further weakness, the new quotation on red feed 10 cents lower than last week.

Red Feed, ctl.	$3.00@3.10
Red for seed	Nominal
Black for seed	Nominal
Recleaned Red or Black for seed	Nominal

CORN.

The corn market is in about the same condition as other grains, with little business and prices on the downward trend. The decline on corn is only around 5 cents, but it is questionable whether the new quotations will hold for many days unless more activity develops.

Egyptian, white	Nominal
do, brown	$3.65@3.75
California	$3.80@$3.85

HAY.

Receipts of hay for the past week were 2,346 tons, compared with 1988 the previous week. The increased arrivals, with very little movement here, makes the market comparatively weaker. It is understood prices in the country are easier than last week, as baling progresses and farmers are anxious to move their crops as soon as possible. Little trading is reported, however, the market at various country points reflecting the same dull condition that exists here. Alfalfa has been especially weak. Sales at from $1 to $2 less than last week have been reported in certain districts. Though the market is dull here, quotations have not been changed.

Old Hay	Nominal
Wheat Hay, new	$26.00@28.00
Tame Oat Hay, new	$26.00@28.00
Wild Oat Hay, new	$20.00@22.00
Barley Hay, new	$20.00@23.00
Alfalfa, new	$20.00@25.00
do, 2nd cutting	$24.00@28.00
Stock Hay	Nominal
Barley Straw, bale	Nominal

FEEDSTUFFS.

Rolled barley and oats are again lower in sympathy with the whole grain. There is a decline of $2 on the former and $1 on the latter. Scarcity of supplies and little more demand have kept alfalfa products and cracked corn from showing a similar drop, even though the alfalfa and corn markets are weaker.

Rolled Barley	$62.00@63.00
Rolled Oats	$66.00@67.00
Alfalfa Products	$45.00@50.00
Cracked Corn	$85.00@86.00

POTATOES, ONIONS, ETC.

(Wholesale prices paid by commission houses.)

Potatoes and onions have reversed their positions this week, potatoes becoming weaker and the onion market stronger. It is explained that heavy shipments of potatoes have been made from both San Francisco and Stockton to the Northwest, but that the local crop is now coming on there ,cutting off the demand from here. There is still a little movement to Texas, but not enough to relieve the market here. Locally, the demand is very light. Clarksburg onions are about cleaned up. Stocks of other yellows are due shortly. Tomatoes are over-abundant in the local market and price concessions are offered in an attempt to relieve the congestion.

Peas, Bay, lb.	6@7c
Beans, wax, lb.	7@8c
do, green, lb.	5@12c
Carrots, per sack	$1.25@1.50
Lettuce, crate	$1.50@1.75
Cucumbers, Alameda, lug box	$1.75
Tomatoes, River, large box	$2.00
do, Merced	50@75c
Rhubarb, Strawberry, box 40 lbs.	$1.50
Summer Squash, box, 35-40 lbs.	70c@$1.00
Egg Plant, lb.	$4.00@5.00
Potatoes, new Garnet, cwt.	$4.00@5.00
do, New River, cwt.	$4.00@5.00
Onions, Bermuda, wax, 50 lbs.	40@50c
do, Red, sack	75c@$1.00
do, Clarksburg, cwt.	$1.25
Green Onions, box, 25 lbs.	$1.25@1.50
Garlic, lb.	9@11c

BEANS.

(Wholesale prices. Buying prices made on sample.)

There is little change in the bean market, and if anything the situation is somewhat weaker than last week. Blackeyes are down again 25 to 50 cents and Red Mexicans have dropped 50 to 75 cents. Other quotations remain unchanged. Latest crop reports indicate that 265,000 acres were planted to beans this season, of which 150,000 are limas and the other 115,000 divided among the other varieties. The entire crop is forecasted at 3,896,000 bushels.

Bayos	$11.75@12.50
Blackeyes	$ 7.75@ 8.50
Cranberry	$ 6.75@ 7.00
Pinks	$6.40@ 6.60
Red Mexican	$ 8.50
Garbanzoes	$ 9.00@ 9.50
Large Whites	$ 6.00@ 6.25
Small Whites	$ 5.90@ 6.15
Limas, Ass'n prices, South	$11.42
do, Baby, Ass'n prices, South	$11.42
Limas, S. F. prices	$11.40@11.60
do, Baby, S. F. prices	$11.40@11.60

POULTRY.

(Wholesale prices made by commission houses.)

The market is firm on broilers and weak on hens, especially on light weight hens. The only decline is on ducks, which are 2 or 3 cents lower this week. On Belgian hares prices show a tendency to harden as the result of light shipments.

Broilers	32@35c
Hens, mixed color	32@36c
do, Leghorns	20@27c
Roosters, young	42@45c
do, old	17@20c
Friers,	30@35c
Squabs	55@60c
Geese	28@30c
Ducks	22@25c
do, old	18c
Belgian Hare, live	16@18c
do, dressed	20@22c
Jack Rabbits	Nominal

BUTTER.

(Exchange quotations less commission.)

The local market has been dull during the past week and largely devoid of buying interest except routine trade. Even though receipts were light, stocks tended to accumulast. The dragging market at this season is attributed to the falling off of consumptive demand on account of vacaions and warm weather. Present prices are operating against shipments east, four out of the six week days San Francisco and New York prices were practically the same. The storage increase amounted to 24,695 lbs. compared with 32,906 lbs. the week before and 90,805 lbs. for the corresponding week last year. Receipts totaled 376,925 lbs. against 421,318 lbs. for the previaus week. According to receipts, California production must be falling ofl rapidly.

	Thu.	Fri.	Sat	Mon.	Tu.	Wed.
Extra	55½	56	55½	56	56½	56
Prime 1sts	54½	54½	54⅛	54½	55	54½

EGGS.

(Exchange quotations less commissions.)

Receipts of eggs were light for the past calendar week, amounting to 15,471 cases in comparison with 18,730 cases the previous week. Up to Wednesday of this week arrivals continued light and prices were inclined upward.

	Thu.	Fri.	Sat.	Mon.	Tu.	Wed.
Extra	53	54	54	55½	55	56
Firsts	50	50½	50½	51	51	51
Dirties	50	50½	50½	50½	50	50⅛
Ex. pullets	44	43½	43½	43½	44	45½
Undersized	32½	32	32	32	33	34

CHEESE.

(Exchange quotations less commissions.)

California flats fancy have remained steady the first three days of this week at an advance of a cent on Saturday. Firsts have advanced a cent and a half during the week. On Y. A. fancy there has been no change, but Y. A. firsts have advanced 2 cents during the week. Oregon Y. A.'s are up half a cent in comparison with last week's quotation, the only drop being on Oregon triplets, which declined a cent on Saturday and remained the same Monday, Tuesday and Wednesday. On the whole the market was a little stronger than during the previous week, but the balance in storage is increasing quite rapidly.

California Flats, fancy	30½c
do, Flats, 1sts	27½c
Y. A., Fancy	31½c
Y. A. Firsts	26c
Oregon Triplets	28c
do, Y. A.	31½c

FRESH FRUITS.

(Wholesale prices made by commission houses.)

Cantaloupes are starting to come from Turlock, a carlot being received Wednesday besides some 900 crates by express. Prices are high, but with heavy receipts for a few days, it is expected they will be somewhat lower. With the exception of raspberries, all berries have advanced on light receipts. Pears show a wide range in quotation, depending largely on the size of box. Basket peaches have been abundant, and receipts of new apples are rapidly increasing.

Plums	$1.25@2.00
Currants, drawer	50@55c
Cherries, loose, lb.	5@12½c
do, box	$1.50@1.75
Apricots, lb.	5@7c
do, box	$1.25@1.50
Peaches, 4 baskets	$1.25@1.50
Pears	$2.00@4.00
Figs, box, 1 layer	$1.50@1.75
Strawberries, 6 12-oz. boxes	85c@$1.25
do, 6 8-oz. boxes, drawer	50@90c
Blackberries, drawer, 12-oz. boxes	50@60c
Raspberries, drawer	70@90c
Loganberries, drawer, 12-oz. boxes	75@85c
do, 8-oz. boxes	50@60c
Cantaloupes, Standard	$4.00
do, Flats	$1.50
do, Ponies	$3.00
do, Honeydew, crate	$1.00@1.50
Watermelon, lb.	3c

DRIED FRUITS.

(Wholesale prices made by commission houses.)

Prices were named on 'cots by the Prune and Apricot Association as follows: Standard, 18c; slabs, 20c; choice 24c; extra choice 26c; fancy, 28c; extra fancy, 30c; fancy Moorparks 30c; extra fancy Moorparks 33c. This is bulk basis, Sun Sweet brand, for Grocer's brand the quotations are 7½ cents less on choice, extra choice and fancy cots. It is understood these opening prices have already been withdrawn. The Associated Raisin Company is expected to name prices about August 5th. Owing to the proposed advance in freight rates, it is likely a strong demand will develop for spot goods, which may have a marked bearing on the market.

Raisins, 1920	18½@20c
Prunes—40-50s, 1920 crop basis	17c
do, 50-60s	15c
do, 60-70s	13½c
do, 70-80s	12c
do, 80-90s	11c

HIDES.

..Dry Hides.—16 pounds and up: No. 1, 25c; dry kip, 7 to 15 pounds, No. 1, 26c; dry calf, under 7 pounds, No. 1, 28c; dry stags and bulls, one-third less than dry hides; dry glue hides, kip and calf, one-half price or less, according to quality.

Pelts.—Long wool, 9 to 12 months' growth, $1.50 and up; medium wool, 6 to 9 months' growth, 75c@$1.25; short wool, 3 to 6 months' growth, 40@70c.

Wet Salted Hides.—No. 1 heavy hides, 55 pounds and up (free of all brands), 14 cents; No.1 medium, 45 to 55 pounds, 15 cents; No. 1, light, 30 to 45 pounds, 15 cents; native bulls, 12 cents. Center branded hides in all grades, 2 cents less than base price, and No. 2 center brand, 3 cents less.

WOOL.

No prices being quoted on wool market absolutely inactive. Small lot of few bales price would be about 40 per cent below ruling quotations of few months ago.

Special Livestock Market Report

San Francisco, July 21, 1920.

The market is overstocked with cattle. The high price of hay and scarcity of grazing lands are forcing the producers to dispose of all surplus cattle, which makes the local market inactive, or as a matter of fact, depressed. As to general conditions throughout the United States, we quote as follows from a statement issued by the Institue of American Packers of Chicago: "Meat production in the United States during the half year just closed, as compared with the first half of 1919, shows a decrease of about 5 per cent, which amounts to several hundred million pounds, according to official figures of slaughter at the 69 principal stockyards. At these 69 markets slaughter of cattle, hogs and sheep for the first six months shows a falling-off of more than two and one-half million animals, as compared with the first six months of 1919. This indicates a probable decrease at the 69 markets of more than 400,000,000 pounds in meat production for the first six months in 1920, as compared with the same period in 1919. Should this decrease continue the same for the rest of this year, meat production in the United States in 1920 at these markets alone would be nearly 1,000,000,000 pounds lesst than in 1919. During nearly every month of 1920 producers lost money on cattle and many packers reported losses on beef. Diminished exports have substantially lowered the price of hogs of that a year ago.

Steers, No. 1, 1000-1200 lbs.	9½@10c
do, 1200-1400	9@9½c
do, 2nd quality	7@8c
do, thin	6@7c
Cows and Heifers, No. 1	8@8½c
do, 2nd quality	6@7c
do, thin	2@4c
Bulls and Stags, good	4@5c
do, fair	3@3½c
Calves, lightweight	10½@11c
do, medium	9@10c
do, heavy	8@8½c

SHEEP.—Both live muttons and lambs are plentiful. Market overstock and producers anxious to dispose of stock.

Lambs, milk	11@11½c
do, yearling	8@8½c
Sheep, wethers	7@8c
do, ewes	5½@6c

HOGS—Demand exceeds the supply, producers holding for advance in prices.

Hard, fat, grain-fed, 100-150 lbs.	15½c
do, 150-225 lbs.	16c
do, 225-300 lbs.	16½c
do, 300-400 lbs.	14½c

Los Angeles, July 21, 1920.

CATTLE—A good many cattle are being offered killers at present, but the demand is said to be somewhat light. Prices held steady all during the week and remain the same as a week ago, but the tone of the market seems to be a little weaker today.

Per cwt. f. o. b. Los Angeles:

Beef steers, 1000@1100 lbs.	$8.50@10.50
Prime cows and heifers	$8.00@ 8.50
Good cows and heifers	$7.00@ 7.50
Canners	$4.50@ 5.00

HOGS—Hog receipts still very light. There has been a good demand for some time for everything coming in. Killers all wanting just enough, however, for the fresh meat trade. Prices show no change from last week's quotations.

Heavy, averag'g 275@350 lbs.	$12.00@12.50
do, 225@275 lbs.	$14.00@14.50
Light	$15.50@16.50

Rough docked 20 lbs. piggy sows 40 lbs. and stags, 40 per cent.

SHEEP—Lambs continue in very good demand and ewes selling well all through the week. Very little call for wethers. Receipts are only fair. It will be noted that a slight decline in prices appears today lower than those of last week.

Prime wethers	$ 7.00@10.000
Yearlings	$ 6.00@10.00
Prime ewes	$ 8.00@ 9.00
Lambs	$10.00@12.00
Spring lambs	$10.00@12.00

Portland, July 20, 1920.

CATTLE.—Firm; receipts, 101. Choice grass steers, $10.50@$10.90; good to choice, $10@10.50; medium to good, $9@10; fair to good, $8.25@9; common to fair, $7@8.25; choice cows and heifers, $8.00@8.50; good to choice, $7@8; medium to good, $6@7; fair to medium, $5@6; canners, $3@4.75; bulls, $5.50@6.50; choice dairy calves, $13@15; prime light, $11.50@13; medium, $9@10; heavy, $7@9; best, feeders, $7.50@8; fair to good, $6@7.50.

HOGS. — Steady; receipts, 32. Prime mixed, $17@17.50; medium, $16.50@17; smooth heavy, $13@15.50; rough, $10@13; pigs, $12.50@15.50.

SHEEP—Steady; receipts, 454. East of mountain lambs, $11@11.50; valley, $10.50@11; culls, $7.50@8.50; ewes, $2.50@6.25; yearlings, $6.50@8; wethers, $6@7.

LOS ANGELES

Los Angeles, July 20, 1920.

BUTTER.

Butter prices continue steady and they are unchanged from last week. There is a good demand from the consuming trade and all arrivals are taken. Receipts still very good, but not up to those of a week ago. For the week ending today, they were 360,400 pounds. Prices we quote are those paid the producer.

California extra creamery	58c
do, prime first	56c
do, first	55c

EGGS.

The egg market maintains its firmness and it has all during the week. Fresh ranch and case counts advanced 1 cent on the dozen over last week's prices. There is just as much of a demand from the consuming trade as ever and all arrivals are easily disposed of at quotations. Receipts have begun to fall off, but that is expected, and they will continue to be lighter as the season advances. There was received on the exchange for the week ending today, 1019 cases. We are quoting prices paid the producer.

Fresh ranch, extra	52c
do, case count	49c
do, pullets	46c

POULTRY.

Prices in this market are firm and unchanged from last week. Broilers now coming in very freely, but only a fair demand for them. Not many fryers arriving, but not such a good call for them. Heavy hens are in good demand, but not much call for light hens today, they being reported slow sale and heavy receipts. Ducks said to be very dull. Turkeys scarce, in good demand and firm.

Broilers, 1 to 1¼ lbs.	24c
do, 1½ to 1¾ lbs.	28c
Friers, 2 to 3 lbs.	32c
Hens	18@28c
Roosters (soft bone), 3 lbs. and up	38c
Ducks	17@20c
Turkeys	40@44c
Geese	25c

MELONS.

The demand for melons in all varieties is very good and receipts also are better than some few days. Imperial Valley cantaloupes have about disappeared from the local market. Home-grown melons are coming in now.

Cantaloupes, home grown, tip-top, crates	$2.50
do, home grown, pineapple, crates	$2.50
Honeydew melons, standard crates	$2.50
Watermelons, lb.	2@2½c
Casabas, lb.	2@2½c

BERRIES.

The berry crop is pretty much exhausted and as a result, prices are sharply higher today. Everything that is coming in, sells without difficulty at the advanced prices.

Blackberries, 30-basket crate	$4.75@5.00
Raspberries, 30-basket crate	$5.00@5.50
Strawberries, 30-basket crate	$5.00@5.25
do, poor to choice, crate	$4.50@5.00

FRUITS.

All good fresh fruits in splendid demand today. Consuming trade buying very generously of everything that is coming in. For the poorer grades, there is very little of it wanted.

Cherries, Black Republics, lb	18@20c
do, Royal Anns, lb.	18@20c
Apricots, lb.	4@5c
Plums, Beauty, lb.	6@8c
do, Santa Rosa, lb.	8@9c
do, Satsuma	7@8c
do, Kelsey, lb.	6½@7c
do, Burbank, lb.	5@6c
Peaches, Freestones ,lb.	7@8c
do, Clings, lb.	7@8c
do, extra, fancy clings, lb.	9@10c
Figs, black, lb.	10@12c
Crabapples, lb.	4@5c

VEGETABLES.

This market is well supplied and all good fresh stuffs in splendid demand at steady prices. Home-grown tomatoes now coming in and they control the market. Peas are very scarce and quoted higher this week; also they are in good demand. Potatoes and onions slow sale and weak. Cabbage and lettuce steady and in demand. Green peppers in fair demand and selling at lower prices.

Potatoes	$4.75@5.25
Onions, Stockton, yellow, cwt.	$1.25@1.35
do, Coachella yellow, cwt.	$1.40@1.50
do, local, crate	60@75c
Cabbage, per 100 lbs.	$2.50@3.00
Lettuce, crate	60@75c
Rhubarb, per 30-lb. box	50c@$1.00
Peas, lb.	9@11c
Carrots, doz. bunches	30@35c
Summer Squash, local lug	50@60c
String beans, green, lb.	2@3c
do, wax, lb.	2@3c
do, Kentucky, lb.	3@4c
Cucumbers, lug	50@60c
Tomatoes, home-grown, No. 1 lug	$1.25@1.50
do, No. 2	75@1.00
Bell peppers, lb.	12@13c
do, Chile, lb.	7@10c

HAY.

Receipts are pretty good, but market is reported very quiet. Alfalfa and grain hay selling slowly. Prices are the same as those of last week, but the tone of this market is weak, it is said.

Barley hay, ton	$23.00@25.00
Oat hay, ton	$25.00@28.00
Alfalfa, Northern, ton	$30.00@32.00
do, local, ton	$28.00@33.00
Straw	$14.00@16.00

BEANS.

There was absolutely nothing doing in this market all last week. But as stocks are light and the outlook more encouraging to the growers, prices held up and are steady. Dealers are looking for a better demand shortly.

Limas, per cwt	$10.00
Large white, per cwt.	$5.25@5.50
Small white, per cwt.	$5.25@5.50
Blackeyes, per cwt.	$6.50@7.00
Tepary, per cwt.	$3.00@3.25
Pink, cwt.	$6.75

MARKET COMMENT.

Peach Market Nervous.

The peach market has acted somewhat nervous during the past week. We can account for that by referring to the auction sales. A sale of Alexanders in Philadelphia, July 16, brought 45 to 50 cents per box. In all probability it was really more than they were worth—a lot of green skin and pit unfit for hog feed. The same day St. John's sold in Minneapolis for $2.50; Triumph at $2.00. On the 19, in Cleveland, St. John's, $2.80 Same in St Paul, $2.42; Hale's Early, $2.40. Minneapolis: St. John's, $2.40; Hale's Early, $2.12½. New York: St. John, $2.17. These prices are unprecedented, but as to the rubbish, the sooner the grower and shipper makes it up in his mind to dump such rubbish, the better off he will be. Those eastern dealers and consumers are onto every curve. One might just as well attempt to make a cocktail with a basis of buttermilk as to entertain for one moment the idea of deceiving them in quality or pack.

Bartlett Pears are "King."

There isn't a fruit grower or shipper down the line that ever expected to live long enough to see the Bartlett pear market perform as it has this season. That expected ceiling hitting stunt didn't materialize. When the Pioneer Fruit Company sold a car of Tehachapi Bartletts in Philadelphia, September 24, 1918, at $5.52 average, the writer "set-'em-up" to the whole town of Tehachapi. Now such sales, and much better, are an everyday occurrence in all of the markets. We have before us sales of Bartletts in 13 markets on July 19, and the lowest car—and only one—was $5.05 to $6.30 average per box, the majority of cars selling above $5.75 average.

Plums in Splendid Demand.

The plum market is still in fine shape; however, there have been some poor sales, due to quality of the fruit. We note that 4-tier Burbanks sold as low as 75 cents per crate—all they were worth. At best the Burbank is not a palatable success, and when it comes down to 4-tier they would not cause a furor at a county fair fruit display. Aside from that break we note plums of all varieties are selling at splendid prices.

Cantaloupes Plentiful

While cantaloupes are plentiful in the wholesale district, the consumer would never know it from the price one has to pay at the retail stands, for some that resemble, in size, the Wilson Wonder walnut. However, the railroad deliveries are so irregular that the market is never settled—one day there will be a feast, the next a famine, but the retail price remains about the same.

Peaches in Abundance.

Like the cantaloupe market, those who eat peaches never know that the market is flooded at times, when they are paying Christmas holiday prices for peaches. Practically all varieties are now to be had, even the Elberta has put in its appearance. The first arrival sold at $1.50 per box.

Berry Market Easy.

The berry market has had no exciting movements during the past week. Strawberries have been little firmer, owing to light supplies. The first crop is about done, and the second crop is about ready to begin, which is said to be much lighter than the first.

Early Apples Doing Well.

The local apple market is in splendid shape. The list of varieties are being added to. The latest is the Red June and Davis. Of the former, one box made its appearance and sold at $6. Red Astrachan, wrapped, brought $2.25 to $2.75 and crab, $1.25 to $2.00.

Peaches Plentiful.

Peaches are arriving in large quantities, many showing over-ripeness. Fancy goods are commanding top prices, while low grades are moving slowly around 50 to 75 cents per small box. Wrapped stock 85 cents to $1.10 per box.

Cherries Hang On.

There is still a liberal arrival of cherries, mostly Royal Anns, with some Bings and Black Republicans. Some lots are arriving in poor condition, cracked and moldy. This damage may be attributed to weather conditions.

Nurserymen Bud Association Busy.

According to W. T. Kirkman, Jr., president of the Nurserymen's Bud Selection Association of California, work is being rapidly conducted by their horticultural experts, in the matter of selecting the best producing trees from which to obtain buds and scions for nursery work. In this the association is doing a work that will greatly assist in standardizing the fruit-producing stock of the State. It is intended that all buds and scions selected for experimental work will go through the test, as to their trueness to name, their productiveness and general character as to quality and flavor.

A new system of pear blight control, which saves much of the bearing surface of the tree formerly lost, has been given a thorough tryout during the last two or three years in the Sacramento and Marysville fruit-growing districts and has given excellent results. The new system of control consists in cutting away the bark of the tree over the affected part, down to the cambium layer, but this is not destroyed. The cambium layer is the portion of the tree covering which corresponds to arteries of the human body. It carries the sap of the tree.

A prominent bacterial residential section is the seams of the inside of a milk can.

SAN JOAQUIN HOG MARKET AUCTION.

No. Hogs	Av. Weight	Dock	Price	Buyer
		WASCO, JULY 3, 1920.		
76	187		16.00	Wilson & Co.
14	150		15.00	Wilson & Co.
4	140		15.50	Wilson & Co.
7	307	300	13.50	Wilson & Co.
		One car, 11 consignors.		
		MODESTO, JULY 6, 1920.		
102	194	10	16.15	Wilson & Co.
15	111		13.65	Tom Dye
6	393	280	10.00	Tom Dye
		One car, 15 consignors.		
		TEGNER, JULY 7, 1920.		
70	213	20	16.10	Virden Pkg. Co.
2	310		15.10	Virden Pkg. Co.
5	166		11.50	D. G. Brunton
2	365	40	10.00	Virden Pkg. Co.
		One car, 12 consignors.		
		FRESNO, JULY 9, 1920.		
55	222	20	17.10	Joe D. Biddle
25	169		16.75	Joe D. Biddle
42	178		16.80	Joe D. Biddle
26	222	80	16.50	Joe D. Biddle
28	147		15.75	Joe D. Biddle
4	337		15.75	Joe D. Biddle
21	124		14.30	Joe D. Biddle
20	307	210	14.30	Joe D. Biddle
		Three cars, 34 consignors.		
		McFARLAND, JULY 10, 1920.		
63	178	50	16.10	Wilson & Co.
13	130		15.45	Holiday Bros.
51	131		14.95	Holiday Bros.
3	155	40	12.00	Holiday Bros.
17	247	335	14.95	Holiday Bros.
5	86		12.10	Holiday Bros.
		Two cars, 11 consignors.		

DON'T GO EAST FOR DUROCS.

A breeder of the Pacific Coast, going East and buying hogs, gets a certain amount of publicity, but in many cases he could have bought better hogs in his home State for less money. It is true there are more good Durocs in the eastern states than in California, but if a breeder or farmer knows where to go in this State, it is possible to supply their needs here with acclimated stock.

The Winsor Ranch representative has been going East from once to twice a year and studying the situation there for the purpose of supplying their own and their customers' needs from the herds of the best breeders.

Gilts selected by experts who know the Red Hog territory of the Middle West brought to the Winsor Ranch in San Diego county grown out in the best possible manner, bred to two of the greatest boars of the breed in California, carry as great value as can be found anywhere today. Such animals will be offered in the Winsor Ranch sale at Los Angeles on July 28th. No pains have been spared to bring these animals along in a manner that will give the buyer the greatest possible value for his money.

LIVESTOCK AND DAIRY NOTES.

Los Angeles County not to be in the rear of the procession announces a dairy cow competition to include both grades and purebreds with classes for both herds and individuals. The prizes will be divided into both monthly and yearly divisions.

F. E. Koehler, government hunter, has arrived in Nevada county to wage war on the coyotes that are infesting that region. Mr. Koehler has an average record of 15 coyotes a month for a long period of time. He is paid by the Federal government and local sheepmen.

B. M. Halbert of San Angelo, Texas, recently paid Wm. Riddel & Son of Monmouth, Oregon, $1750 for a two-year-old Angora buck. This was at a three-day auction sale of Angora goats at San Angelo, and was said to be the highest price ever paid for an Angora goat.

According to the Oregon Farmer, C. L. (Farmer) Smith, agriculturist for the Union Pacific Railway system, has issued a little bulletin in which he discusses the comparative value of corn and sunflowers for silage. The gist of the bulletin indicates equal feeding worth for the two plants.

Dog trials in herding sheep are, for the first time to be accorded a place in the program at the State Fair this year. Such trials have been in existence for years in Scotland and England, with some also at the Chicago International in the past. Wonderful performances have taken place and always create much interest among those present.

Special Citrus Market Report

Los Angeles, July 21, 1920.

The orange market throughout the East is showing more activity while at the same time receipts are heavy. The lemon market remains weak. While there is a good demand, the supply exceeds it, both of domestic and foreign arrivals. Many lines of California stock are arriving in bad order, which has had a demoralizing effect on the market, and as long as imports continue so heavy there cannot be much change for the better. Condition of stock must also improve.

New York, July 20.—There were offerings of 27 cars of Valencias and two mixed cars of seedlings and St. Michaels. The market showed an advance of 50 cents per box. Valencias, $3.70@9.10; Seedlings, $5.00@5.80; St. Michaels, $6.50@7.50; lemons, $1.55@2.50. Philadelphia—Market strong. Valencias, $3.95@7.05; lemons, stronger, $1.15@3.30. St. Louis—Market unchanged. Valencias, $3.90@6.50; grapefruit, 95c. Boston—Market firm. Valencias, $3.50@6.90; grapefruit, boxes, $3.45; half-boxes, $1.70@2.40; lemons, easy, $1.10@3.40. Pittsburg—Market steady. Valencias, $3.90@6.15; lemons, market weak, 90c@$2.25.

Shipments—Oranges, to date, 25,133; same date last year, 27,816. Lemons, 6,317; same date last year, 7,984.

Special Deciduous Market Report

San Francisco, July 22, 1920.

With the exception of stock arriving overripe, the deciduous market throughout the East sill retains its strength.

Very heavy arrivals from California and the Northwest have been taken care of at exceptional high prices for this time of the year. On July 20, 57 cars of deciduous fruits alone were offered at auction in New York, realizing following prices: Tragedy, plums, $2.25; Burbank, $2.05; Wickson, $3.35; Splendor, $2.62½; Santa Rosa, $1.80; St. John peaches, $2.17; Bartlett pears, $5.95. Philadelphia: Santa Rosa plum, $2.05; Climax, $2.10; Burbank, $2.05; Tragedy, $1.90; Peaches, dead ripe, 55 to 75 cents per box. St. Louis: Tragedy, $3.00; Burbank, $2.70; Wickson, $3.45; Bartlett pears, $5.60. Pittsburg: Tragedy, $2.05; Santa Rosa, $1.75; Burbank, $1.55; Bartlett pears, $6.20; Plums, mostly overripe. Cleveland: Climax, $2.50; Burbank, $1.75; Tragedy, $2.50; Santa Rosa, $2.45; St. John peaches, $2.45; in crates, Bartlett pears, $6.15. Minneapolis: St. John peaches, $2.40; Hale's Early, $2.25; Burbank plums, $2.62½; Climax, $2.55; Tragedy, $3.70; Wickson, $3.20; Bartlett pears, $5.00. Baltimore: Climax, $2.70; Santa Rosa, $2.75; Tragedy, $2.75. St. Paul: Wickson, $2.95; Gaviota, $2.55; Burbank, $2.60; Hale's Early peach, $2.40; St. John, $2.42.

Classified Advertisements.

Rate, 3½c per word. Cash must accompany all orders.

COUNTRY LANDS.

ORANGE GROVE BUNGALOW FARM 21 Acres, Equipped, $3500.
On good road, near city; 19 acres under productive cultivation; borders lake; orange grove, grapefruit, peach trees, pears, plums, figs, grapes, guavas, all bearing; good 7-room bungalow, 3 piazzas; barn, poultry house, magnificent lawn, shrubbery, rose bushes oak and magnolia shade; owner retiring, includes horse, wagon, machinery, tools at quick-action price, $3500, easy terms. Details page 35 Strout's New Illustrated Catalog Semi-tropical Orange Groves and Farms. Copy free. STROUT FARM AGENCY, 503FA, Wright Callendar Bldg., Los Angeles, Calif.

MUST SEEK lower altitude on account of sickness. Will sell 80 acres, mostly alfalfa; balance grain. Good 5-room house, good barn, milk house, smoke house, etc. Five brood mares, 1 mule colt, seven A-1 milk cows, seven yearling calves, mostly heifers, two brood sows with pigs; size 15 De Laval Separator. Price, $8,000; mortgage, $3,000 at 7 per cent can stand; balance cash. Second crop alfalfa included if sold in 30 days. Ben Wurtzinger, Buntingville, Cal.

FOR SALE—About 50 acres of deep mellow land, all under irrigation canal. All kinds of hardy fruits, grapes, walnuts, chestnuts, figs, and berries, potatoes, alfalfa and vegetables grow to perfection. In warm belt close to paved highway, trolley and steam lines. Good buildings. Inquire, J. H. Gassaway, R. D. H., Box 2, Grass Valley, Cal.

80 ACRES—Honey Lake Valley, good location, near county seat, schools, banks, S. P. station. Good improvements. Good irrigation system. Raise fine alfalfa seed, hay and grain. $16,000.00 cash. A good buy. Box 280, Standish, Lassen Co., Cal.

FOR SALE—100 acres nice level land. No waste land on it, 13 miles N. W. of Chico, Cal., ¼ mile of Cana on S. P. For particulars address, Owner C. L. Vanschoiack, R. F. D. 4, Chico, Cal.

POULTRY RANCH, small orchard—big money-maker. Exceptional opportunity for experienced poultryman with small capital. Rinconada Poultry Ranch, Campbell, Cal.

RANCH FOR SALE—Wih stock, implements, orchard in bearing. Will not trade. Write to C. G. Brochu, Placerville, El Dorado, Cal.

MISCELLANEOUS.

WANTED—A number of experienced men to cut grain with old-fashioned cradles. Will pay 75c per hour. Six weeks or 2 months' steady work. Apply C. S. Jurges, Willows.

AGENTS WANTED—To sell seeds, plants, trees, spray, garden supplies, etc. Large firm, liberal commission. Be the first to apply from your town. Give age, reference, photo, etc. Fine opening for young man or lady. Boys and girls can make good money during vacation and after school. I send you the packages of seed free—you pay as sold. Write at once to Wm. E. Dart, Box 414, Santa Rosa, Cal.

REMANUFACTURED PIPE.
All sizes standard pipe and wrought iron screw casing. All kinds of fittings. Guaranteed good as new. Write for prices. Weissbaum Pipe Works, 160 Eleventh street, San Francisco.

FOR SALE—A practically new Russell Special Rice Thresher, 24x43—been used only 3 weeks threshing rice and grain. Price, $1500. This is a bargain for anyone wanting a good machine. Geo. Boock, Los Molinos, Calif.

PARTIES INTERESTED in securing plans for the best and cheapest evaporator of large capacity on the market will find it to their interest to communicate with F. C. Chapman, Modesto, Cal.

RELIABBLE CABBAGE SEEDS—I grow them. You want them. Let's get together. Write for special offer on what you need. Isaac F. Tillinghast, 32 Podel St., Santa Rosa, Calif.

ALL SIZES OF PIPE and screw casing, both new and second-hand, dipped and undipped. Guaranteed. Prices right. Shecter Pipe Works, 304 Howard St., San Francisco.

FOR SALE—Alfalfa meal in carload lots; quality guaranteed. I raise the alfalfa and wish to deal directly with consumers. Address D. Power Boothe, Ceres, Cal.

AGENTS — Mason sold 18 Sprayers and Autowashers one Saturday; profits, $2.50 each. Square deal. Particulars free. Rusler Company, Johnstown, Ohio.

WANTED GRAIN CLEANER and grader. Standard make, medium capacity. State condition and price. Address, Box 78, R. F. D., Arbuckle, Cal.

CROLEY'S BALANCED HOG FEED—The cheapest feed to fatten hogs. Write Geo. H. Croley, Townsend St., San Francisco, Calif.

FOR SALE—Portable Smalley Alfalfa Cutter, 26 inch, with mealing attachment and sacker. Box 2080, Pacific Rural Press.

WANTED IMMEDIATELY — Experienced budders and tiers. Address or phone, Kirkman Nurseries, Fresno.

FOR SALE—First-class new oat hay. For particulars write, Box 31, Cayucos, Cal.

PUMPKIN SEED — Mixed pumpkin seed. Good germination, 25c per lb. Aurora Seed Mill Stockton.

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Very truly yours,

E. H. Broadwell

EHB-M Vice President & Gen l. Manager

VOL. C—No. 5 Fiftieth Year

THE PACIFIC RURAL PRESS

California State Lib 7-1-

SAN FRANCISCO JULY 3, 1920 LOS ANGELES

A typical vacation in the orchards of California at the present time. A very large percentage of the peaches prepared for drying purposes is the work of women and girls, many from the cities, who find such, healthy, pleasant and profitable, coming at a time when the city folk are most in need of a change of environment.

Lima Bean Conditions and Markets

Written for Pacific Rural Press by R. E. Hodges.

Green glaciers we have seen today in the hills of Ventura county. Green-capped mountains mothered the glaciers. Green seas stretching to the horizon we saw last week in Orange county. A green carpet delighted our eyes on thousands of acres in San Fernando valley in Los Angeles county yesterday. One may wander far and wonder long where can all the people be that must eat the millions of pounds of lima beans that will grow on these green vines covering 149,837 acres in five counties of southern California.

Crop Likely to Be Short.

We are sorry to say that people will not be required to eat beans from all of these vines because already on July 21 the black-green color and even the curled and yellowed leaves in many places have indicated to disheartened farmers of non-irrigated fields that the end is in sight with perhaps not over two or three sacks per acre on many fields.

We are glad, however, to state on the authority of Manager R. L. Churchill of the California Lima Bean Growers' Association that the acreage under irrigation is increased this year over previous years; and the irrigated beans are of good color, good stands, with lots of blossoms in cool Ventura county and lots of full-sized pods in warmer Orange county as we have seen them. Orange and Santa Barbara counties had more nearly their normal rainfall than the other lima-producing counties.

Just now is the critical time for all the dry lima acreage; and the next four weeks, until mid-August, will either make a good crop or make a bad crop failure. Ranchers are hoping for lots of fog and cool weather until that date. San Fernando valley, where most of the baby limas (Henderson Bush) are grown, is practically all under irrigation from the aqueduct or from wells; so the prospects for over 20,000 acres planted there are excellent.

Wireworms the Worst Pest.

Mr. Churchill has received no reports of damage by aphis or red spider, but wireworms are devilishly defying all attempts to protect beans from their devastation; and many areas are barren where limas have furnished food for these beasts. Their effect on the total production is minimized this year, however, by the extra-thick planting quite generally practiced.

Total Acreage Reduced.

Acreage of baby limas is about the same as last year; but of regular limas, acreage is considerably reduced. The association had about fifty men a-field this spring getting names and acreages of all growers, regardless of whether they were association members or not. Their report showed 12,302 acres growing in Santa Barbara county, 66,627 in Ventura county, 25,103 in Orange county, 11,446 in San Diego county, and 34,361 in Los Angeles county. Of these the association controls 52.6 per cent, considerable acreage having been devoted to beets where formerly the association had its greatest strength, and some having withdrawn at the annual opportunity in January.

Market Conditions.

All of the association's 1919 baby limas have been sold; and only a few of their regular limas remain. There were probably about 100,000 bags total in and out of the association in storage July 1, much of which had been sold for July delivery. The average net price paid to growers for 1919 limas will be a trifle over 9½ cents per pound recleaned weight. This is after storage, insurance, taxes, marketing expenses, and interest on money advanced to growers (5 cents per pound on delivery) have been paid. The baby limas will pay about ½ cent less per pound.

The marketing this season has been hampered by imports of large quantities of limas from the island of Madagascar, where they had been accumulating several years for lack of ocean transportation. These were in bad shape and they demoralized markets to considerable extent.

Cartons Proving Popular.

A great advance step in marketing association limas is the packing in two-pound cartons, which was begun in a small way last season. Comments from the trade from all over the United States regarding the 1919-20 pack show heavy repeat orders and strong demand. Mr. Churchill received an order for a carload to go to Pittsburg the morning we called, July 21. About 1,200,000 of these cartons have been sent forward in the past four months in heavy fiber cases, each containing 40 cartons. The cartons themselves are of paste-board, attractively colored orange and black and featuring the Seaside picture and label on which trademark rights were just received. Several recipes are printed on each carton to insure good cooking.

Nine people are employed about the carton-packing machine at Saticoy, two of them handpicking for extra quality. Another such outfit is to be installed at Saticoy for 1920 beans, and another elsewhere, thus trebling the association's present carton capacity of about two carloads per week.

Packing in cartons costs about 1½ cents per pound more than packing in bulk. The cases cost 47 cents each and the cartons $10.50 per thousand; while packing and automatic weighing cost $5 per ton extra. On the other hand, sack costs are saved. The association has absorbed this extra cost in 1919-20 to introduce the cartons; but it looks like good demand and saving to the trade will justify adding the extra cost to sales prices next season. Certainly the great feature window displays given to the carton limas this summer will increase consumption. They are being displayed in Los Angeles and small southern towns for retail sale at 30 cents per pound for limas and two cents less for baby limas.

Grading Aids Marketability.

Grading the beans is increasing their marketability. Screens, air blasts, and hand-pickers are used for this purpose; and the grades are being improved each year. Practically all association warehouses have now installed hand pickers to get rid of adobe, gravel, and inferior beans.

In 1917 the association marketed about 20 per cent of the California lima crop for about $3,000,000. In 1918, its proportion sold for about $4,500,000. With 60 per cent of the total 1919 crop, its sales will run close to $5,000,000.

The World Wool Trade Unsettled

Written for Pacific Rural Press.

We are frequently interrogated with, "What's the matter with the wool market?" We have set about to ascertain the cause of the present stagnation of the World's wool market to find that local dealers are in the dark. They tell us there is no market. No sales are being made by which a reliable quotation could be given. However, we have learned, according to the American consul general at London, that recent wool sales in London show that the wool trade as a whole is in a very unsettled state. He states, that withdrawals among the coarse grades of cross-breds have been large owning to the desire of the authorities to maintain prices for the benefit of the Australian grower and these sales are being held pending an increased demand which many think should come with the settlement of the central European financial situation. The lower prices for raw material are reflected in the manufacturing districts where the curtailment of credit is increasingly felt. At Antwerp sales during the first days of June, only about one-third of the offerings of 11,000 bales of wool owned by the British Government was sold averaging 20 per cent below the May auctions.

From Boston, the American wool market Mecca, comes the report that for several weeks about all the wool that has been sold in that market, with one exception, has been such small lots as manufacturers have needed for piecing-out purposes. It is claimed that prices have been realized on some of these lots which would not have been possible, if the dealers had been forced to go out and solicit the business. The one exception to this rule of inactivity is to be found in the unexpected activity in Australian wools in the closing days of June. Within that period several thousand bales of Australian wool changed hands. The bulk of this wool came from the London sales. Furthermore, there has been a big slump in values in the London market during and since the last London sales. At these sales, about 75 per cent of the offerings were withdrawn, and only the choicest super Merinos were maintained at the level of the London closing. In view of the deadly dullness prevailing in the Boston market, the slump in London, and the rejection by the trade of all but the best wools, there is much curiosity to see what will result when the next series of the London wool sales open.

What makes the situation worse at this time is that the new clips of Australian, New Zealand and South Africa will be shorn shortly and will soon be on the market to create still further congestion in collecting and distributing markets. The storage of 700,000 bales in New Zealand means that more than one year's wool is still unshipped. This may be due largely to the fact that New Zealand wools are practically all of the grades that have been neglected during the war. All this has a bearing on the domestic wool situation, for it means that manufacturers will be able to draw from these big stocks if they fail to buy the domestic clip at what they consider reasonable prices.

The British government has about 5,500,000 pounds of wool available for sale in Boston, wool that will be wanted as soon as the market recovers from the present depression. In addition to this the United States government has 50,000,000 pounds, mostly low South American wool, stored at the Army Supply Base in South Boston.

According to local dealers no buying is being done in the West, as no one cares to load up at this time. Some clips are being taken on consignment, the general rate of advance being 20 to 25 cents a pound for fine clips and 15 to 20 cents for medium. The difficulty of the present situation may be gathered from the way that cloth production is being curtailed at the various New England mills—an indefinite shutdown by the Lawrence Mills of the American Milling Company. The whole situation is summed up in the statement that the market is unsettled and unsatisfactory, with no one willing to operate, and all wool values in a state of flux.

"The View Herd"--Off for South America

Written for Pacific Rural Press.

The great view herd of swine gathered by the National Swine Growers' Association is now well on its way to fame in South America.

The herd, consisting of fifty head of Berkshires, Chester Whites, Duroc-Jerseys, Poland Chinas and Spotted Poland Chinas, left New York June 30th, on the steamer Swinburne. (It should be spelled with an e for this trip.) They were to go direct to Montevideo where they were to be exhibited at the National Live Stock Show of Uruguay. After this show they will go to the International Live Stock Exhibition of Argentina at Buenos Aires. At the close of this show they will be disposed of either by auction or private sale.

W. C. McGuire, of Moroa, Illinois, Commissioner of Swine Industry, has general charge of the consignment and R. C. Russell of Blair, Nebraska, is the herdsman. The hogs were carefully selected by a National Association Committee and represent America's best.

A sixteen-page booklet on the swine industry of the United States has been printed in Spanish and will be distributed wherever the herd is shown. At the same time representatives of the Association will get in every possible lick to create friendly sentiment and spread the fame of our hog industry with a view to developing a wider foreign market.

California has a special interest in one animal of the View Herd. The Senior Yearling Berkshire sow deemed fast enough for this company is Anchorage Star 29th. She was farrowed on Anchorage Farm at Orland and is by the great Star Leader out of Iowana Lady 31st. And "listen here," you mere men! Mrs. Fritsche, of Sycamore Farms, Peru, owner of Anchorage Star 29th, in a personal letter to Mrs. Hardy, manager of Anchorage Farm and breeder of Anchorage Star 29th, has this to say of the sow: "She is a wonderful animal for type, size and as a breeder. She has given us 19 pigs in two litters and was bred again before she sailed."

General Agricultural and Horticultural Review

AGRICUTURAL NOTES.

The average hay yield in the hill section between Vallejo and Cordelia, Solano county is 1¼ tons per acre.

General farm help in the Hollister district is demanding $5 per day of 8 hours, and transportation to and from work.

Pretty fair wheat crops have been harvested in the Bradley and Jolon sections of Monterey county, though rainfall has been under normal.

Sutter Basin farmers have finished planting their crop of beans on the land that was planted to an early crop of peas. Mostly pink varieties were planted.

Orange county has fewer irrigated lima beans than last year, as figured by W. C. Jerome, because much of the irrigated bean land was planted to beets.

Salinas Valley potato acreage is about the same as last year, but much lighter than ruled previous to four years ago. The crop is in fine condition.

W. D. Egilbert, rice grower of Willows, predicts that the California rice crop will exceed the estimate of 4,000,000 bags as given by the Department of Agriculture.

The hay yield south of Hollister in San Benito county is reported to be an average of 1½ tons per acre. No sales are being made, only locally, among the ranchers.

William Irwin had the misfortune of losing by fire an $1,800 grain separator. The origin of the fire is believed to have been from friction spark thrown from a belt.

E. A. Schuler of Anderson has harvested 160 sacks of potatoes to the acre, for which he received a wholesale price of $7.50 per sack, which amounts to $1200 per acre.

One of the heaviest crops of grain and grain hay ever harvested in Santa Barbara county was produced this season. Its excellence is considered largely due to rotation with beans.

A fifteen-acre experimental cotton crop planted on the C. H. Ohlinger ranch near Chico is expected to yield a bale to the acre. The plants are growing under a system of furrowed irrigation.

The big reclamation pumps at Tisdale weir, that has furnished water to float the dredgers for the Sutter By-Pass, has been closed down on account of the river going below the suction pipe.

Comparative statement of carload shipments of vegetables for the present season to July 3, including cabbage, dry beans, lettuce, onions and white potatoes (new stock), season 1919, 8,928; 1920, 12,370 carloads.

A farm consolidation project is under way in Yuba and Nevada counties. Options are being taken on 30,000 acres of fine farming land. Plans are being made to establish a large reservoir on Deer creek near Smartville.

The Humboldt County Fair Association has decided to offer prizes for the best Farm Center exhibits, $15 for the first, $10 for the second, and $5 for the third. Thursday, September 16, will be observed as Farm Bureau Day.

Cotton growers of Imperial Valley are importing Mexican labor for use during the picking season, which will be returned to Mexico at the close of the season. This will apparently insure sufficient labor to take care of the crop as it matures.

In the twelfth Federal Reserve District of California the first crop of alfalfa has averaged from five to ten per cent below normal and the total winter wheat crop for the district is now estimated at 53,364,000 bushels as compared with 61,075,000 bushels

A Marysville rancher has devised a plan by which he gasses the gopher and ground squirrel. He connects a four-foot length of hose with the exhaust of the engine in his Henryliz and fills the rodents apartments with smoke, gas and odor that never fails to put them out of commission.

The Board of Supervisors of Stanislaus county have passed an ordinance providing a punishment of any farmer who allows noxious weeds to grow on his place. Heretofore the horticultural commissioner has requested that such weeds be destroyed, but was without authority to enforce it.

Fresno county is always to the fore with something exceptional in the agricultural-horticultural line. The latest is a tomato grown at Clovis and is now on exhibition at the rooms of the Fresno Chamber of Commerce. The product weighs one pound and ten ounces and is 17 inches in circumference.

P. O. Palestine, who has been teaching agriculture at the San Juan High School in Sacramento county for several terms, has taken charge of the Agricultural Department of the Modesto High School. A regular four years' course will be given in conjunction with Smith-Hughes' home project work.

Experiments in controlling smut on wheat, according to an announcement by Professor J. W. Gilmore of the Agricultural College, have shown that the disease is curable by the copper sulphate lime solution, and that the parasite grows with the plant itself. The method has reduced the losses from smut from 8 to 2 per cent.

A committee representing the California Rice Association has conferred with bankers at Havana, Cuba, with reference to the serious credit situation resulting from alleged failure of certain Cuban importers to accept rice shipments valued at more than $20,000,000 now held up in the Havana harbor, which is claimed was shipped under contract.

Arthur Green of Hood, Sacramento county, a member of the Sacramento Farm Bureau, reports excellent results with Mariout. He planted Mariout and common barley side by side, giving them a good test. On harvesting he found Mariout to give 43.3 sacks per acre, as compared with common barley, which yielded 38 sacks per acre.

Comparative statement of acreage planted to sugar-beets in the three leading sugar-beet producing states in this Federal Reserve District in 1918-19 and 20 are: California, 1918, 126,989; 1919, 130,168; 1920, 136,783. Utah—1918, 90,478; 1919, 110,200; 1920, 112,000. Idaho—1918, 40,500; 1919, 54,700; 1920, 56,500. A total in 1918 of 257,968. 1919, 295,068; 1920, 305,283.

Farm Bureau members of Merced, Madera and Santislaus counties, have organized and incorporated for the purpose of buying and selling under the name of the Farm Bureau Exchange. The association proposes to maintain warehouses, to operate rural truck routes, to operate mills, to provide at lowest cost all supplies needed in agricultural production. The capital of the corporation will be secured at a membership fee of $20 and an assessment of $1 to $5 per month until an assessment of $80 shall have been paid in.

People who have soft-pedaled the sugar bowl for six years may be interested in the statement by the Department of Agriculture, that crop conditions on July 1 promised an increase in next fall's sugar production in the United States—an increase amounting to, approximately, 333,000 tons, or enough to load a train of freight cars 75 miles long. This prospective crop is equal to more than 22 pounds of sugar for every man, woman and child in the United

HORTICULTURAL JOTTINGS.

The first week shipment of cantaloupes from the Turlock district amounted to 100 cars.

Berry growers of Paradise Valley, Butte County, have organized a cooperative marketing association.

Raisin grapes and apricots at Chowchilla occupy only a small acreage, but they are producing fine crops this year.

The Tulare Cannery is in the midst of Tuscan cling canning. There are 250 men and women employed at this work.

The large recently constructed cannery of Hinckley-Beach Co. at Sanger is now in full operation employing 300 people.

Present indications are that the California raisin crop will equal 215,000 tons, as compared with 185,000 tons in 1919.

Oakdale, Stanislaus County, has made her maiden carload shipment of Bartlett pears from the six-acre ranch of A. B. Hamden.

The Greenfield colony in Monterey County is an inspiration to the fruit grower. Orchards look well loaded, clean, and vigorous.

D. B. Harris has sold the wine grapes on the vines in his big Madera County vineyard to be dried and paid for on a dried basis.

Prices now being quoted for Elberta peaches for Eastern shipment are $75 per ton and even $80 is mentioned by buyers in the San Joaquin Valley.

The Turlock watermelon market is attracting attention of the buyers, although the market "on the street" is strong—ruling from $30 to $35 per ton.

Porterville is now under full headway canning peaches, which is one of the best crops in that district for years, and the pack is expected to be heavy.

L. P. Bizant, of Fresno, received $138 from the sale of plums from six trees. Total weight of fruit was 2760 pounds. One tree produced 723 pounds.

Apricots have been slow in ripening in the Berryessa section, but are now in full swing. Very little tonnage is being dried, practically all sold to canneries.

The plant of the California Packing Corporation at Dinuba began shipping canning peaches last Monday to the company's various canneries throughout the State.

Never have we seen the fruit trees of Atascadero colony in San Luis Obispo County looking so vigorous as now. Practically no irrigation is practiced here.

Plano, Tulare County, Packing House Company has been granted authority to sell 1920 shares at par. The company packs fruit for its stockholders only.

Despite discouragement of the early season and a light crop of Elbertas, a strong Eastern market points to a successful season for the San Joaquin Valley peach growers.

W. W. Hughes of Madera has received the highest price ever paid for Malaga grapes in the county. For his 30 acres he received $72.50 per ton on the vines. He estimates his crop at 200 tons.

It is reported that independent raisin packers have offered growers from 16 to 17 cents per pound for Muscats and Thompsons, as compared with 10 to 12c per pound at this time last year.

L. R. Cody, horticultural commissioner of Santa Clara County, states that as a result of planting operations in Santa Clara Valley this year the county will have 4,100 additional acres of fruit farms. Nearly half the new acreage is devoted to French prunes, 900 acres in pears and

All fruits and melon shipments from California during the first six months of 1920, as compared with same period in 1919, are 1919—41,861 carloads, in 1920—37,670 carloads.

The cantaloupe inspectors in the Turlock district are watching the shipments of cantaloupes as to their fitness to be marketed. A few lots have been returned to the grower with instructions to keep "within the law."

The Kern County fruit exhibit at the State Fair will deviate from the accustomed rule by being displayed in its fresh state instead of in glass. There will also be cotton included in the exhibit.

The green fruit shipping season is now in full blast in the Fresno district. All packing houses are running to capacity. The pack being principally peaches, canneries are also under full headway.

Louis Backart, who owns a four-acre plum orchard near Reedley, claims to have made a record on his plum crop, which netted him $1,250 per acre. Last year his returns from the same acreage was $4,700.

A. J. Sturtevant, sales manager of the California Peach Growers, Inc., who has just returned from a trip through the Eastern markets, predicts that there will be little, if any, speculation in dried fruit this season.

The directors of the Valley Fruit Growers' Association at Fresno have announced that the schedule of fruit workers' wages fixed by the State Welfare Commission will go into effect in that locality August 1.

New Zealand exporters of apples have been allotted shipping space to the United Kingdom for 60,000 boxes. However, reports from commercial sources state that probably not more than half that quantity will be shipped.

W. D. Butler, horticultural commissioner of Napa County, reports the new planting of fruit trees in Napa County to be a total of all varieties of 117,429, occupying 1200 acres. Prunes head the list with 96,872. Pears next with 11,198.

E. D. Sharp of Chico is the owner of a new dehydrating plant now under the course of construction at a cost of $10,000. He expects to have it in operation in one week. The plant will hold 1296 trays at one time, or about 20 tons of fruit.

In the campaign conducted by the California Peach Growers' Association to gain control of fig acreage of the Fresno section, $350,000 has been subscribed. $500,000 is required before the Peach Growers' Association will take over the fig crop.

Red spider has appeared in unusual quantities in San Benito County this season, but the growers have successfully met their attack by timely and systematic spraying. An unusually large quantity of spray material has been used in the orchards this season.

The 1920 plum pack of the San Joaquin Valley has been a record breaker. J. W. Murdock, manager of the Pioneer Fruit Company, states that prices have been in keeping with the excessive shipments. Kelsey plums will wind up the season's shipment.

Sonoma County is now at the peak of apple picking and packing. No apples will go to the "dump" this season, as dryers are now in full operation. All culls and windfalls will be used. A new cider and vinegar factory with a capacity of 200,000 gallons will be in operation this season.

The California Associated Raisin Company and the California Peach Growers, Inc. intend spending over $3,000 in exhibits at four big fairs during the early fall. Large exhibits will be placed at the State Fair, Sacramento. The Fresno District Fair will also give large space to the display. There will also be exhibits at River-

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EDITORIAL

THE JAP., ALACK!

WHAT is the matter with the Jap? Is he too much like so many of the rest of us? He is as liable to strike as a town-clock! He wants all there is in a job and is eager to retire the owner on a rent-pension and boss the outfit himself! He is eager to subscribe to the American doctrine, conceived by the old railway magnates and now revived by the railway workmen, "the public be damned!" He believes in "higher-ups," and takes himself to be one of them. He believes the United States is the greatest collection of sovereignties in the world and California is the best of them. He is anxious to add his might to the cosmopolitanism of California. He is willing to have his color fade away into white, just as other darkish people from other parts of the earth do, and thus merge what he honestly believes to be the superior traits of his race as a contribution to the new type of Americans which shall consist of a combination of the best there is in all peoples!

Do all these attitudes of his constitute the matter with the Jap? If so, are they not much like American attitudes assumed by the founders of the Republic as manifestations of the independent spirit, alertness, energy and mastery of a composite people, to which the oppressed of all nations should contribute aspiration, efficiency and power and lose their racial and national traits in the new anthropological creation? And where does the Japanese get the ideas of his place in America which now seem to underlie his disposition and actuate his movements toward establishment as a factor in American citizenship. About the first thing he does after getting a reading knowledge of the English language (which he acquires in less time than some other foreigners need to master the brand on a box of smoking tobacco) is to read American history and learn the fundamentals of our national origin and policies. Is it not a fact that the Japanese is too much like what the rest of us are, or ought to be, or ought not to be, in our relations toward each other and toward the rest of the world?

A CONTRAST OF OBJECTIONS.

As it is more than forty years ago since the Chinese exclusion act was passed, all our younger readers may not know that the reasons upon which that action was taken were different from those which should now prevail agains all foreigners whom we conceive to be undesirable and unwelcome as factors in the Americanship of the future. The Chinese were excluded, not merely because they would work cheaply and thus reduce the standard of living below that which an American workingman should accept, but because they could be fairly charged with having no interest in the country except for the gold they get to send out of it; that they did not desire to remain and grow up with the country; that they would risk dying here for the sake of the money they could send home—providing they could be sure their bones would go back to Canton in a lug-box; that, though faithful, honest and trustworthy in all their dealings with us, they scorned our country even as a wholesome cemetery for the bones of them, and largely for their antagonistic nationalism they were cast out. And yet it must also be remembered that it was their nationalism which made them disinterested, unaggressive, obedient and serviceable in the development of the enterprises and operations which have ultimately made California great.

The Japanese are all which the Chinese were not; they are restless, ambitious, self-assertive; they do not usually menace our white laborers by working for less wages; they organize to get all they can and would affiliate with white labor organizations if they could; they wish to buy land, to marry white women, to become captains of industry, to become voters and office-holders; they have no idea of going back to Japan to enjoy their money, except as tourists naturally desiring to make display of their achievements; they care no more for their bones than people usually do. Forty-odd years ago we excluded Orientals who cared not for us and desired not to be of us. Now, what shall we do with Orientals who desire to become part of us; or, if they prove the stronger race in the arts of peace, to have us become part of them; or, if the races prove equal in progressive civilization, to have them both become indistinguishable in a comprehensive Americanization?

ATTITUDES TOWARD EXCLUSION.

Forty-odd years ago the chief opposition to the Chinese was manifested in the towns; the country had no more than it needed, and, in the views of most farmers, needed badly. It was both their crowding into factories and competing with white workmen and their starting factories of their own and competing with white manufacturers, that engendered the movement which ended in their exclusion. The chief opposition to the Japanese is now manifested in the country because in the country they chiefly congregate. They do not render such widely satisfactory service as the Chinese did, but because of their strong initiative and proprietary ambition, they secure ownership of land wherever they can and failing that, they secure control by lease. In both cases they transform the social order to such an extent that many rural communities have become so Japanesque that the descendants of the white families which established them consider them no longer desirable as places of residence and industry. They enter a community not to recognize and serve the existing social and industrial order, but to substitute their own, and they know all the tricks and devices which will enable them to have their way and to discourage others from competing with them. Therefore, the opposition to them is chiefly in the country and in the towns which are most dependent upon the increase of the activities of white men in their environment. There can be no doubt about the almost universality of the opposition to the presence of the Japanese in this State. There is just now a louder and more flamboyant declaration of such opposition because all the office-seekers are making campaign music of it. It was that way, also, when the politicians took up the cry from the sand-lots of San Francisco: "The Chinese must go!" But it was not the cries of the office-seekers which excluded the Chinese nor will it be their importunities which will settle the Japanese problem. In both cases it will be the refusal of the masses of the people to allow their greater entrance and their determination to dicourage in all legal and humane ways the multiplication of those who have already secured admission.

WHY SHOULD THERE BE TROUBLE ABOUT IT?

We cannot see why there should be any trouble over the almost universal desire of Californians to choose the kind of people they are to live with nor any reason for such a hullabaloo by orators who are called pro- or anti-Japanese. The people are neither one nor the other; they are not anti-anybody. They are for themselves and for the sovereignty of their own desires in the development of this State for themselves and their posterity. What claim has Japan upon this country beyond that which this country has on Japan—and that is national amity and good will? It is true that the Japanese seem to think that they would make as good Americans as any other, and perhaps a little better. We may think the same about the capability of improvement in the citizenship of Japan, and both they and we are at liberty to get all the joyful assurance that can be had from the thought, so long as neither insists upon trying it. We do not care how many laws Japan may pass against American workmen coming to displace the native laborers of Japan, nor how many regulations they make against American ownership of their industrial properties. So long as they permit us to sojourn amid the wonders and beauties of their land and exchange our money for the ownership of their lovely lacquers, potteries, embroideries, etc., and to learn esthetics, politeness and possibly enterprise and efficiency from them, why should we not allow them to ring their own belles and stuff their own ballot-boxes? And why should Japan expect more from us, or insist upon uplifting us against our will? Unless this country proposes to embark on an ocean of internationalism, in which all men will float about, not only as the brothers, but as the ancestors and posterity of all others, we can see no reason for the social and geographical merger of America and Japan—nor, for that matter, of the merger of America with any other country under the sun. And unless our high economists have some lofty purpose of international trade and finance, which requires the issuance of securities negotiable for real properties everywhere in the world, we see no reason why industrial property should be owned in this country by a Japanese, or, for that matter, by any other alien incapable of citizenship—if such is the will of the American people. The people of the United States desires so subject people. They had some wished on them once by strange inhumanity and unwisdom, and they paid for it as well as they could by conference of citizenship. Neither do the people of the United States desire to become a subject people themselves by any process of external domination or internal absorption. It seems pretty clear to us that our nation should keep its head clear and its blood cool until we can see where in the world we are and understand better the meaning of the words: "America for the Americans."

EXPLANATIONS UNDESIRABLE.

If the queenly daughter of our house, the incomparable Arabella, frowns on our neighbor's admiring John and lights all her facial torches at the approach of the Count of Pompeii or the Marquis of Lisbon, do we help the matter by wearing out our neighbor's hearthstone by visits of explanation? Not all; it is up to Arabella, and we must fall in behind her gleaming shoulders if we are to have any hope of peace on our own fireside. And Arabella explains nothing to anybody; she wants what she wants when she wants it. Thus it is with California, and we believe her older sister, America, is determined she shall have her own way and needs to give reasons to nobody. California wants no more Japanese, now nor hereafter. Her wish is her sovereign will—and that is the full law and the prophets on that subject. And it is not the fact so much as the explanations which are engendering hard feelings and likely to create national animosities which are wholly unnecessary and deplorable. Explanations are the stock in trade of well-disposed visionaries and ill-disposed demagogues; they make them to meet their dreams or their desires, and they are therefore often either ill-founded or irrelevant and create prejudice and passion. The fact that California does not desire more Japanese and insists that her desire shall be embodied in legal enactments, and not merely dependent upon a sentimental and unbusinesslike agreement on their part not to come, is enough to secure for California what she desires. This fact, as we have stated, is unquestionable. It is attested by the almost universal attitude of the California people—and that also is not strengthened by explanations.

THERE IS NO AFFRONT TO JAPAN.

So far as we can see, this attitude of the Cali-

fornia people involves neither disrespect to the nation of Japan, nor dislike of that nation's citizenship, as such. It reflects no more upon Japan than our Arabella's preference for Italians and Portuguese reflects upon our admiration for the qualities of the Smith family. Arabella will not marry John Smith; California will not hook up with the sun-gods, and that is all there is of it in both cases. It is stated that Japan has decrees, not promulgated, which provide that any nation which discriminates against the Japanese shall in turn be discriminated against by Japan. That is all right. We are ready to play tit for tat and not get angry about it. Of course, international diplomacy will arrange that such discrimination shall be corresponding and commensurate. We desire to play fair with Japan.

We are not saying that the Japanese are the only people we do not desire in greater numbers. In the general upsetting of the world, brought about by the war, there are many other kinds of people who do not wish to stay at home and are disposed to go on a world-quest for a new country. There are lots of them we do not want, and many more whom we do want in excessive quantities. It is now probable that the next Congress will arrange for a system of limited and wisely selected immigration which shall be directed against no nation, but against all nations. The Welty bill now in the House of Representatives aims to do just that. By its terms there will be waiting lists of intending immigrants in all countries where such exist, and, in addition to testimony of morality and competence, they shall declare their industrial qualifications and desires. From such qualified immigration such numbers shall be admitted as there is specific and localized need for, and when admitted they shall be delivered in the faces of the opportunities for which they are admitted. In this way, the huddling of immigrants and their disposition to plant little communities of their own national languages and customs in this country shall be checked. Provisions of this kind should have been undertaken long ago. They are now imperative if the United States is to remain one and indivisible—in language, ideals and the discharge of the duties of citizenship. By such national enactment we can dispose of the Japanese and all other such problems and have our own way, as we are unquestionably entitled to have, about who shall have domicile and the right to pursue industrial callings in this country.

QUERIES AND REPLIES

By the Editor.

Inquirers Must Give Full Name and Address.

Answered questions also on other pages.

Mice-Girdled Orange Trees.

To the Editor: In the vicinity of Porterville hundreds of orange trees have been badly gnawed and many completely girdled close to the ground, the rodents taking the tree bark three to eight inches in width. What may be done to save these trees? Owing to continual rains last winter and spring, making it practically impossible to turn the heavy oat cover crop until very late, the straw and trash around the trees, where the disc could not operate, has furnished an ideal nesting and business place for these pests. The soil is adobe or dry bog. Here at Lemon Cove, with the same conditions as to cover crop remaining about the trees, I have not seen a sign of a rodent. Has the difference in soil anything to do with it? Is there not some preparation which can be applied to these wounds and tightly bound which will permit the flow of sap?—G. S. D., Lemon Cove.

Such injuries as you describe are sometimes covered with grafting wax and sometimes with a plaster of cow manure and clay, held in place with a burlap band. This mixture holds together well and holds moisture, which helps the tree to grow new bark from the edges and from granulations on the surface of the wound which the rodents did not completely clean off. It helps a lot to keep the wound from drying, which would kill the cells, which, if kept alive, would go at once to making new bark. Mice-girdled trees are also saved, when the injury is near enough to the ground surface, by simply heaping up the dirt around the tree so as to cover the injury. This is a common method at the East, where the earth is frequently moistened by showers. Under our dry conditions it would be desirable to moisten the mound occasionally, unless the irrigation incidentally does it. When the girdle is very wide and exposure has killed the cells on the surface or edges of the wound, bridge-grafting is necessary to save the tree. The trouble is not due to the soil. Where there is no injury there are no mice.

Grain Weevils.

To the Editor: I have a shed closed on three sides, with concrete floor. For the past three years there has been Egyptian corn stored in it, and the weevils are getting worse each year. They do not make their appearance until about May or June. What is the difference, if any, between the bean and grain weevil? Weevils are getting to be the worst pest in this locality, and so far I have been unable to find any way of getting rid of them.—N. R. M., Turlock.

The bean weevil is thicker and has a more hump-backed appearance than the grain weevil. It is also lighter colored—grayish instead of dark, brownish red. Both are too abundant in your district, but one is chifely confined to stored beans, the other to all kinds of grain. Empty the shed and sweep and scrub it out as clean as possible. Then whitewash the sides and ceiling thickly with fresh, sharp lime whitewash—filling the cracks. Harvest the grain as soon as ripe enough and do not let it lie out in the field. Your job is to clean out and kill out everything now in the shed and get the new crop out of exposure to the pests as fast as you can. It would probably help you to board up the other side of the shed tight for then you could kill out the pests which might come in with the grain by fumigating with carbon bisulphide.

Irrigating Prunes.

To the Editor: We are preparing to irrigate our six-year-old prunes for the first time, and having received so many different opinions from orchardists, would like to have your advice. If the water was turned on about the first of August, would it cause the prunes to swell and crack open, and also make them hard to knock by not ripening? Or does this all depend on the way the orchard is irrigated? The soil is sandy loam and well cultivated. —C. W. C., Chico.

It does not depend upon the way the trees are irrigated so much as upon the condition they get into before the water is put on and the length of time before ripening. If you irrigate, in anticipation of a later need, while they are still growing well, they will go on all right and behave normally —but water should not be put on much nearer than a month to ripening, unless your soil is very sandy or very shallow, and, in the latter case, too much should not be put on at once. If you let the leaves go limp and the fruit start to ripening prematurely, the water may cause a fresh start, and it may crack or fall off or stick on too long or do other things which are not fully understood. The chief troubles from irrigating are due to waiting too long and using water too late.

Variations in Thornless Berries.

To the Editor: Can you give reasons why one kind of thornless blackberries grow here to perfection and another kind, on apparently equally rank-growing plants, just forms a few seeds and then quits growing and dries up. Both kinds are 4 or 5 years old, and have the best possible care and the same amount of water, and they are in the same row. The new canes, on the non-bearing kind especially, are many of them 10 to 15 feet long and a wonderfully large amount of berries started.—G. L., Auburn.

Apparently, some of the thornless blackberries have been sent out without proving them up sufficiently in fruiting habits, for there has been a good deal of complaint of non-fruiting and of bad fruiting. Perhaps some one, not getting plants enough from rooting canes, grew a lot from seed which, of course, opened the way for all kinds of variation. It was that way with the Loganberry at first. Cut out resolutely all plants which are worthless or disappointing in any way and propagate only from the actual wood of those which meet your desires.

Olive Pruning and Spraying.

To the Editor: Can I safely prune large olive trees at this season of the year? Would it be practical and satisfactory to spray the trees with soluble sulphur to eradicate the black scale which encrusts them?—N. C. T., Monrovia.

While the olive tree does not apparently object to light pruning, or even the removal of a few branches whenever it is convenient to do it, systematic cutting-back for renewal of the top growth should be done from the time the fruit is gathered until the starting of new growth in the spring. We should not anticipate any satisfactory effects from sulphuring the black scale. It needs fumigation, as citrus trees are treated, or the use of an oil emulsion spray after the fruit is off. Such spraying makes a good killing during February and March usually. We should cut back then and thoroughly spray all that remains of the trees.

WANT WORK AT GOOD PAY.

We are going to add more men to our circulation force. They need not have experience or capital, but must be red-blooded, dead-in-earnest fellows, who enjoy interviewing people and are not afraid of hard work.

If you have an automobile, are free to travel, believe in the Rural Press, and would like to present it to others, perhaps you can qualify for the position. It pays a straight salary and is permanent.

If you think you are the man we are looking for, tell us why. Convince us that you should have the position and we will make you an attractive offer.

What Is Eating the Blue Grass?

To the Editor: I would like to know what destroys the blue grass lawn (seeded 3 weeks ago) and other vegetables around the house? When the ground is packed smooth there will appear small mounds of loose dirt about one inch in diameter. The ground is low and heavy sandy loam, with a good deal of alkali in it. Could the ants be doing the bad job, or any other insects?—J. S., Manteca.

We have seen the mounds you describe, but we have been too dull or lazy to catch the beast that builds them. They are not ants, and if they were it would not account for destruction of much of the grass. It may be eaten by hosts of small snails or slugs working at night, or the alkali may be biting it off. Bermuda grass, started from root pieces, is the only lawn plant we know of that will stand much alkali. The slugs are quite capable of getting away with the vegetables and not getting caught at it. The worst thing to do for them is to water at long intervals and soak more and keep the surface loose and dry between irrigations.

Cactus Fruits.

To the Editor: Cactus fruit is now a staple fruit and sold by the producers at a net profit of $500.00 to $1,000.00 per acre from 5 to 6-year-old plants, as claimed by some who have the leaves for sale.—G. L., Auburn.

Cactus fruit is not a staple fruit. It is a fancy fruit,which frugiverous cranks are getting quite a taste for and it sells well to the amount in which it is offered at the fruit stands. Of course, if the cranks of today go around fast enough with their consumption and propaganda, the fruit may get to be a staple. It is not long since tomatoes were eaten only by a few cranks. That is a matter about which no one can confidently prophesy. As for the returns per acre, they probably come from multiplication of sales from a few plants. We doubt if there are three people in the state who have an acre.

Resistant Strawberries.

To the Editor: I send some strawberry leaves. Kindly tell me what is the matter and the remedy. The "Dollar" and the "Oregon Plumb" are all affected, while the Ettersburg berries are not. I have the "Trebla" and the "Ettersbury 80." They are certainly wonderful berries.—W. J. F., La Mesa, San Diego county.

It is not a specific disease; it is a leaf-burn with a die-back around the edges of the leaves. Both troubles seem to be due to heat, and perhaps soil drying. It was Mr. Etter's early object to get better strawberry foliage, which would resist such injuries to which most Eastern varieties are subject, and he has made a wonderful success of it as your own experience demonstrates.

CALIFORNIA WEATHER RECORD

The following rainfall and temperature record is furnished the Pacific Rural Press by the United States Department of Agricultural Weather Bureau at San Francisco for the week ending July 26, 1920.

Stations—	Rainfall Past Week	Rainfall Seasons To Date	Rainfall Normal To Date	Temperature Highest	Temperature Lowest
Eureka	.00	.12	.11	66	52
Red Bluff	.00	.01	.00	98	62
Sacramento	.00	.00	.00	9b	52
San Francisco	.00	.00	.01	72	51
San Jose	.00	.00	.00	96	48
Fresno	.00	.00	.00	100	60
San Luis Obispo	.00	.00	.01	86	48
Los Angeles	.00	.00	.00	88	60
San Diego	.00	.00	.00	76	60
Winnemucca	.00	.00	.00	94	46
Reno	.00	.00	.00	94	44
Tonopah	.00	.00	.00	90	56

The Best Summer-Growing Green Forage

Written for Pacific Rural Press by R. E. Hodges.

The forage plant that will grow two inches per hour ought to make a hit with all feeders of livestock, goats, rabbits, and poultry. It happened to be an extensive goat raiser, Miss Annie Wheeler of the Sycamore Heights' Goat Ranch in Los Angeles county, who unexpectedly gave to both of us a demonstration of the remarkable growth pressure there is in the roots of Napier grass. She was cutting some three weeks' growth thirty to forty inches long for her goats when the writer appeared on the scene. Each clump of ten to thirty stalks was cut off square with a knife close to the ground. An hour later those stubs were not square across—they had pushed their centers into growth varying generally between one-eighth and one-quarter inch on each stalk. Mathematically, with sixteen stalks per plant averaging one-eighth inch growth in an hour, each plant had made **two inches growth.** That was done on July 19. On July 1 these same plants had been cut back to the ground, the growth then measuring over three feet long. The same plants had been cut back to the ground about the middle of June, six weeks after they were set out, averaging then about 30 inches length and fifteen to twenty stalks per hill! In the next six days they grew 14 inches length of leaves. It's a fairy tale all right, but it's a true one.

The plants had been set out on coarse, sandy soil about May 1 as single root divisions. Each successive cutting had made more numerous stalks start from buds in the crown, which was thus enlarged, while at the same time making even greater length growth of leaves. We counted one no better than the average, and it had 27 stalks. These stalks are finer than those of gyp corn the same height and are of succulent leafy nature to the center. The leaves are finer than those of gyp or milo. Fortunate is Miss Wheeler in having her three rows, perhaps 150 feet long, for the big herd of milk goats she handles. Though the goats have considerable hill range, most of that is brown now except the brush; and Napier grass is their chief green feed.

Feed and New Plants Same Time.

But the large herd needs more of it. For this reason, even while cutting for feed, Miss Wheeler is dividing many of the plants and setting them out in new rows. Twenty-six plants one year old made 625 crown-divisions each with one to three stalks for a starter. It was about July 1 that she divided enough of her old plants to set out 1100 new ones. There will be a wilderness of feed if she doesn't cut it every two or three weeks. An easier, cheaper way to feed now being considered is to fence it off into small plots and turn the goats on to avoid the labor of cutting and hauling.

Tall Jungles Grown This Season.

What the Napier grass does when it is not so frequently cut back can be seen better on the place of Eugene Spencer also in Los Angeles county. Here we saw a dense jungle of this year's new shoots averaging easily seven feet tall in mid-July, much of it nine feet tall. Mr. Spencer said it would be fourteen or fifteen feet tall before summer is over. These stalks are hairy and coarse but succulent all the way through. The leaves were almost as big as corn leaves. Late in the season the stalks become harder and form joints. That growth is not particularly good feed, but the mature jointed stalks make the cheapest reproduction. One clump of them, whose root crown is three years old was allowed to stand through last winter along with canes from some younger plants. About Thanksgiving came a frost which killed the tops back a couple of feet, but the plants grew at warm times during the next two months about eight inches. About February 1 came a very heavy frost, which froze the rest of it half to the ground or more. Most of the mature stalks were then cut off at the ground, but some which were left are now bristling with a densely multiplied growth of fine, many-branched shoots from each of the upper joints. This makes a lot of fine feed, but not so much as has come up from roots whose canes were cut back to the ground.

Plant Any Time; Best in Spring.

Mr. Spencer plants in most all months of the year successfully; but he advises spring planting after frost danger is over. One lot of crown divisions was transplanted last September. They made three or four feet of growth and froze back to the ground. Last spring, he forked the dead stuff off, and early this July they were a dense mass of good, strong green feed averaging five feet tall.

Several rows of crown divisions planted last March had been neglected afterward and were only two feet tall, no better than cane joints planted somewhat later. Surplus plants averaging twenty to forty new single-stalk divisions per plant set out last April and May have now multiplied from the single stalks to twenty to thirty per plant. Miss Wheeler's divisions planted about July 1 were making a perfect stand and were getting well established three weeks later.

Dry Experiment.

Last August or September Miss Wheeler transplanted two Napier grass plants to a dry, hot, steep, barren southern slope on her goat range, watering them from her canteen and covering them with wild brush for protection from sun and beast. About a week later she watered them again from her canteen and gave them no more attention. Last spring, when she looked at them a rabbit or gopher had gotten one, but the other had made a shoot about a foot long. More experiments of similar nature are to be tried with the first spareable plants, for Miss Wheeler believes that it will do better than other feed on the natural ranges.

However, it may be said that one who lets Napier grass lack water is losing a valuable opportunity to get much forage by adding a little water to his other expenses of production, which will remain about the same, whether the yield is small or big.

There is no doubt in the writer's mind that with fair soil and plenty of water, Napier grass produces more summer forage than any other plant in California. We would not recommend dry culture nor would we expect much growth in cool or cold weather. Other plants better adapted for such conditions will make better tonnage there. Nor is there any doubt that it will make as valuable a green feed ton for ton as any of the non-leguminous forage crops grown in the United States. Nor is there any doubt of its palatability to all kinds of livestock. As a hay plant, it is handicapped by the size of its stalks and their habit of growing in clumps. This would be at least partially overcome by thick planting and frequent cutting, but the mower would have a rough road to travel. It now appears that the best way to feed it is to graze it. Grazing can be abusive, however, as seems shown by Mrs. Galbreath's two or three acres in Tulare county. She had a magnificent growth there in 1919; but all of last spring her dairy cattle kept it eaten off short, sheep being on it when the writer called early in July; and it had not been irrigated this season. Only a few plants seemed to have escaped long enough to throw out a little new growth in that mass of Bermuda grass; and it was not convenient to determine whether the remainder was alive or dead. However, we give it the benefit of the doubt, for one clump which had been dug out in spring, and left on top of the ground, had sent roots into the soil beneath and would probably have continued growth.

How Napier Grass Is Transplanted.

Much of success with Napier grass depends on giving it the right start. Whether planting cane cuttings or crown divisions, they ought to be set deep and kept moist but not soggy until they become established.

Seed from Napier grass is absolutely no good commercially on account of scant production and poor germination. To make either canes or crown divisions grow, it is essential to keep them good and moist. In planting canes, they are laid lengthwise end to end in a furrow deep enough so they may be covered two or three inches and still leave half the depth of the furrow through which to irrigate. Later the new new shoots may be separated and transplanted farther apart.

To get crown divisions, insert a spade full-depth all around a plant, then tip it over, pull it out, and pull the shoots apart with the fingers. To cut them apart destroys too many. Mr. Spencer leaves only one shoot per plant generally; Miss Wheeler leaves two or three. Each shoot has enough roots to become established most any warm time of year if enough moisture is furnished, and especially if the tops be partially cut back at transplanting and more or less shade given when the work is done at a hot time of year. Miss Wheeler says that a plant will be ready to subdivide six weeks after transplanting. Mr. Spencer says that he gets three generations of subdivisions per year when desirable.

In a permanent feed patch, they should be about 3x6 feet apart, but Miss Wheeler is planting about 18 inches apart in rows three feet apart, because she cuts it off so frequently and does not want to cultivate a big interspace. Thus, also, when she sells plants, she will simply thin out her producing patch to get them. Mr. Spencer also plants close on account of his business of selling the crown divisions.

The rooted divisions may also well be set in furrows. After irrigating through the furrows, dirt may be turned into them, leaving another furrow on each side of the row for future irrigations and cultivations. Roots should be six to eight inches below the level surface soil, according to Miss Wheeler, partly to avoid freezing, partly to avoid heating and drying out in summer.

For the conditions mentioned, we doubt if there is a better plant for production of green summer forage in California than is this Napier grass, but we have seen no reason to recommend it for dry conditions.

Coast Bean Prospects Are Fine

(Written for Pacific Rural Press.)

Bean acreage between Los Alamos and Nipomo, including the Santa Maria Valley and surrounding territory in Santa Barbara county, was reduced from 65,000 acres last year to 20,000 acres this year, according to District Manager R. C. Jensen of the California Bean Growers' Association at Santa Maria. The reduction is due to continually sick market conditions, which are in turn due to importations of foreign beans. From Solvang to San Luis Obispo (including practically all of the beans of Santa Barbara and San Luis Obispo counties except limas), there are 38,000 acres, half of which are small whites and the rest colored varieties.

Beans on Hand July 1, 1920.

A good reason for reluctance of growers to plant beans is evident in figures collected and compiled by Mr. Jensen, showing beans in warehouses of Monterey, San Luis Obispo, Santa Barbara, and Ventura counties. On November 1, 1919, there were a great many over a million sacks of beans other than limas in the various warehouses, besides what were still held on the ranches. On February 1, 851,232 sacks of beans were still on hand. On May 1, there were still over three-quarters of a million sacks awaiting markets. On July 1, 1920, 566,352 bags remained. Perhaps half of these were grown in 1918. In the Los Alamos and Santa Maria Valleys alone there were 258,000 sacks of small whites on hand July 1, 1920, about half being of the 1918 crop. There were also 30,000 sacks of pinks of the two years' crops. In the Lompoc district there were 170,000 sacks of small whites July 1, over half being of the 1918 crop. Of the beans on hand July 1, 1920, in the four counties, 12,781 sacks were large whites, 504,386 small whites, 42,063 pinks, 2,084 blackeyes, and 5,038 miscellaneous. In the Salinas Valley, Donald Lazier estimates 50 per cent of last year's acreage with 90 per cent of previous crops sold and 75 to 80 per cent already shipped. No contracts have been offered on new beans except certain varieties, as the Kentucky Wonder for seed.

The crop is growing beautifully and the stand is fine in all of the counties mentioned, except in certain districts as the Arroyo Grande valley, where one-third of a crop is expected.

No serious insect or disease attacks are showing up so far and the pods already forming. Fog and cool weather are needed to compensate lack of moisture in the soil and to make plenty of plump beans per pod. The bluepod strain is replacing old small whites all along the line. With reduced acreage, growers are hoping to realize their money from preceding crops before the coming marketing season is past.

SOUND SENSE AT LAST.

(Written for Pacific Rural Press.)

Down in Los Angeles they have a Fair Price Milk Committee with some real, sound, horse—or cow—sense. If Los Angeles has milk next winter and the Bay Cities are short, a good many of us will attribute the difference to the methods of investigation employed by the two districts. While the Bay cities have been denouncing the dairymen as "baby killers," the Los Angeles Fair Price Committee—headed by a woman, too, mind you!—have, through their milk committee, put forth some real intelligent effort and have arrived at a point where something sensible may be done to save the situation down there.

They have taken actual cost sheets from actual dairies, and have satisfied themselves that the statement is absolutely true that most dairymen are now producing at an actual loss and that not one is getting a decent profit.

They have also gone into the distribution costs and find net profit is not over ¼ cent per pint or quart bottle. They conclude that "there is no immediate hope of a reduction in the present high cost of labor, feed and other items entering into the production and distribution of milk," and that "Los Angeles will never see cheap milk again."

They recommend: That the public be advised of the facts developed by this committee so that the consumer may know and the producer be exonerated from the misleading publicity that has tended to discredit his business.

The Bartlett Pear--It Pays Well, But Has Enemies

Written for Pacific Rural Press by W. S. Killingsworth.

While the writer is partial to the cherry and has a high regard for the peach, there is that attractive feature about the Bartlett pear that we must with reverence bow. It is recognized far and wide for its excellent qualities that makes it a favorite in the horticultural derby. As a shipper it is of the class A type. As a canning product it is in a class by itself. When transformed into the dried state it is without a peer. No other variety of the pear family are wanted while the Bartlett occupies the center of the stage, which extends from July until October.

With the exception of those grown in Placer and El Dorado counties, the late shipping Bartletts are grown in the new districts of Kern and Los Angeles counties, where several thousand acres of young orchards are now coming into bearing. The lateness of maturity in these districts has so far proven to be a decided advantage as the fruit arrives at destination after all other sections have cleaned up on Bartletts. For three seasons the writer superintended the packing and shipping of the Bartletts from Tehachapi, Kern county, the baby district of the State, where 2,000 acres are now producing at an altitude of 4,000 feet. It was predicted by many that Bartlett pears would not prove a success at that elevation, that theory has been exploded by the success that has been attained both in production and prices realized during the four years that shipments have been made from that point. At Little Rock and Lancaster, Los Angeles county, where Bartletts are grown at 2,500 feet elevation, the fruit also ripens late and is of fine quality, but the late producing orchards of long standing are located in Placer and El Dorado counties. These Bartletts have a national reputation as a splendid shipper, a good keeper, of fine texture and excellent flavor.

While not universally grown in California, such is not a lack of popularity but it is denied that privilege by climatic conditions. However, it thrives best in localities where the apple, the most universally grown and highly beloved member of the horticultural family, fails to make an impression. Had the Bartlett pear the storage keeping qualities of the apple, the boost we intend giving it before this story is ended, might go unsaid, but with 'au that, the pear is ever increasing in popularity.

Acreage and Tonnage Growing.

There is at the present time more than 46,000 acres planted to Bartlett pears in California, and the acreage is increasing substantially each year. The localities suited to its production are well known, and as it takes years to bring a tree into commercial use, there are but few orchardists who will take the chances of experimenting in untried territory. Such experiments have been made and success has been the result, but in the majority of cases such attempts were based on speculation — wildcat real estate misrepresentations. Now that the real Bartlett pear-producing sections of California have been staked off, no man with courage and energy, backed by a sufficient amount of capital can make a mistake in joining the ranks of the Bartlett pear producers.

While the Bartlett pear was among the first fruits to be grown in the State, it has had hard sledding from disease and pestilence, a description of which will be given later. The peak load is now on the wane, from 50 to 75 cars leaving the State daily; and while the estimate of the present season's production is 72 per cent of normal, the probable production will be in the neighborhood of 80,000 tons, against 110,000 tons last year, while the government forecasts the pear crop of the United States at 13,634,000 bushels, or in round numbers 340,000 tons. The surprising feature of the season's shipment to date is the remarkable prices being obtained in the auction markets of the East; something unprecedented in the history of the industry. The writer has been closely identified with the Bartlett pear shipments from the State for the past 27 years, and we have yet to have brought to our attention prices anything in comparison.

Low Prices Not Feared.

However, it is to be expected that as the heavy shipments reach destination, prices will ease off somewhat, but there is such a vast amount of territory in which the Bartlett pear has become a favorite, should the fruit arrive at destination in condition that it may be reshipped by express in less than carlots to a vast number of towns, there will be no slump in the market, as was an annual occurrence in years past, prior to the systematic handling of the Bartlett pear crop as is now in vogue. The day of ruinously low prices is in the discard. There is no longer "price fixing" by a speculative element, as we recall in the years of the long ago. There is, however, a price fixing at the present time, but of a different nature. Instead of being of a speculative nature conducted in the interest of a corporation or private individual, it is now being handled by the producer himself, in the form of a non-profit, co-operative association composed of the Bartlett pear growers of California, incorporated under the laws of the state, and known as the California Pear Growers' Association, consisting of 637 of the leading Bartlett pear-growers of the state.

Co-operative Marketing.

This organization became effective in 1918, and in one season it took rank with the leading co-operative fruit organizations of the state. The purpose for which the association was formed, was not to antagonize in any way the old line deciduous fruit-shipping concerns, but to place the pear industry on a basis that would eliminate the disastrous results that overtook it each season, and to carry this to a successful end. When the association had signed up sufficient tonnage to do so they said to the canners: "The California Pear Growers' Association is going to ship so many tons of pears to eastern markets, and is going to sell so many tons of certain grades to the canners at a certain price, and the tonnage will be guaranteed." Now what more could the canners ask? And what better deal could the fruit-shipping concerns want? They had friends among the association that would remain loyal to them to the extent of the tonnage set aside by the association for eastern shipment. Even better than that, if on or before a certain date fixed by the association, should a member decide that he wantd to ship all of his tonnage to eastern markets, he was granted that privilege. However, he would be required to pay into the association the stipulated amount that he would have paid had he shipped his quato to the cannery, which is nothing but fair, as the association must have some protection as well as remuneration for its protection of the growers' interest against loss when they are in a position to prevent glutted markets by dealing with the canners.

Through the able management of Frank T. Swett, president of the association, order has been brought out of chaos. Beginning with a membership of 175, with business amounting to $390,108 in 1918, increasing to a membership of 520, with a business of $1,107,288 in 1919, they have increased their membership to 637, for the season of 1920, and indications are that their business will reach the one and a half million mark. In 1918 the association supplied 14 canneries; in 1919 they supplied 26, and for the present season we are not prepared to state the number of canneries that will be supplied, but as an example of the friendly relationship existing between the canners and the association, when the canners handed in their statement of number of tons they would require, the association was forced to reduce it 40 per cent. This, of course, was largely due to shortage of production, and as the association was playing no favorites, they were treating all canneries alike, giving the new accessions the same generous treatment they did those who had dealt with the association from its inception. When the price for the 1920 cannery pears was made, the highest in the history of the business, there was no complaint on the part of the canners. Doubtless they felt they could pay a premium for the treatment they knew they would get.

Markets to Be Widened.

When we approached Mr. Swett for an expression of the future of the association, he said in part: "In order to market our future crops at a profit, we must create greater demand, and that demand can be created just as the citrus growers, the raisin, the peach, the prune, and apricot, the walnut and almond growers are creating and have created it, by advertising our products. The association is planning an advertising campaign with a fund of $50,000. This fund is not to be used this year, because of a short crop which renders it unnecessary, but with a normal crop next year, including new acreage coming into bearing there may be 40,000 tons more pears than this year. Advertising in 1921 will prevent the slump which otherwise would almost certainly follow such a sudden increase." Mr. Swett stated that the movement of cannery pears was now under way — these first deliveries coming from the Sacramento river district, the later ripening sections coming in their order, which will extend the canning season over a period of about ten weeks.

It has been the writer's privilege to witness the inception and subsequent development of every co-operative fruit organization now in working trim in California. Some of them traveled a rocky road, as in the beginning the opposition to co-operation in any line of the fruit industry was looked upon with disfavor by some, so misguided by ignorance and prejudice that they questioned the grower's right to even think for himself in such matters, but as each succeeding organization has been successful in the working out of its own destiny that feeling of resentment has been changed into one of get together for the benefit of all concerned. In the lead and clinging to the "pole," we predict that the baby organization will increase in popularity until its stability may be likened unto that of its predecessors of long standing.

Adaptability of the Bartlett.

It would not be amiss for the layman to ask, "Why is it that there is such a fuss made over the Bartlett pear when there are so many other varieties produced in the state?" The well informed might answer that its popularity is due to its perfect adaptability. It can be shipped in the fresh state; it can be dried; it can be canned. When produced in localities adapted to its requirements, its size, color, texture and flavor is without a peer. Its popularity is increased by its prolific tendency, its early-bearing propensity and longevity of life, but with 'au that, like every shining mark of whatever nature it might be, it has its enemies many of which have proven disastrous at times, the greatest of which is that horticultural cancer—blight. The pear growers of the state recall with regret the period from about 1900 to 1910, when at times it looked as though the Bartlett pear industry was doomed. So disastrous was the attack in some sections that the growers abandoned hope and replaced the trees with some other variety of fruit. Fabulous sums were expended by State and Federal government, to say nothing of what was spent by the pear growers themselves. For a time the trouble abated in most sections of the state, but at no time has it been entirely eradicated. Progressive research and constant experimentation has proven to be love's labor lost, for the only successful treatment that has yet been discovered is in a removal of the cause by systematically amputating the diseased limb or dissecting from the body the infected parts. There is not a Bartlett pear orchard in the state that has escaped this dreaded disease. While it might not have been as serious in some as in others, we venture the assertion that there is not a Bartlett pear grower who is not familiar with the tactics pursued in fighting it, which is resorted to at once when its return is discovered, hence it would be useless to enter into a discussion as to the best mode of procedure.

Two Enemies to Combat.

The intruder to lead the pear grower a merry chase is the thrips. This horticultural iconoclast can do more damage to a prospective Bartlett pear crop than any insect or pest whose name or description appears on the pages of the most reliable treatise on insect pests or diseases. The annual invasion of the thrips is just as familiar to the Bartlett pear growers of the stats as an attack from blight, neither of which a grower has ever escaped, hence he is posted as to the mode of procedure. However, the blight is a little more honorable; it makes its attack in the open, for as soon as it appears it may be removed before any damage is done, while the thrips is a thief in the night—before it is known to be on the premises, it has gotten in its deadly work.

The next in point of destruction is the codlin moth, a regular visitor. The blight may take a vacation, the thrips may be detained until it is too late for them to get in their work, but the pear grower who thinks that the codlin moth will not make connection with his orchard every season will be the grower who will have a lot of dried pears to market when the harvest is over, for they are just as certain as tax-paying and death. Since the pear industry became commercialized there has been two well known remedies used in combating codlin moth, but in some way these remedies failed, in many instances, to perform the service for which it is known they are so well qualified. They are as familiar to every pear grower as the formula for the thrips, which are none other than arsenate of lead and Paris green. However, since the enactment of the fruit standardization law another remedy has made itself known in the form of the county horticultural commissioners and their deputy inspectors. This third remedy is not applicable to the fruit in any form, but in the strict performance of their duty they have done more to suppress codlin moth invasion during the past two seasons than in the entire history of the pear industry. One fine of $50, and doubled if offense is repeated, has taught many growers more about spray formulas and spray machines, then they had learned while growing old in the service.

A summary of the Bartlett pears troubles, as viewed by the writer, are now well in hand. The California Pear Growers' Association have, by co-operation among themselves and collectively co-operating with the canners, placed glutted markets in the discard, and by properly caring for their fruit and for their trees they are producing a quality of fruit as

Best Method of Irrigating Fruit Trees

(Written for Pacific Rural Press by Dana L. Teague of Santa Paula.)

The clipping which follows is from the Santa Paula Chronicle of recent date and a part of an account of a Citrus Growers' Institute held at Santa Ana, June 24th and 25th.

Prof. Vaile said in part: "The surface four feet of a sandy soil has a water holding capacity of only two and one-third acre inches of water, whereas, the average citrus grower of today is supplying not less than four to six acre inches at each irrigation. A head of 45 inches running for 24 hours on 10 acres is ample for light soils, and for heavier types, 60 inches for 48 hours is about right." This means that we should irrigate oftener and use less water at an irrigation, which in some cases has resulted in an immediate pick-up of the tree, provided the feeding root area is not kept saturated, thereby killing the nitrifying bacteria and causing as much distress as a great need of water. Much of the mottle leaf in this country can be traced in part or in whole to an oversupply of water, all other factors being favorable. Short runs will assist greatly in keeping the moisture content even throughout the whole grove.

Difficulties in Doing It That Way.

A man, here in Santa Paula, owns a ten-acre lemon orchard in full bearing and the head of water which he uses is about the same as the Professor refers to, i. e., 45 inches. His soil is a deep rich soil, not sandy and not what would be called heavy—call it medium. His tree rows are about 500 feet long and in irrigating he uses four furrows to a tree row. He grows a fine cover crop in the winter, which he plows in the spring. He puts on from 10 to 15 tons of stable manure annually.

According to the Professor's remarks, when he gets ready to irrigate he should notify the water company that he wants to use 45 inches of water 24 hours. As a matter of fact, experience tells him that with his system of cover crops and fertilizing, if he tried to cover his 10 acres with 45 inches all at one time he could run it a week and not get a furrow wet through.

He finds that he has to turn the 45 inches all onto a quarter of it, that it takes from 10 to 12 hours to get the furrows through, and he generally has the water run through about 12 hours. This would figure out about 8 to 10 acre inches.

How Often to Irrigate.

Then the Professor says we must irrigate oftener. This man, by using a shovel, finds that his land does not need any additional moisture for about 8 weeks, and then he finds that it again takes water about as it did before. He thought that it was a good condition to have his soil in. He has seemed to get good results, but now he is all upset.

He fully realizes that the scientific gentlemen, who for years have been studying our various problems, would not throw out any information the tendency of which would be to upset all accepted practices, without first having fully digested it. Also he is anxious to follow scientific methods whether they result in lemons or not. The only thing that really bothers him about following the above instructions of Prof. Vaile is how to do it.

One man suggests that he might stop growing cover crops and stop the use of manure, and practice clean cultivation to a depth of three inches and possibly in time he would be able to cover 10 acres with 45 inches.

Another man suggests that for a very few thousand dollars per acre he might install a sprinkling system. Anyway, he knows that he is all wrong now and feels that he has made a very narrow escape from ruinging his orchard, and as he don't know what is the best method to pursue to correct his past errors and to get his soil into condition to follow the new scientific rules, he would drop by Professor Vaile he asked me to write to his favorite agricultural paper, The Rural Press, which he considers a fountain-head of knowledge, wit and humor, stating his problems to the best of my ability, and he hopes that you can solve them for him.

[It is only courteous to Prof. Vaile to invite him to expound his prescription and inform his willing patients how to get it down.—Editor.]

HURRAH FOR FRUIT STANDARDIZATION.

(Written for Pacific Rural Press by W. S. Killingsworth.)

It is gratifying to those of us who have championed fruit and vegetable standardization to learn that through the untiring efforts of Director G. H. Hecke, assisted by F. W. Reed and S. V. Christierson, the county horticultural inspectors and their deputies, that the practice of deception in packing is being rapidly checked. "After a period," says F. W. Reed, "of more or less experimental work, covering five years, we may say that the past year of operation of the Fresh Fruit and Vegetable Standardization Law has been a practical test, and the results uniformly have been accounted successful by producer and consumer alike."

Stands the Acid Test.

Director Hecke also states that reports received from all counties in the State point to the general good reception of the standardization regulations and their value is evidenced also by the character, condition of the pack, and the ever-increasing demand for California fruits and vegetables. Another indication of the real value of this standardization code, says Hecke, "is the ready manner in which similar regulations have been adopted by progressive fruit growers and farmers all over the world, particularly in New Zealand and Australia. From a standpoint of good advertising it will be seen that to compete successfully in the future interstate and export trade we needed just such wholesome practices as are brought into play through the application of our present standardization laws.

The outlook is good, and if California is accorded sufficient refrigerator cars to move her crops, we may expect a season of business in 1920 exceeding in volume that of other banner years."

Equalizes Shipping Opportunities.

The standardization act was not made a law for the purpose of discrimination, but to place all commercial packing and shipping enterprises on an equal footing. In so doing it does not impose a hardship on any one, which was formally a hardship on the honest packer, as the intrinsic value of his product was materially lessened in being forced to compete with an article poorly packed and of inferior quality. The law is plain and there is no excuse for a plea of ignorance. After its long-standing and constant explanation, violation is prima facie evidence that it was premeditated by the promulgator, and the remedy for such should be a fine to the limit. A "curtain lecture" will have no effect. We speak from experience for there are fruit packers in California who have absolutely no regard for common decency in the matter of fruit packing, and it is only the law, with its penalty hanging over their heads, that stands between them and a continuance of their unlawful practices.

Honest Packers Get Their Dues.

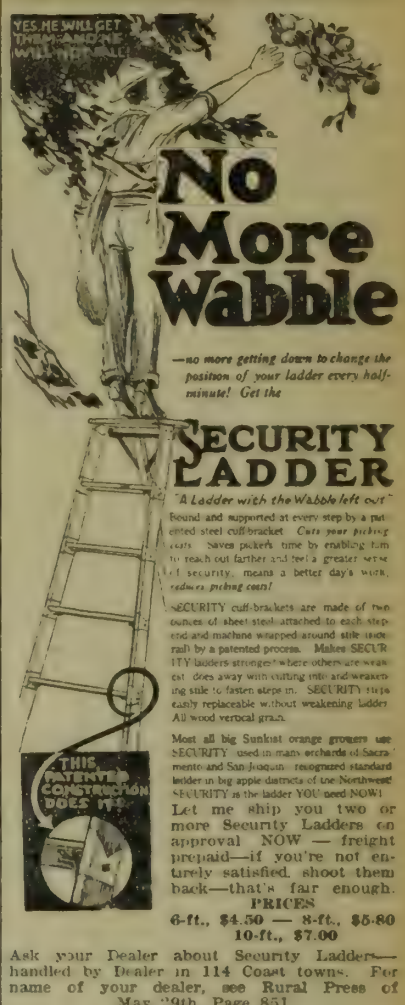
As proof of the foregoing statement, we refer to the records of the San Francisco, and Alameda county horticultural commissioners. Not that all other commissioners are not making the culprits toe the mark, but these two counties, being receiving points, have had by far the majority of the offenders to contend with, and what the courts have done to those "honest packers" meets with the hearty approval of every honest producer and every innocent purchaser throughout the

UNRIPE GRAPES CONDEMNED.

(Written for Pacific Rural Press.)

Frank P. Roullard, horticultural commissoner of Fresno county, is teaching some of his constituency a lesson that should bear fruit which in time will be more profitable than some of the grapes they are attempting to foster upon the suffering public.

Now, there is a law as plain as "Thou shalt not steal," condemning the practice of shipping fruit not in accordance with certain standards. Notwithstanding, there are some who continue to disregard it as though it was a gentlemen's agreement, binding only to the extent of what either side may consider to what extent they might honorably proceed. Mr. Roullard's recent raid was strictly wholesale. We learn that the loss to the growers amounts to something like $10,000—quite a clean up. More than 2,000 lug boxes of Thompson seedless grapes were condemned on account of not reaching the minimum test of 17 per cent as required by law. According to Roullard, some of these grapes were as low as 13 per cent in sugar content. If this fruit had remained on the vines one week longer it would have passed the test, been a perfect grape, meeting all the requirements, but the grower cared little about the quality of the fruit; his object was to get by with his nefarious practice, but it didn't work. Each attempt at such practice will increase the determination on the part of the commissioners to "run to cover" every attempt thus made so the grower will be money in pocket to act on the square, for Director Hecke has the law on his side and a bunch of county horticultural commissioners at his back that are going to make Jordan a hard road for the fruit trickster to travel.



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Timely Work in the Orchard

(Written for Pacific Rural Press by W. S. Killingsworth.)

The Care of Young Trees.

Where young trees, of whatsoever kind, were planted last spring to aid life and a healthy, vigorous growth they should be irrigated at intervals during the long, dry season we are now experiencing. Where the orchard is not equipped with a bona fide irrigating system, such irrigation may be successfully conducted by hauling water in spray tanks. It may be a little expensive, but when one takes into consideration the loss of trees, at the present price of nursery stock, the high cost of labor and the loss of one year, should trees, from death, require replacement, the expense thereto attached is nothing in comparison to that incurred in irrigating them in the crude way suggested. It was a practice of the writer, while connected with ranch life, to water young trees at least twice each summer of the first year's planting. This was done by drawing the earth from around the tree, making a basin that would hold from eight to ten gallons of water. When the basin was filled allow the water to soak in, then draw loose, dry dirt back, filling the basin completely, allowing it to remain in this state for about four days, then hoe the trees well. This loosens the earth, prevents it from forming a cement crust, thus preventing the intended activity of moisture. This hoeing should be practiced at least once each month, but two irrigations at least should be made. There will be no loss of trees if this method is systematically practiced.

Cut Out Dead Wood.

Now that the cherry crop is practically harvested, it is a good time to have some careful, experienced party look over the cherry orchard, and either do it himself or superintend the work of cutting out all dead, diseased or broken limbs, avoiding as much as possible, making larger wounds than are necessary, for those who have had experience with cherry culture know that it is dangerous practice to promiscuously cut and slash a cherry tree; they will resent the treatment. Cherry wood is very porous, and when large wounds are made, even with the best of subsequent care the tree will feel and show the bad effects by a decrease in production and ultimate loss of the tree. Cherry orchards have come under the writer's observations where horticultural murder had been committed, either by an amateur owner or a worthless tenant. There was no pretense at caring for the wound, however large it might be—simply a case of get the dead limb out of sight; the tree could take care of itself. From such neglect, the "home fires" are kept burning, with orchard wood of untold value, produced by neglect. When a wound is necessarily made, protect it with paint of a nature that will shield it from exposure to the weather, one application is not sufficient but should be repeated as often as the parts show signs of checking and drying out. Always saw the limb on an angle; in this way the surface of the wound will shed moisture.

Formula for Grafting Wax.

It isn't necessary that orchardists should do their own grafting and budding, but it would be a wise plan should they familiarize themselves as to how and when such work should be done. It looks easy, and is easy when one knows how to go at it, but one must not lose sight of the fact that it is work that may be slighted. The simple matter of placing the scion or inserting the bud is not all, for should there be neglect in taking care of the wounds the work will be another case of "love's labor lost." In grafting, the matter of waxing the parts is the secret of success, necessitating the selection of the best material and the greatest care in mixing the ingredients. The following formulas may be depended upon: Resin, 1. Another: Resin, 4 pounds; beeswax, 2 pounds; linseed oil, 1 pint. To each of these a small portion of flour may be used by dropping it into the vessel slowly while formula is being prepared. These mixtures are made with the aid of gentle heat, and during the grafting the wax must be kept warm enough to apply easily with a brush. To do this the vessel containing the wax may be held over a slow fire placed in a 5-gallon oil can. Cut hole in one side of can at bottom to make the fire.

Watch Gopher in Cherry Orchard.

The ground is dry, food is scarce, so the gopher will be on the alert. Nothing tickles his palate more than the bark of a cherry tree. With the dryness of the soil it is difficult to check their deadly work. Their "runway" practically fills up as they advance, making it difficult to trace them with the poisonous gasses now used. Where they have been discovered working about a tree it will prevent further action on their part should the earth be drawn away and allowed to remain so for a few days, then draw back. By doing this it disturbs their plans; however, they may attack another tree; if so, again disturb their work, but the surest plan is to catch the brute, if possible. Keep your eye on the cherry tree.

Whitewash for Trees.

A great many orchardists make a practice of whitewashing their trees. A splendid idea. It prevents sunburn when trunk is exposed; it is sanitary, and not least of all, it greatly improves the looks of an orchard. It was a long-standing practice of the writer to keep the orchards under his supervision whitewashed, and we are here giving a formula that will stick. Lime (air-slaked), 30 pounds; tallow, 4 pounds; salt, 4 pounds. Water enough to make wash flow well. Apply with a stiff brush. This should by all means be used where old trees have been dehorned, leaving the trunk and a portion of the limbs exposed to the sun.

Excessive Spraying Often Injurious.

The Department of Agriculture at Washington warns against too much spraying. The claim that some injury to the fruit-growing industry resulted last year from the seizure by certain health officials of fruit showing considerable spray residue. They claim that carelessness in making the summer application may result in undeserved loss to fruit growers, through fears of the public caused by a few exceptional instances in which oversprayed fruits may reach the markets.

Corrosive Sublimate a Disinfectant.

The pear grower troubled with pear blight necessarily uses the pruning shears and saw in cutting it out. In order that the healthy portion of the tree may not be inoculated, the tools should be disinfected with some standard disinfectant, such as corrosive sublimate; the wound should also be disinfected. The following formula may be used effectively: Corrosive sublimate, 1 part; water, 1000 parts. The bottle should be labeled "Poison" in large letters.

To Destroy Root Maggots.

The root maggots, pests that are to be found in every orchard and home garden, may be destroyed by the use of carbolated lime worked well into the soil. Following formula will be found very effective. Iime (unslaked), 10 pounds; Carbolic acid (crude), 1 to 2 pints; water, 50 gallons. Slake the lime with a little water, add the rest of the water and carbolic acid.

Standard Summer Spray.

A standard summer spray for sucking insects, such as green aphis, woolly aphis and other aphides, may be found in the following formula: Tobacco, black leaf, 1 gallon; water, 65 gallons. A second sulphate of nicotine—black leaf "40"—1 pint; water,

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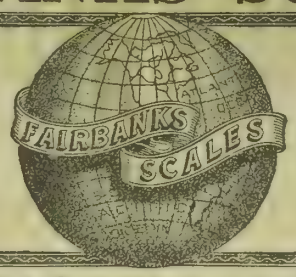

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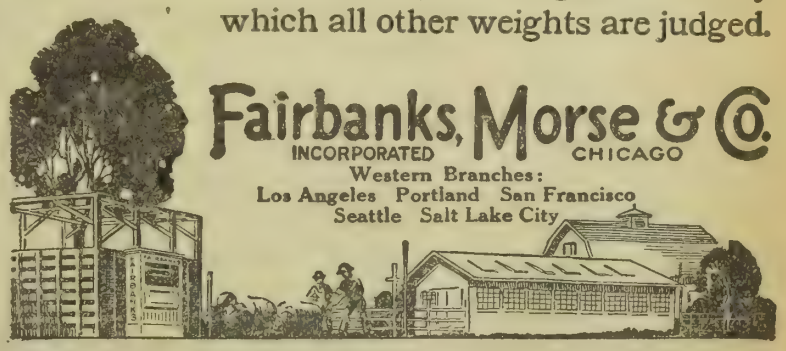

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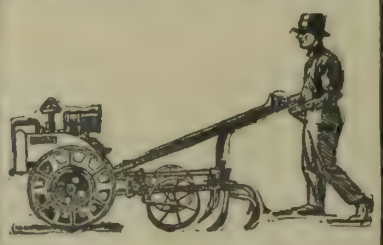

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Here and There in the Fruit Business

Newcastle Shipments Heavy.

At the present time Newcastle is at her best, forty to fifty cars of mixed fruits moving daily. Bartlett pears seem to be in the lead, as ten to fifteen cars are moving each day, and as those pears are grown at an elevation always calculated to produce a pear of superior quality, the Newcastle growers are reaping a harvest on prices being obtained for this fruit, which is ranging from $5 to $6 per box. The Early Crawford peach, grown so extensively in that district, is through shipments to Eastern markets, but there are many other varieties to follow. Plums are moving freely, and like the Bartlett pear, they are topping the market, selling as high as $5.50 a crate. One carload grossed at $4,100 — more like a fairy tale than actual coin of the realm. However, Newcastle need never fear pulling at the hind teat; her reputation as a fruit-producing section will never wane.

San Joaquin Valley Busy.

The great San Joaquin Valley, from its rim to the center, is at the prestime and for the next two months will be the greatest picking, packing, loading and shipping territory of deciduous fruits on the globe. Every packing establishment is now working on full time, either on peaches or grapes, for eastern shipment or canning of peaches and apricots. Plum shipments have been above the average, at prices the like of which have never before been known. The same may be said of prices being paid for peaches and grapes. The latest to a record price is the wine grape—$120 a ton being paid, and so optimistic are some on that point that they are predicting $150 per ton—probably, but not possible—but we know that there never was such a demand for wine grapes as there is at the present time.

Terra Bella Citrus Industry Booms.

As evidence that Terra-Bella is coming to the front as a citrus-producing section, plans are being formulated for a second citrus packing-house, to be in readiness to handle the 1920 citrus crop. The Grand View Heights Citrus Association and the Deer Creek Citrus Association have consolidated and it is through these organizations that these additional improvements are being made. The new organization is starting off with a splendid asset in the shape of more than 1,000 acres of citrus fruits to draw from. The fruit is about evenly divided between Navels and Valencias. Ultra, a station on the Santa Fe railroad east of Terra Bella, is where the new packing-house will be located.

Advance of 15 Per Cent.

J. T. Niswander, vice-president and general manager of the California Peach Growers, Inc., has announced the following prices to the trade on package goods, embodying an approximate increase of 15 per cent over last year's prices. These prices were agreed upon at a meeting of the board of directors. Following are the opening prices for deliveries on September, October and November: 60, 11-ounce, Blue Ribbon peaches, $8.70 a case; 24, 2-pound, Blue Ribbon peaches, $10.20 a case; 10, 50-pound cartons Blue Ribbon peaches, $10.50 a case. These prices are f. o. b. factories.

Fresno's Record Plum Prices.

Never before in the history of plum shipments have the growers of the Fresno district received such prices as they have this season. Two hundred dollars a ton has been the prevailing price, fully one dollar a crate more than last season's prices, which were looked upon as topnotchers. Such is encouraging to the growers who have had faith in the plum, not depending entirely on peaches and grapes. This will, no doubt, increase the plum acreage, as plum culture in the San Joaquin Valley is no longer an experiment.

Heading Off the Brown Rot

(Written for Pacific Rural Press by Prof. W. L. Howard.)

The treatment mentioned on page 40 of the July 10 issue of the Rural Press in a brief article entitled "Destroy Brown Rot Mummies," is that made use of in Eastern and Southern states for the control of this disease in peaches. It is quite true that the control of the plum curculio, which is responsible for spreading the brown rot there, will in large measure prevent the recurrence of the disease on peaches, but all of this will not hold good for California, as the curculio has not yet found its way to this part of the coast.

Brown rot is a comparatively new disease in California, but it was responsible this year for the destruction of perhaps 25 per cent of the apricot crop, by attacking the trees while in bloom and killing the flower clusters and the fruiting spurs. The disease causes masses of gum to form on the twigs, usually at the point where the fungus stopped spreading.

Experiments to Control Brown Rot.

At the Deciduous Fruit Station at Mountain View, Santa Clara county, eighteen spray treatments were tried this spring for the control of the brown rot. It was found that either lime-sulphur or Bordeaux mixture would almost entirely prevent the occurrence of the disease, where the spraying was done just before or as the trees were coming into bloom. Both the lime-sulphur and the Bordeaux were used at winter strength, that is 1-10 for the former and 4-4-50 for the latter.

While there is a popular belief that spraying with lime-sulphur will cause the fruit to be small, the Deciduous Fruit Station has not been able to effect. Spraying with lime-sulphur after the fruit has set may cause injury to the fruit, but there is absolutely nothing to be gained by spraying so late. In the experimental orchard it was noticed that in not a single instance did spraying after the trees had begun to pass out of bloom do a particle of good in controlling the disease. In a few isolated cases, growers believe they have caused their fruit to be small by spraying with lime-sulphur before the trees bloomed, but it is highly probable that in all such cases the fruit is small because the trees have suffered for lack of moisture in the soil.

When to Spray.

Lime-sulphur 1-10, applied just before the trees come into bloom, is being recommended for the control of brown rot rather than Bordeaux mixture because the lime-sulphur also controls the peach twig-borer, which is beginning to be a serious pest in apricot orchards in the Santa Clara valley. However, if anyone prefers to use Bordeaux mixture, that fungicide can be relied upon to control the brown rot, where the spraying is done as the buds are beginning to show pink. Spraying with either Bordeaux or lime-sulphur as the buds first begin to swell does considerable good, but the spraying will be more effective if done a little later on, as near the beginning of the blooming period as possible. In sections where the blooming period is long, spraying should be done before any of the flowers begin to fall, even though some of the buds may still be dormant, because it does no good whatever to spray after the trees begin to pass

Delhi State Colony Is Progressing

(Written for Pacific Rural Press.)

It took imagination to look at the sandy wastes around Delhi in northern Merced county and to see them peopled with small farmers of small means attracted by the liberal terms offered by the State as an object-lesson in land settlement. It still takes imagination to see crops on the 8,000 acres selected here by the State Land Settlement Board. The first unit of 2,000 acres was allotted May 1, too late for new owners to fix up to live there and to get crops planted. Nevertheless the whole unit, including about 50 farms and 20 farm laborers' allotments, was quickly sold. Houses have been built on all the laborers' allotments and on a number of the farms. About 1000 acres have been leveled by the Board, partly by tractor power. About 100,000 Thompson Seedless grapevines have been planted and are doing well, as stated by Construction Engineer H. C. Rogers. The settlers have planted a little alfalfa and some white and sweet potatoes. But they are mostly engaged in putting up their own buildings or on the colony development enterprises being carried out by the State.

One of these is the cement pipe factory, which is just being completed at a cost of $25,000. As told by Chief Engineer M. B. Williams, between 200 and 300 miles of cement pipe, 6 to 36 inches in diameter, are to be laid underground on the project; and while a pipe-making machine and electrically compressed air tampers will be used. the factory will pay a great deal of wages to colonists, who need extra money to live on. The State will pay for the main distributing pipe and the laying of it. Lateral pipe will be sold to settlers at cost. Ditch water from the Turlock canal is available to the colony; but it usually plays out in mid-summer, so as Mr. Williams points out, seven wells have already been put down on the project to furnish water when ditches are dry. Three of these have been tested and are able to deliver 500 to 1,000 gallons per minute. They are 80 to 100 feet deep; but the water lift is less than 50 feet.

There are no areas now to be drained. It is hoped that the Delhi colony may avoid this bane of irrigated districts and by use of the cement pipe avoid seepage. Water will be conserved, and can be delivered by pipe to the high places, so no farmable area will be lost for lack of water. Irrigation is made available to every piece of land before it is sold.

Roads are being scraped and graveled. Merced county has appropriated $6,000 for road graveling within the colony, and is expected to appropriate some more next winter. The townsite is laid out artistically. School opened last spring with 42 pupils in four rooms.

All work is being directed from headquarters at Delhi since about a month ago, when quarters were completed here for engineers, office force, etc. They had been quartering at Turlock and working at Delhi; but it was inefficient. The second unit will be opened for settlement next September.

LONG-PRUNED TREES RESIST FROST.

(Written for Pacific Rural Press.)

According to Professor Whitton of the University of California, who has just returned from a pruning demonstration in Southern California, the long-pruned trees showed a greater resistance to frost than the headed back trees. "In the deciduous fruit districts of Riverside County particularly, and to some extent in adjacent counties, frost was sufficient this spring to test the comparative frost resistance of long-pruned and headed-back trees. Most of the headed back trees of apricot and to a less degree of peach had the fruit which they set killed. In many cases the succulent new sprouts were killed back to a distance of six inches to one foot from the tip. In the same orchards, trees left long last winter for the first time had very little frost injury and are carrying fair crops of fruit," Professor reported.

Trees left long for two or more winters in succession had their twigs, foliage and fruit untouched by frost. The contrast between susceptibility to frost of the soft, watery, succulent, headed back trees as opposed to the firmer, thick, leathery green leaves and fruit with evidently more concontracted sap in the long-pruned trees, was most marked. Professor concluded: "In the favored spots, I saw no headed back trees which retained more than one-fourth a crop after the frost. Long pruned trees uniformly had at least a fair crop. Those which had one summer's growth or more after being long-pruned in every case carried a heavy crop."

NURSERYMEN'S BUSY SEASON.

(Written for Pacific Rural Press.)

Every deciduous nursery in the State is now on the qui vive. Buds of every conceivable kind of commercialized deciduous fruit are now being obtained from the best stock the State produces, and are being budded into seedling stock in nursery row. To those of us who have had years of experience in the collection of buds and scions for both nursery and orchard it is a pleasure to see that the nurserymen of the State have placed the nursery business on a high plane. No longer is there that uncertainty of feeling when ordering nursery stock as to what the result will be when it comes into bearing.

The utmost care is being exercised in the selection of buds and scions. We are reliably informed the Silva-Bergtholdt nursery at Newcastle have secured 860,000 buds from the best-producing orchards in Sutter county, consisting of cling peaches and canning plums. Before the budding season ends they expect to have secured at least 1,000,000 buds from the orchards of Sutter county. This is but a "drop in the bucket" of the amount of buds that will be secured by the many nurserymen throughout the State. It would be well for those who contemplate orchard planting the coming season to get busy on their order as we are informed that some varieties of nursery stock will be scarce. The present high prices for all varieties of fruit has stimulated a demand for nursery stock that is taxing the capacity of all nurseries in the State.

UNRELIABLE TRAGEDY'S.

The past few years there has been quite a boom in certain parts of the Central California fruit country with Tragedy prunes, which have greatly outnumbered all other kinds of shipping plums put together in new plantings. Experience this season and last, however, had proven that such plantings were largely a mistake as the yield could not be depended upon. Some crops are heavy, some discouragingly light. Even in the same orchard trees heavily loaded are nearly surrounded by trees bearing little fruit at all. Consequently a number of orchardists are planning to graft over either alternate rows or their whole orchard to other varieties. As table plums have not been grown in large quantity in the district the best varieties are not well known. Climax plums have borne enormous crops quite consistently and are next to Tragedy's in acreage.

The Central California Cantaloupe Company of Denair are making heavy daily shipments of cantaloupes to

"CALIFORNIA FRUITS," $4 PER COPY

Because of the advance in cost of everything used in its manufacture, we are no longer able to furnish our book, "California Fruits and How to Grow Them," at the old price of $3 per copy. We are forced to advance the price to $4 per copy. We regret this necessity, but the advance is unavoidable and at the new price the book will be sold for less than is now current among publishers for books requiring similar labor and material in its publication. We must either make the book less satisfactory and valuable or charge more for it. We trust the alternate of making the price cover the cost without sacrifice of contents or quality will be acceptable to purchasers.

CALIFORNIA

AGRICULTURAL BOOKS

THE SIX BOOKS listed here were written and published to help the grower solve the problems incident to farming in California, where conditions and climate are different from those obtaining in other sections. These books are by the best authorities and are largely used as text and reference books in schools and libraries, and should be in your library for quick reference.

California Fruits and How to Grow Them

By Prof. E. J. Wickson, eighth edition, cloth bound, 500 pages, illustrated. **Price, $4 per copy, postpaid.**

California Vegetables in Garden and Field

By Prof. E. J. Wickson, fourth edition, illustrated, cloth bound; over 300 pages. **Price, $2 per copy, postpaid.**

California Garden Flowers

By Prof. E. J. Wickson. For the working amateur flower lover. Cloth bound; 260 pages; illustrated. **Price, $1.50 postpaid.**

California Hog Book

By W. S. Guilford, cloth bound, illustrated; 250 pages; first edition. **Price, $2, postpaid.**

Second Thousand Answered Questions in California Agriculture

By Prof. E. J. Wickson. Over 250 pages, cloth bound. A handy volume of questions answered, covering fruit, stock, dairy, veterinary, poultry and agriculture. **Price, $1.50, postpaid.**

California Poultry Practice

By Susan Swaysgood. Over 150 pages, illustrated; cloth bound. Tells how to hatch, raise the chickens and sell the eggs; also care, feeding and housing. **Price, $1, postpaid.**

You can buy these books of your local book dealer, or we will send them upon receipt of your order accompanied by check.

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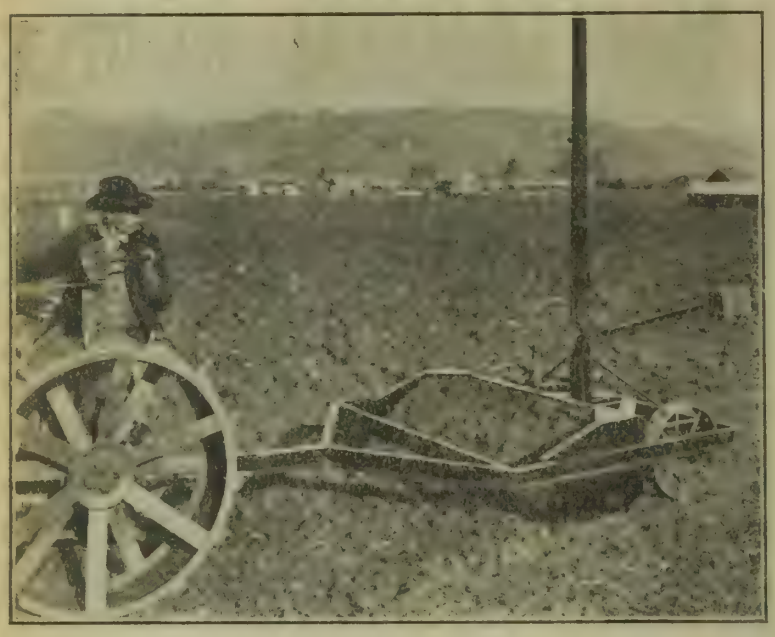

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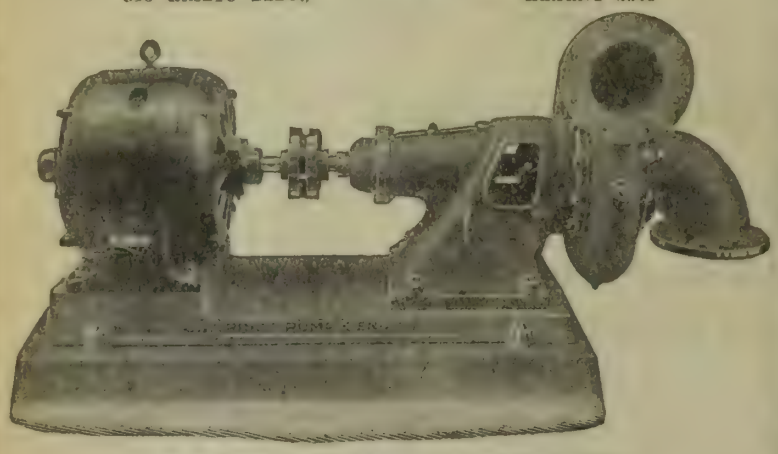

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Agricultural and Mechanical Service

TRACTOR SERVICE — WHO PAYS FOR IT?

(Written for Pacific Rural Press.)

Giving expert service to tractor users is far different from similar service to automobile owners. On automobiles, repair work is generally done in a garage with plenty of help and tools at hand. On tractors, the repairs must generally be installed in the dust and heat of a sunny field miles from the assortment of tools that may be needed. Some one pays not only for the repairs and the time required to install them, but also for the time spent going to and from the job. Though tractors are generally guaranteed against defective material and workmanship, and new parts are sent free from factory or branch house after the rancher has sent in defective parts, this does not begin to cover the case from the point of view of the tractor user. It takes time often valued at ten times the cost of a new part just to take it out. Then if the tractor is laid up two to thirty days awaiting the new part, the rancher is likely to spread a black reputation over the tractor business.

Worse than that in the case of a man who does not understand tractor anatomy (and there are a greater proportion of such who use small tractors than big ones) is the expense of getting a so-called expert to drive out from town whenever the tractor develops trouble. The expert must be paid at a high rate, not only for the time he is repairing the machine, but also for the time he is coming and returning. Often the charge for his time on the road is greater than for the new part.

Who Pays for This Service?

Different people, with varying degrees of fairness. A tractor customer is of great value to the dealer if he is a booster among his neighbors for the machine. If he is dissatisfied, the dealer might as well withdraw all sales effort from that community. Thus, whether he has run the tractor weeks without greasing and oiling it, or whether a defective part lays the tractor up, it matters not who is to blame; the dealer is compelled to give all the service necessary at a nominal charge and pocket the loss. He can not afford to have a reasonably or unreasonably dissatisfied customer. Now, most dealers claim that they do not make enough profit from the sale of tractors to enable them to give this free service. Many a man has quit a tractor agency in disgust, saying that it cost him more than he made out of it and that it made him more enemies than friends. This is especially true of tractors faultily designed and of good tractors sold for uses and soils to which they were not adapted. But it is also true to some extent of good tractors properly sold. It is said also to be oftener true of tractors sold on a small payment down. However, some dealers carry tractors in spite of the disadvantages, in order to keep in close touch with ranchers who need implements, and tokeep their trade.

Paying for Defective Parts.

Properly, the manufacturer should pay at least all the expenses of replacing defective parts; and he should also furnish a complete and ample stock of new parts in every community where his tractors are sold, in order to repair laid-up tractors in the least possible time. But as human nature goes, there would be great abuses of such a system of service; and the only one to prevent such abuses is the financially interested local representative of the manufacturer. So, if dealers are not getting enough margin to enable them to minimize loss to farmers due to defective parts, they ought to be allowed more profit and required to fix up their customers' tractors promptly. Who should maintain the local stocks of farming and of the tractor industry they should be maintained where there will be no more than a maximum of a day's delay for the tractor user.

Paying for Abuse of Tractors.

Properly also, the tractor user who hasn't sense enough to recognize that a machine is a machine with definite capabilities and certain requirements, should have to pay all of the costs of repair work and parts. If such a policy could be adopted, it would be necessary to provide for some disinterested party to determine who is to blame for the breakdown. If it were carried out, the man who takes good care of his machine would not be compelled, as he now is, to pay for the service rendered free to careless or ignorant tractor users. Pay for what you get is a fair policy for anybody; but to pay for a good machine and encounter great loss of time because it contains parts designed too weak to stand constant grueling at rated capacity simply counteracts the good money spent advertising, and is thus unfair to the manufacturer himself, to the tractor industry as a whole and most of all to the rancher who attempts to use this form of power on the farm.

More Frequent Alfalfa Irrigation.

"I pump out of the river and irrigate when I want to," says W. F. Duffy of Stanislaus county, regarding his Crow's Landing alfalfa-dairy ranch. "Here at Modesto we lose a good bit every year because ditch water fails early. It will be worth all it costs to put in a pump on this ranch, and I'll have it this season.

"But that isn't the only value of a pump. With ditch water we take it when we can get it, about once a month. I have been irrigating for 20 years, and I believe that alfalfa does better with two irrigations per cutting. The soil should be kept moist. Alternate wetting and drying out do alfalfa no good. Double irrigations work O. K. For instance, what we are irrigating today we will cut in about four days. There will not be too much moisture on medium land to cure it then. On heavy land, the irrigation ought to come longer before cutting. In this climate we rake into winrows and bunches right after the mower. Its own moisture and that in the ground help keep alfalfa from curing brittle and losing its leaves. In four days from cutting, it is ready for the stack. With my 40 acres of alfalfa I can begin to haul as soon as cutting is finished. I finished hauling the seventh cutting one year on December 4. The alfalfa makes at least six cuttings every year."

Truck Hauls Fruit from Orchard.

It costs members of the Laverne Orange and Lemon Growers' Association in Los Angeles county 2½ cents per loose box to have their fruit hauled from the plowed ground of their orchards to the packing-house, an average of two miles, by motor truck, according to D. G. Arbuthnot of the Association. Before the truck and trailer were obtained, all growers hauled their own fruit, or hired others to do it. Now about 25 per cent of them have it hauled on the Association truck. Last year this outfit packed about 1,000 carloads of 462 packed boxes each, so we may figure that the truck and trailer hauled fruit totaling over 115,500 packed boxes. As a packed box is estimated by Mr. Arbuthnot to contain on the average all the salable fruit in 1½ loose boxes, or a little more, the truck hauled about 173,000 picking boxes last season. Some job that; and the beauty of it is that many of the navels must and can be hauled when ranchers' horses are all needed for plowing and cultivation. Moreover, the truck doesn't have to sleep except while it

teen to eighteen hours per day, hauling about 250 boxes per load. One reason that a full load can be hauled out of members' orchards is that the truck drives on all four wheels.

Tractors on General Ranch.

Two 45-horsepower tractors on the Saticoy Orchard Ranch in Ventura county have had their little rest between seasons; and ere this note is printed, they will have begun a long pull of steady work by plowing out a couple of hundred acres of sugar beets. When the beets are out, plowing will begin for the next season's crops, mainly of beets and beans. There are 350 acres of the latter this year. The tractors plowed, chiseled, and clod-mashed the whole ranch last season, including over 140 acres of walnuts. On this ranch of approximately 700 acres, thirty work horses are also kept for the cultivating and hauling. F. R. Cole, who operates one of the tractors, estimates than an hour a day is necessarily used on the average for testing and tightening bolts, greasing and oiling bearings, etc. Then at the end of the year's work both tractors get a complete overhauling with replacement of badly worn or broken parts. Mr. Cole did this himself for both tractors after the plowing was done, taking only two weeks for the job. One of the tractors has been operating four years and still has the original shoes on its track, but they are getting thin. The soil is mostly light, with some sand and some adobe.

Tractor Set to Pump Water.

Water for crops is an emergency proposition at this time of this year; and many a rancher is unable to get electricity or a gas engine to run his newly-installed pump. This did not worry a certain rancher in Los Angeles county; for he just set his medium-sized tractor in front of a deep-well turbine, put two timbers end to end between the front axle and the base of the pump, put a belt over the pulleys, tightened it with a jack between the timbers, set the tractor brakes and proceeded to throw about 900 gallons per minute into his underground concrete pipe line.

On this tractor the lower part of the belt has a tendency to rub the underside of the front axle. This was prevented by setting an ordinary ball bearing on the end of a fork handle and fastening the handle to spokes of the wheel so the case of the ball-bearing rotated on the belt, and prevented all whipping. There was a remarkable absence of vibration around tractor or pump which might have disarranged the jack and timbers. There is a remarkable difference between what his crops are and what they would be if power were not available for pumping.

Alfalfa Fertilizer Experiment.

Alfalfa fertilizer tests are being carried out on three ranches in Stanislaus county under supervision of Farm Advisor A. A. Jungerman. On Mr. Perrow's ranch, one half-acre plot received hydrated lime 1000 pounds and sulphur 200 pounds. One plot received 1000 pounds of hydrated lime alone. Another received 200 pounds sulphur alone. Another received 250 pounds of superphosphate. Another is reserved with no fertilizer. The materials were applied in May after the first cutting, but just before irrigating. The next cutting was weighed. The combination of lime and sulphur produced most, giving 400 pounds more of hay than unfertilized land. The superphosphate plot came second in production. The others seemed no better than the unfertilized plot. Up to date, these trials show only the immediate results of the fertilizers. Each successive cutting may show differently as the less available fertilizers become available.

Always Know Where Doubletrees Are.

Some ranches using several teams and many implements have doubletrees scattered most anywhere about otherwise. Not so the big Irvine ranch in Orange county. In the yard reserved for equipment is a big sawhorse about seven feet tall and sixteen feet long with five pairs of legs. On each leg, spikes are placed about 18 inches apart and on these are hung the doubletrees which are not in use. If broken pieces hang there, it is a perpetual notice to fix them. In rush hours of early morning, no time is lost looking for this kind of equipment.

PAPER IN IRRIGATING.

Frequently in running small streams of water down furrows from an open ditch it is difficult to get the flow adjusted correctly, as the dirt will wash more from some furrows than others. If sheets of paper are used at the head of the furrows the dirt cannot wash and the flow down each furrow will be the same at all times.

"Now," said the officer instructing the green recruits. "Suppose you, Jones, were out on guard duty and an entire German company should come up to where you were. What would you do?"

"Sir," answered Jones, without hesitation, "they never would come up to where I was. Maybe, though, they might come up to where I had been."

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Cost less than any other considering long mileage they give and the low prices charged. You can get any size tire or tube at the present time as we have just received a car load of odd sizes.

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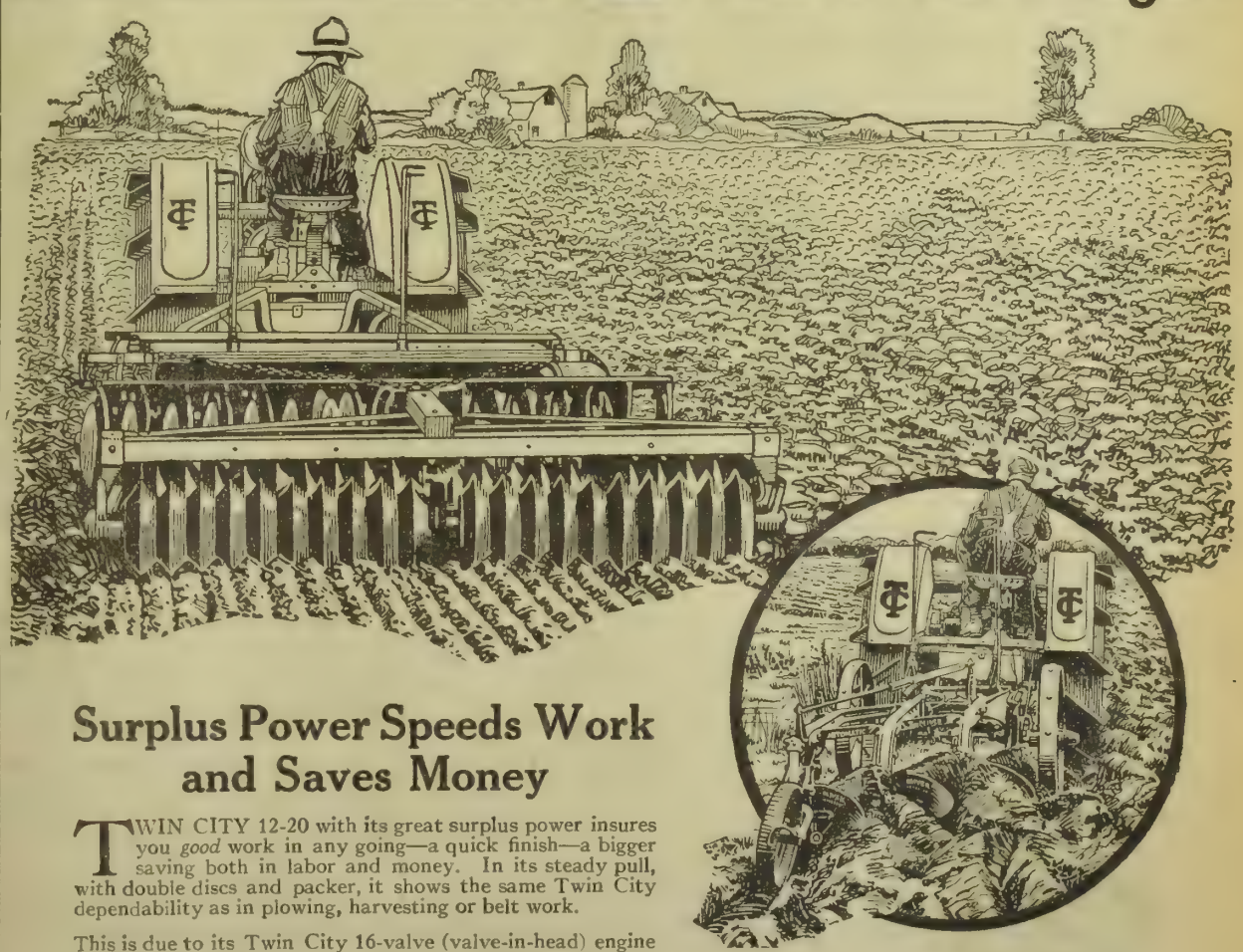
TWIN CITY

12-20 Kerosene Tractor with 16-valve engine



Surplus Power Speeds Work and Saves Money

TWIN CITY 12-20 with its great surplus power insures you *good* work in any going—a quick finish—a bigger saving both in labor and money. In its steady pull, with double discs and packer, it shows the same Twin City dependability as in plowing, harvesting or belt work.

This is due to its Twin City 16-valve (valve-in-head) engine which turns all of the fuel into power—*clean* power—with every charge. It is due to the Twin City's combination of unusual strength with light weight in heat-treated alloy steels.

In a word, it is due to the science and practical knowledge which one of the largest institutions in tractor building has put into the Twin City. It is the product of ten years' development by a $7,000,000 organization with branch warehouses, distributors and dealers throughout the United States and Canada to give you immediate service when you need it. *Built to do the work—not to meet a price.*

See the Twin City dealer nearest you. Or write us for details.

Double valve area of 16-valve (valve-in-head) engine quickly exhausts all burnt gases, leaving a clean cylinder so that the new charges deliver full power. Removable cylinder walls mean uniform cooling, quick and easy replacements. Counter-balanced crankshaft reduces vibration and wear. Pressure feed oiling through drilled crankshaft. Hyatt roller bearings throughout. All gears of special alloy steel, drop-forged, heat-treated, completely enclosed and running in bath of oil. Every part readily accessible.

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Southern Machinery Co.—Atlanta, Ga.
R. B. George Machinery Co.—Dallas, Houston, Amarillo, San Antonio, Texas, and Crowley, La.

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Minneapolis Steel & Machinery Co.

Federation of American Farmers

(Written for Pacific Rural Press.)

Co-operative Protection.

When farmers cry out, "We must get together!" or "We must organize!" and these cries are heard from all over the State and Nation, just what do they mean by the word "organize"? What do they have in mind to accomplish by their organization? They must have an object to justify their pains and costs in organizing and they must aim and hope for better conditions than those they have been living under or they do not need organization. They already have social and educational organizations in plenty; they have many co-operative marketing associations and they have tried out political-protest cross-roads clubs without getting any benefit.

The farmer is intelligent enough to know that he is getting the worst of it from many powerful organizations —financial, mercantile, political and industrial, and he also must know that these organizations are composed of individual men like himself and have but one advantage over him, and that is that they are organized for mutual help and mutual protection, on a basis of a mutual interest. They are not organized for sentimental reasons, but the cord that binds them one to another is a twisted rope of desire for money, privilege and power. The attainment of these material things for the individual members through the concerted effort of all the members, is the aim and object of these organizations.

These organizations know well where to go to get what they want, and at every session of the legislature their representatives are there with bells on and not only on the floor of the assembly and senate, but in every committee room; and before every commission who have the settlement of anything, or the power to hand out benefits, they will be found demanding something. Some of them use the immense money interests of their organizations as a club to compel submission; others tell about the immense weight of their investment interests, while the industrialists quote the number of thousands of votes controlled by them to show the strength of their organization.

Is it any wonder that farmers have been fair game for these interests? Is it wonderful that the farmer has been of no importance at all in the consideration of lawmakers, coming with his needs and wishes as an individual, or as a few individuals speaking in the name of a social club or neighborhood organization composed of all kinds of political partisans, and begging for this help or that relief, whining for "justice" for the farmer. Begging for justice without the power to demand justice as a right don't get the farmer anywhere, nor will it ever do so.

Some Live Topics.

An organization called the "Better American Federation" is now in course of formation, and appeals are being made for the formation of units in the towns, cities and communities of the State. The "Better Americans" are to devote all their efforts to combatting radicalism, etc., while emphasizing "loyalty to the flag of unionism as a whole," and it is certainly a laudable and admirable stand to take.

The Federation of American Farmers has had, from its inception, certain provisions in its organic law which stands for pure Americanism and devotion to the flag of our country, with no modifications and no exceptions. The basic idea of this federation is the preservation of American institutions in their entirely, as they were handed down to us by our fathers, and every member of this organization must subscribe to that basic idea as a prerequisite to membership. Radicalism of every kind is taboo in this organization, and the power to keep it out is placed in the hands of every county unit in the Federation by the provision in section 5 of article 1 of the State By-Laws, which reads: "Any membership may be cancelled by the county board of trustees upon proof being established that the member's conduct has made him unworthy of such membership."

The Federation of American Farmers is 100 per cent American and 100 per cent loyal, and will remain so. It does not desire any change in the form of government, nor does it align itself with those who do advocate such change. It asks for no special legislation or immunities for its members, but will insist that they shall be secured in their property and products and in their rights and privileges as American citizens under the protection of the constitution and the laws.

Gasoline Sops—Do You Like Them?

The farmers are being reassured on the matter of gasoline supply for their farming machinery, pumps, trucks, tractors, etc., and the various methods by which this consummation is to be brought about are gravely stated by the pacificators as follows:

1. "There is a plentiful supply of gasoline for agricultural needs if the public (joy-riders?) is taught to conserve."

2. "Winter is approaching and the demand for gasoline will not be so great and the farmer can get all he wants for irrigation, harvesting and other purposes." That is one of the brightest of the many methods proposed.

3. "Gasoline production is to be doubled by a method of so-called 'cracking.' The product will not be as volatile as the old-fashioned gasoline, etc." Doubling the quantity and halving the quality as a remedy shows how deeply the proponent of this remedy must have studied his subject.

With these reassurances and the price of the necessary fuel jumping in price from day to day, farmers may rest secure in the knowledge that their interests are being carefully consulted and as tenderly conserved as they have always been—and that's going some.

Vote for Sympathetic Legislators.

The Federation of American Farmers is not a political organization in a partisan sense, nor is it in politics. But the members of the Federation will stand together as do the members of other organizations and plug for the state and county legislators who will best serve the interests of the farmers. The members of this organization are farmers before they are political partisans, and it is perfectly natural that they should act concertedly in the selection of the men who make the laws which control them in their business, as do all other organizations.

The farmer's vote is a very valuable asset, and by its use, and only by its use, may he have any voice in the manner in which the tax money, of which he pays sixty per cent, shall be expended. He must, if he desires "representation as well as taxation," which is one of the great principles for which this federation is striving, federate his vote as well as his lands, his voice and his influence in an effort to enforce recognition and consideration for farmers and the farming industry in state and county legislation.

Word has been received from State Chairman J. J. McDonald of the Federation of American Farmers that his month's sojourn at the springs has benefited him greatly and that he will shortly return to begin an active organization campaign throughout the State. State Secretary-Treasurer W. V. Dennis of Calaveras will join the State chairman in the campaign and they will be kept busy for some time in the many counties now asking affiliation with the federation.

Approximately 126,000 acres in California has been planted to lima beans, and 24,000 acres to baby lima beans. While this acreage is practically the same as that in 1919, the the area planted to other beans has decreased approximately 60 per cent.

Working Hour Cost

Some tractor purchasers make the "Caterpillar" their choice because of its big power. Some choose it for its ability to meet exceptional ground or road conditions. Some choose it for its dependability—freedom from delays. But the deciding advantage in most cases is its low cost per working hour, which means increased farm profits. Our folder "What Are Your Power Needs" will help you in the choosing of a tractor for your work. Send for it.

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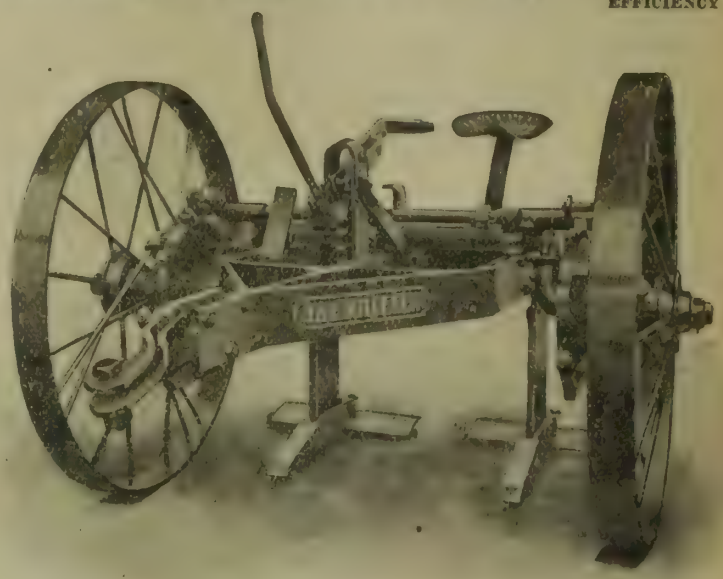
CATERPILLAR

Reg. U.S. Pat. Off.

Four Row Automatic Lift Beet Plow

KILLEFER QUALITY TRADE MARK K KILLEFER EFFICIENCY



IT IS NONE TOO EARLY TO PLAN FOR BEET HARVESTING

The above cut, showing our Four-Row Automatic Lift Beet Plow, the most practical beet plow on the market today, was designed for use behind the larger size tractors for plowing our beets at a minimum cost and saving not only time, but plowing deep enough to get the tap root, which contains the greatest percentage of sugar.

The value of a good implement of this kind is not only in its ability to perform a perfect job of beet lifting, but in the condition it leaves the ground for next season's crop. Subsoiling has proven very beneficial on the Pacific Coast soils, and a good job of beet plowing is nothing more or less than subsoiling.

Our beet plow is equipped with either the straight wings, as shown in the cut, or with angle wings, whichever is preferable.

Place your order early, for owing to the shortage of steel, there will be a limited number of these beet plows available.

PRICE F. O. B. LOS ANGELES, $575.00

Write for catalogue Number One; also our booklet on "Deep Tillage"

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Level Your Land for Less Money with a Compton scraper

Operated by the tractor driver from the tractor seat—one man does it all. Moves more dirt with less power. The 5-foot size does the work of 3 or 4 four-horse scraper teams. Saves enough time, horse-feed and labor to pay for itself in a few days. A size for every tractor. Prices from $215.00 to $335.00. Send for descriptive circular and price list.

THE WOODWARD COMPANY FRESNO, CALIF. Box 706 A

Significant Agricultural Pointers

Eastern Stanislaus Grain.

Barley gained acreage in eastern Stanislaus county at the expense of oats and wheat, according to A. L. Gilbert of Oakdale. Most of the barley was pinched by a hot spell, but some of it weighs up to 50 pounds per bushel, and the summer fallow yielded 15 to 27 sacks per acre. One crop of 27 sacks would have been 40 if it had filled properly. Wheat is pinched worse than barley, a large part being Early Baart, with some Bunyip and considerable Salt Lake Club. The latter is an old short-strawed variety, and it pinched less than the Baart. It averaged about 130 pounds per sack while the Baart averaged about 120. Last year Baart weighed up to 140. Oat acreage is not over 10 per cent that of last year. Rice acreage is reduced about half from the 1600 acres planted last year, which was short of normal. It went 20 to 50 sacks per acre in 1919 and all looks well this year. There is plenty of water to mature the entire planting. Most of it is of the early "1600" variety.

More Sugar from Same Beet Tonnage.

Sugar-making operations will start late in August at the Betteravia plant of the Union Sugar Co. in Santa Barbara county, and will continue about 100 days, slicing about the same tonnage of beets as last year. The company has about 8,000 acres under contract, irrigation facilities having recently been completed on a great deal of them. The crop is expected to average twelve or thirteen tons per acre. The stand is very good, and no diseases have shown up yet. The company is electrifying the beet end of the factory and is installing an up-to-date Steffens plant for recovery of sugar from molasses. This is expected to increase the sugar output ten to twelve per cent. It will be operated by two boilers of 550 horsepower each and a 750-kilowatt electric turbine.

Enough Farm Labor at Tulare.

Folks who have wanted help and men who have wanted work have been brought together this season free of charge by Secretary John I. Sheets of the Tulare Board of Trade. Mr. Sheets maintained a card index by which this was done without loss of time. While the writer was in his office one day recently a man was sent to a job in alfalfa at $4 per day and board. The system was started April 15. On May 22 300 men had been sent to farmers who needed them. In the past eight weeks an average of fifty per week were sent out. In two different weeks there were more applicants for work than for men. The labor situation here has not been bad.

Salinas Has Phenomenal Barley Crop.

A banner barley crop has been raised this season in the north end of the Salinas valley. Bean culture here has increased barley yields "phenomenally," as expressed by Donald Lazier, who has been identified with crop marketing in the valley many years. Some of the uplands have the biggest barley yields ever produced. The average is estimated at 30 bags per acre, all heavy "shipping" barley, some samples on the table weighing 49 pounds per bushel. Farther south in the valley, fewer beans have been grown and the barley yields have not been so heavy. Very few selling contracts have been made, and there is not much movement now.

Sugar Beets Ripening.

Sugar beets in the Oxnard district are yellowing to an early maturity in many cases, partly because the season has been a dry one. But the tonnage apparently will be good, and, according to J. W. Hartung of the American Beet Sugar Co., the acreage is about 25 per cent greater than last year. Notwithstanding the short rainfall of two preceding years and shorter rainfall this year, Mr. Hartung believes the yield per acre is better than last year, mostly due to better methods of farming. No unusual damage from any cause is to be noted in this district, and certainly the stand is good.

Lima Bean Agreement Terminated.

The agreement by which the California Lima Bean Growers' Association employed certain California factors to aid them in disposing of the crop on eastern markets will be terminated when the 1919 crop has been completely marketed. It is rumored among some of the members that one of the big reasons such an agreement was not continued lay in the handling of lima beans imported from Madagascar by one or both of the factors mentioned, competing with California limas and keeping them unsold in the warehouses.

Riverside Fair in Preparation.

The Riverside Fair will be held October 13 to 19, inclusive, according to Farm Advisor R. E. Nebelung, who says it will be bigger even than it was last year. Practically every farm center is already working on exhibits. Farm Bureau President J. E. Wherrell is also president of the fair association, and W. W. Van Pelt is again the pushative secretary. Premiums have been somewhat increased, and the list was sent to printers early in July.

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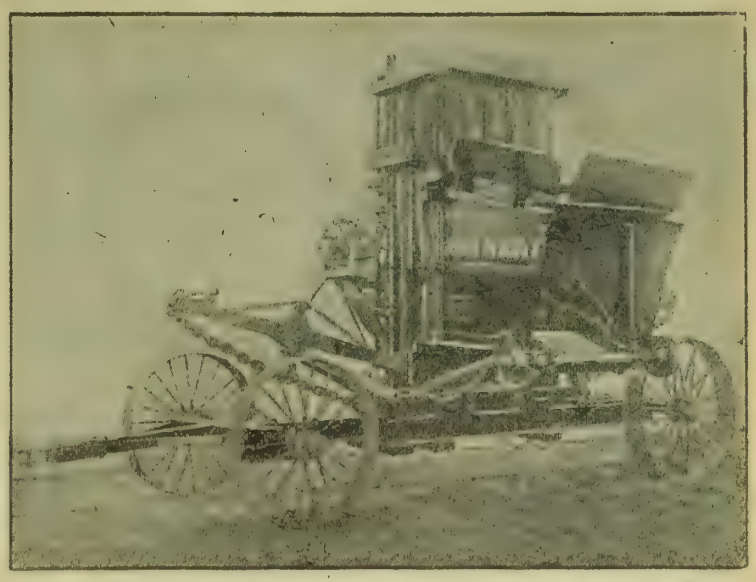

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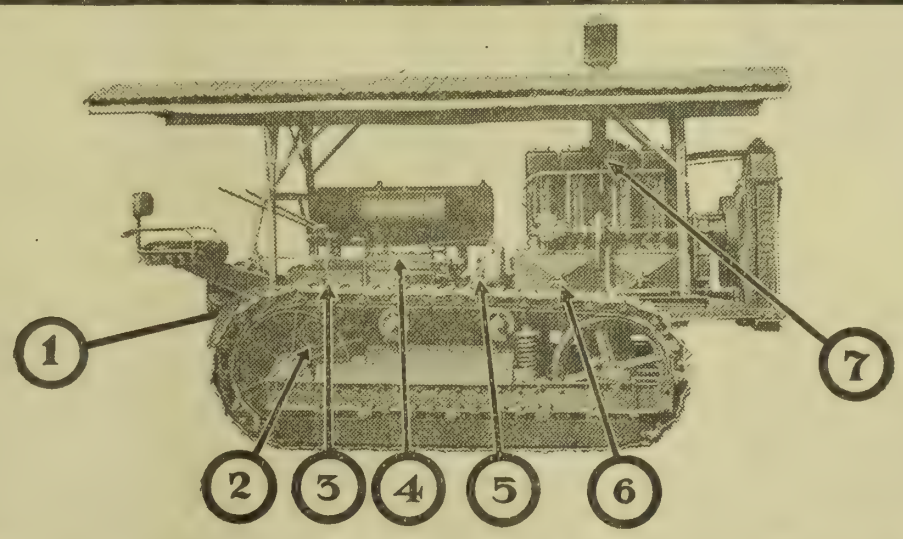

Working Parts Easily and Quickly Reached

This is a leading feature with the Best Tracklayer. Every tractor owner will recognize at once the advantage of having the working parts of his machine within easy reach at all times. Particularly when he is in the middle of a big job. By the diagram above and the corresponding explanations below, we show how the principal working parts of the Best Tracklayer can be reached within a few moments with very little effort.

1 At the rear is a large port through which, when opened, the main bevel gears connecting main drive shaft and cross shaft can be easily reached.

2 Main drive pinions may be removed through the inspection ports in the sprocket wheel. This corresponds to a full-floating rear axle on an automobile.

3 On the side plates of rear housing are hand holes, one on each side of tractor, the covers for which are removed by turning a single hand screw. Through these holes the multiple disc steering clutches are quickly reached. If required, the entire side plates can be removed by unscrewing the bolts, which takes but a short time, as space above plates is perfectly clear for free action with a wrench.

4 Transmission gears and bearings are fully exposed by removing top plate of transmission housing to which is attached small oil tank. This is quickly done as bolt heads are clear of all encumbrances and pipe connections to tank consist of two easily detached unions.

5 Main Clutch is "dry" and hence needs no housing. Parts are therefore reached instantly.

6 Extra large inspection ports in the crank case enable you to make bearing adjustments easily and to remove pistons and connecting rods without "tearing down" anything or disturbing valve mechanism.

7 Rocker arms may be inspected by lifting hood placed over top of cylinders.

All other working parts of the Best Tracklayer are as readily accessible. But accessibility is just one of many features which have made the Best Tracklayer famous. These features are described in a catalog which we will be pleased to send you. If you are interested in tractors, send for it.

C. L. Best Gas Traction Co. San Leandro, California

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High Efficiency Saves Power

Above are pictured the DeLaval Labyrinth Protecting Rings. The pump case ring on left, impeller ring on right.

These rings are so constructed as to eliminate all leakage and yet provide the greatest possible clearance. They are made of bronze and to standard gauges, and can be replaced without fitting. They mark the highest point of efficiency.

This is one of a series of advertisements explaining the different parts of the DeLaval Irrigation Pump.

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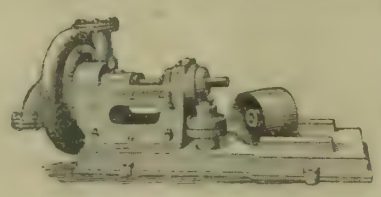

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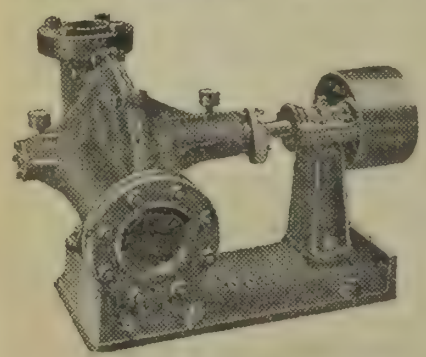

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MOTOR TRUCKS SAVE $8,000 PER YEAR.

(Written for Pacific Rural Press by R. E. Hodges.)

When the Santiago Orange Growers' Association of Orange county changed their system of hauling oranges from orchards to packing-house with teams, and began to haul with motor trucks in 1913-14, they cut the charge from an average around three cents per box to two cents, as stated by Asst. Manager Perry V. Grout, who has charge of outside work for the association. Though growers have the option of hauling their own oranges or having them hauled by the association, very few haul their own; and the association's two five-ton trucks with a trailer for each hauled something over 400,000 boxes last year. Only in the busiest of the rush season are the trucks supplemented by a couple of teams.

The regular load is 200 boxes, averaging 50 pounds each on the truck and 135 to 200 boxes on the trailer. Of course, the truck load is increased in rush seasons. Wagons haul 96 boxes per load. Two of the orchards whose fruit is hauled by truck are 24 miles distant. The rest of them average about four miles. The trucks average about four or five trips per day where the teams used to average two.

Save Two Cents Per Box.

Two men with two teams would haul 384 boxes per day. A truck driver and "swamper," who always goes with him, haul on the truck and trailer easily 1500 boxes per day. A team and driver now cost $9 per day, which would make the charge for hauling by team now at least 4½ cents per box. The price for hauling by truck this year was raised to 2½ cents per box. Judging by past experience, this will cover the cost. The association will have packed 800 carloads of oranges this season. If the trucks haul no more than they did last year, the saving to members of the association will total 400,000 times 2 cents, or $8,000. This is surely a silvery argument in favor of trucks in spite of hard extraction of gasoline from the dealers. The advantage in favor of trucks is more than $8,000, however. There would never be a surety that the association would have or could get enough teams and men to haul enough oranges to keep the big packing-house busy. If shipments had to be slowed down at a favorable time, or the packing-house crew had to be laid off temporarily and collected to work later, or if by reason of slow hauling a lot of oranges were held on trees until injured by weather, wind, etc., there is no telling what the loss would be.

Trucks Work Overtime.

Teams would have to rest at the end of a day's work; but the motor trucks frequently keep going fifteen to sixteen hours per day. Occasionally when orange hauling is slack, the trucks carry feed and supplies to the ranchers. One of them has traveled over 100,000 miles, according to Mr. Grout. Another traveled about 150,000 miles and was traded in last year on a new one. They keep busy from the middle of April to the first of October.

Haul by Truck Out of Orchards.

"Do they haul fruit out of the orchards, or do growers deliver fruit for them at the roadside?" we asked.

"Growers are welcome to deliver at the packing-house, but 95 per cent of them do not," said Mr. Grout. They stack fruit from two rows on each side of a center, down which the truck drives to load up. No box is carried more than a few feet; and except in half a dozen orchards, the trucks haul capacity loads over the cultivated ground. As the truck itself weighs nearly five tons, and as solid tires are used, there is some packing of the soil. However, most growers run a two-horse subsoiler down the tracks after hauling is over and do not worry about the packing.

We asked about bruising of the fruit. There is none except where oranges are pinched between boxes. The trucks ride like a cradle when loaded.

The trailers are used chiefly on long hauls on account of some difficulty in short turning and backing with them. But they are of the automatic steering kind, which do not whip back and forth across the road with great danger to themselves and other machines on the road, and they require a minimum pull.

Certainly the present volume of crops could not be handled under present conditions without the motor trucks and trailers, and certainly the cash saving is well worth reserving to the growers.

ORCHARD TRACTOR GETS WORK DONE.

(Written for Pacific Rural Press.)

Rapid work with a tractor after each irrigation saves a great deal of moisture for T. B. Dawson of Santa Clara county, and keeps the orchard soil in fine shape where it would get hard and crack and lose moisture if cultivation were delayed until a reasonable number of horses could get it done, as observed by the tractor driver, C. G. Cunha. Even with the tractor, the ground became too hard last spring to plow, though plowing was twice attempted. It was finally double-disked by the tractor, and the entire 40 acres of orchard has since been kept in good shape. Six horses were sold when the tractor was bought about a year ago. One horse is retained for light work, on which the tractor would not be economical. The tractor requires exactly a gallon of gasoline and 1/20 of a gallon of oil per hour. We wonder how much the horses would require! Of course, the horses would dodge limbs around which the tractor must be driven to avoid marring them with wheel lugs, and a horse tool could be pulled back into a corner while a ten-foot spring-tooth or an eight-foot double-disk such as the tractor pulls could be only dragged around without getting back into the corner. But cost for feed and extra drivers outweighs the small advantages of horses, while the big additional advantage of the tractor is in getting work done while it is do-able.

Twice the orchard is irrigated after the first working-up and before harvest time. As soon as possible, the whole thing is spring-toothed and then double-disked, taking only two days each way. The harrowing and disking are repeated two weeks later. The same four cultivations follow the next irrigation and also the one which is applied after fruit is off.

Wheels in Soft Ground.

The ground dries more or less unevenly. This sometimes leaves soft places where the rear wheels would go down on a hard pull. Mr. Cunha has learned to throw out the clutch when the rear end begins to bury. He can always unhitch and pull out, then hook a log chain to the implement, and pull it through. The chain is always ready at the drawbar.

But even if the wheels should dig in till the drawbar rests on the ground, no trouble is experienced. A brake band has been put onto each wheel. When buried, the operator's foot tightens one wheel so it barely creeps while the other wheel swings around and out.

Repairs on this tractor have been slight. One bearing stuck and the factory put in a new one, free of charge. In the year's work no cylinder has been reground and no new piston rings put in.

THE ROMANCE OF POWER FARMIN CALIFORNIA.

(Written for Pacific Rural ress by N. C. Wilson.)

The history of California agriculture is the history of bending methods to meet new conditions.

The earliest farmers in California found themselves confronted with agricultural opportunities and agricultural problems, without parallel in their eastern experience

They found a virgin soil that was willing to do almost anything, provided it was broken up. They found an underlying hardpan that would have made Job sit down and weep.

They found a country that was arid half the year. They found variations in soil that made one small farm look like a spotted leopard. They found everything that they were unaccustomed to, including—after their work had been done—a generosity of nature in the matter of crops that made stories of California agriculture rank with the stories of Yosemite waterfalls and big trees—plain, rank lies when first announced.

But these enormous opportunities and enormous problems grew something else besides big crops. They grew big men. They grew men who were willing to undertake anything at least once. They grew the world's most enterprising race of farmers.

That helps to explain why power farming, once it gained a foothold, became such a wholly popular institution in California.

The fifteen years that have elapsed since tractors first began to tear open the soil of California's big grain ranches are years crammed full of romance. They are the years in which big holdings have disintegrated in which the vast wheat ranches have broken up, in which the amazing cotton and rice industries have sprung into being. They are the years in which prosperity has settled over the land. They are the years in which farm labor has turned its back upon the farm and trekked cityward, perhaps never to return.

In these fifteen years the huge, lumbering tractor that operated on vast grain ranches has proved to be but the head of a tribe of power-farming engines and implements of all sorts. Today the smallest farmer has a tiny tractor and a motor cultivator.

These fifteen years have seen the development of the automobile and its remarkable results and effects upon farm life.

Today the farmer who has no automobile is in a class with the farmer who has no telephone. And if he has an automobile, he is pretty likely to have a tractor, a pump and a truck.

These units of farm power but serve to eduacte him to the further possibilities of power-farming. He is beginning to study belting, dairy machinery, power-lift plows, and farm-lighting plants. He is pretty well cleaned out of his help this year. What is left would ruin him, at present prices, if he were not a careful manager. But he has called power machinery to his aid, and in spite of expensive help is making more money than ever before.

He is strictly optimistic, this modern California power-farmer. He is not afraid of the labor shortage. Behind him are seventy years of ingenuity in meeting new conditions.

What will the next fifteen years bring forth? If a man could sit down, close his eyes, and see California agriculture as it will be performed fifteen years hence, he would have about the most interesting experience that it is possible to conceive.

However, he can almost have that experience—if he has been marooned up in the mountains, off the beaten paths—by leaving his farm for a few days this year and stepping up to Sacramento, where everything that is up-to-date will be shown at the State Fair.

That experience would be almost as good as sitting down and peering fifteen years into the future—it would be almost as good, that is, for the farmer who is at present living fifteen years in the past.

of him. The majority of California farmers are too up-to-date.

STEAM VS. ELECTRIC POWER IN THE SAN JOAQUIN.

(Written for Pacific Rural ress by D. J. Whitney.)

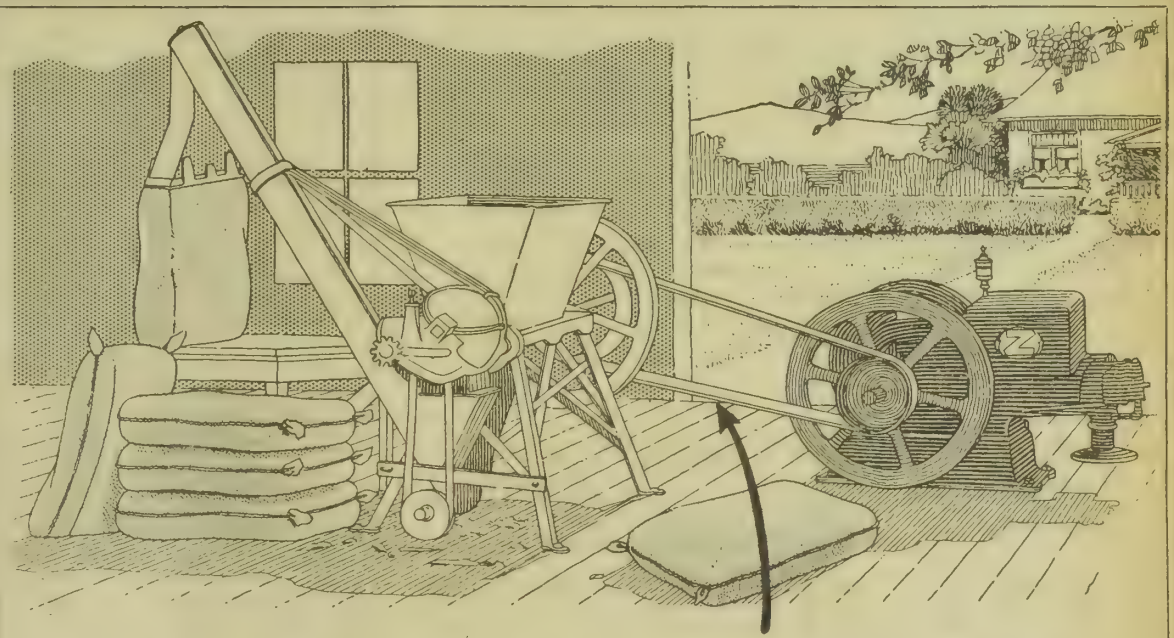
Several weeks ago, in connection with a short article about San Joaquin Valley farmers demanding first rights to all electric power generated from streams running into the valley, the question was asked, "Would the farmers be willing to dispense with the steam plants supplementing the water-operated plants?"—apparently intimating that the steam plants were a necessity and a benefit to the farmers.

After taking this matter up with Mr. Horace J. Evans, president of the Tulare County Farm Bureau, and an officer of the Water Users' Association, I can reply, "They could get along perfectly well without those steam plants, provided they had first right to the power generated from their mountain streams."

The proof of this lies in the fact that there is no time in the year in which far more power is not shipped out of the valley to Southern California than is generated in steam plants. Certain companies have not enough power from water operated plants to supply their customers, but the Southern California Edison has a big surplus, which they take south, and this surplus is far greater at all times than the other companies ever developed by steam. They buy some power from the Edison company, and if they could get all they wanted at a low enough price, the customers would be fully supplied without the necessity for any steam plants at all and there would still be a lot to take south.

This can be said: by the use of natural gas in the oil district, it is possible to generate electricity very cheaply, and it is simpler to do this and to transport power south in spite of leakage from wires, than to generate all the steam power needed in Southern California, so these plants are desirable, but if the valley electric users had first call on power generated from Sierra streams they could dispense entirely with steam generated electricity and the cost of steam-generated electricity would not go onto their bill. This should answer your question.

Two women were discussing their marital troubles, when one asked, "By the way, what is your husband doing now?" "Oh," said the other, "he's a-settin' round tellin' what's goin' to happen next election.' "Then he's a prophet?' "No, he ain't. So far as this family is concerned, he's a dead loss.'



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STANISLAUS COUNTY

SALE of HOLSTEINS

Following the suggestions of the program of the Extension Division of the National Association, the Stanislaus County Holstein Breeders' Association are planning on holding a sale of about

45 - HOLSTEINS - 45

AT PATTERSON, CAL., AUGUST 21st
During the Patterson Fair

The animals comprising this sale will consist of 25 Cows and Heifers bred to the best bulls of the county. (Many of these are due to freshen right after sale time.) 12 Open Heifers of show-ring quality and superb breeding. 8 Bulls that will please the most exacting buyers.

All tuberculin tested and sold under the strongest kind of a guarantee. Watch following issues for further particulars and write E. M. Morrow, Sec., for catalog at Modesto, Cal.

This is a regular club sale as it represents so many of the herds in the county association, no less than 18 different breeders consigning animals. All of these cattle have been passed on by a special committee, appointed by the local association, which insures an offering of exceptional merit. Watch later issues of the Press for information in regard to this sale and get your name on the list for a catalog.

Stanislaus County Holstein Breeders Association
E. M. MORROW, Secretary ***MODESTO, CAL.***

TESTIMONIALS

"Cows increased in one week 3 per cent in milk."
A. L. McCULLOCH, Alpaugh, Cal.

"I never saw hogs do so well or grow so fast as on this molasses ration."
C. H. HARTWIG, Yuba City, Cal.

"It has enabled me to keep my stock in better condition at less expense."
J. M. HENDERSON, JR., Sacramento, Cal.

"Have one calf that refuses to drink new milk—prefers skim milk with molasses. What do you know about that?"
R. HECKLEY, Santa Rosa, Cal.

"It has been a great advantage in getting the stock to clean up the roughage."
H. H. AMES, Chowchilla, Cal.

"One cow will turn down the choicest handfuls of alfalfa hay unless it has been 'Molassed.'"
REDWOOD AYRSHIRE FARM, La Honda, Cal.

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cheaper than hay, but has same feeding value as corn or barley.

W. H. YOUNG COMPANY
58 Sutter Street, San Francisco, Cal.

OWING TO THE FACT THAT I HAVE SOLD MY CATTLE AND DAIRY EQUIPMENT, I AM OFFERING FOR SALE MY FINE YOUNG HERD SIRE

VALET'S EMPEROR of L.

A. J. C. C. 166002

His Dam: Empress Lass produced 637.10 lbs. fat in 311 days under ordinary dairy conditions. She was Grand Champion at Oregon, Washington, and at California State Fairs; also at A. Y. P. Exposition; a daughter of Gertie's Lad.

His Sire: King's Valet Imp., Grand Champion in Oregon, Washington, Nevada, and in California; also at A. Y. P. Exposition. He is a grandson of Financial King.

FOR FURTHER PARTICULARS, APPLY

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REGISTERED HOLSTEINS
Creamcup Herd offers service bulls and bull calves of 34-lb. breeding. Females offered for foundation stock.
Tuberculin tested.
M. M. Holdridge, San Jose, Cal.
R. D. "A," Box 437,
Two miles out North First Street

We Must Standardize Dairy Products

(Written for Pacific Rural Press by Ralph Newman.)

Next to financial relief to meet what we hope is a temporary emergency in the dairy industry, the most important consideration at this time, on the commercial end of our job, is the standardization of our product, and a very high quality standard at that.

Canada, with a standardized product, is looming north of us. Denmark, with a standardized product, is making a strong bid for our best Eastern market, while this coast must watch New Zealand with her standardized butter and one wonders what in time may come out of Argentina!

Word comes that Minnesota has started a movement to get more uniformity in the butter output. The plan there is for each creamery in a county to pay one-fourth cent a pound to employ a qualified instructor to visit each creamery as often as possible, and, in this way, bring about similarity in methods of manufacture. So dairymen elsewhere are becoming alive to the great need.

It strikes us, however, that the plan proposed by the Associated Dairymen of California is far and away the best yet devised. If this plan of the organized dairymen goes through to its logical conclusion, we will have two things that will make a high-quality, standardized product a comparatively easy matter.

Centralization.

First we will have the manufacture of our butter, cheese, etc., centralized at commanding positions in the State. Centralization is a splendid thing, working for economy and efficiency. It has gone far in the state pushed by private capital. Farm-made butter never has and never can really compete with creamery-made butter, because its quality varies so greatly. And a large number of small creameries, scattered all over creation and working independently, have been tried and found wanting for the same reason. In the course of evolution they are crowded out or are being swallowed by the centralization idea. In the scheme of the organized dairyman, the raw product of the dairy will be gathered in a comparatively few great plants like the ones now operating at Sacramento and Modesto. It will be seen at a glance that by this plan the work of so supervising manufacture as to secure for the whole state a uniform output, will be greatly simplified.

Control of Quality.

The quality of butter, and still more of cheese, depends on the farm more than on the factory. At the recent Dairy Council convention, Dr. Roadhouse exhibited two samples of cheese. Both were made from the same milk, in identically the same way, except that the portion of milk for the first cheese was cooled quickly and handled properly till it was ready for manufacture. The portion for the second cheese was allowed to take the too common dairy course until it reached the vat. The first cheese was excellent in flavor and texture. The second was inferior in both respects. Here is the crux of the quality problem—it goes back to the farm. If the dairyman does not send to the factory a first quality raw product, no factory, however efficient, can make a first quality finished product.

Some of the "outside" creameries have fallen down before this problem. And I am inclined to think they always will. With two or more buyers in the field bidding for cream, if one doesn't take the farmer's cream, the other will. If one doesn't pay the price, the other will. If one "cuts" for inferior quality, the other will say, "We are not so fussy; bring on your cream."

When these outside interests attempt inspection or education, the dairyman's resentment is instantly aroused and he swings over to some concern that "minds its own business." The dairyman argues that when A. attempts to educate the dairyman, A. is a meddler, but when B. attempts to do the same thing, B. is a rank outsider, but the dairyman himself, and the dairyman is dead right. For the most part, then, the private centralizer follows the line of least resistance. He takes all the cream he can get, pays a certain price for it, grades it after it has been paid for and from it turns out a product of several different grades. Under this method some high quality products are made and a lot of inferior ones are turned out also to hammer down the whole market. Who pays for this tremendous waste of the faithful cow's butterfat? You do, Mr. Dairyman. How can the sinful waste be stopped? I don't believe it ever can be stopped under the competitive system of cream buying and manufacture. The system is wrong.

The waste can be stopped by co-operative production and manufacture. When C, or A, or B, or N, or S—all of them out for their own profit, most of them in the spirit of one of them, who was quoted as saying: "The public and the producer be d——d. I am out for myself." When one of them asks the dairyman for quality, the dairyman grins or swears, and says, "I should worry. I don't own their plants and none of them intend to allow me any more than enough to keep me producing." But when the co-operative plant talks quality, that is a different tune. The dairyman does own that. If any waste is stopped, if better quality, properly standardized, brings a better price in the open market, the saving from arrested waste and the difference in price between good and poor products comes back to him—every cent of it in proportion to his output—less only what it has cost to manufacture and sell the goods. When an inspector comes around to advise as to better method of producing and handling the raw product, he is not a rank outsider, but the dairyman's own hired man, employed by the dairyman himself to do that very job. And the dairyman will want the instruction and will follow it, because being a manufacturer himself and having visited his factory, he will know why a high quality cream will bring more money. As it is the money he is after he will need no outside prodding to induce him to produce high quality, or if he does need it, he will get it from his partners in business.

A high quality, standardized dairy product is essential if our dairy industry is to endure. Centralization within reason is essential to practical standardization. Quality requires more than efficient standardization methods of manufacture; it requires the intelligent, sympathetic co-operation of the dairyman himself. The agency in the field today that can best centralize manufacture, and the only agency in sight that can secure the whole-hearted co-operation of dairymen in getting quality, is the organization that puts the dairy business, from cow to market, in the hands of the dairyman himself.

CALIFORNIA LEADS IN HOLSTEIN PRIZES.

The annual report of the Advanced Registry Department of the Holstein Friesian Association of America has been issued. This covers the reports of all tests of Holstein cows made for the fiscal year ending May 31, 1920. California was leading winner of first prizes for the year. Following is a synopsis of the report:

There were 13,751 cows entered for test during the year. There were prizes won for milk and butter production by cows from 311 different herds in the United States and Canada. The prizes were divided into 68 divisions. California won 14 first prizes, being the leading State for winner of first prizes; her next nearest rival was New York, with 10 first prizes.

First prizes were won by the following breeders of California: Bridgford Holstein Company, 6; W. J. Higdon, 2; A. W. Morris & Sons, 3; Toyon Farm Association, 1; J. S. Gibson, 1;

Madera Co-operative Cattle-Handling

(Written for Pacific Rural Press.)

Eight or ten ranchers of the Zebra district in the Sierra foothills of Madera county have a co-operative grazing association formed for the purpose of reducing costs of handling cattle in the Jackass range of the National forests. The range is some fifty miles into the high mountains from the Zebra district. Formerly each was supposed to keep his cattle on that area. As there are no line fences, the cattle of course strayed; and in the fall, each owner would have to send two or three men and about eight horses to scour the entire range before snows came. In that altitude and with all the steep climbing, it was a job to take all of the pep out of men and beasts. This season, the entire Jackass range is assigned to the Association on the basis of the total number of cattle to be grazed by the members—some 1100 or 1200 head, as estimated by I. H. Ward, one of the members. They employed two men at $125.00 per month to stay on the range, watch the cattle, salt them, and keep track of them. Next fall, when they are to be taken out these men (or one of them) will know where the cattle are; and it will be necessary for each owner to send only enough men and horses to drive them home, eliminating the weeks formerly spent searching all corners of the range.

The owners of the cattle are supposed to stay home and raise feed for them to use in winter, as suggested by Henry Krohn of Coarse Gold, president of the Madera county unit of the California Cattlemen's Association. Moreover, according to Mr. Krohn, the latter association is largely responsible for the Government's policy of refusing a permit to graze in National forests to anyone who doesn't make a practice of providing winter feed and taking good care of stock. The shiftless cattleman is a detriment to the industry, and it is almost a crime to waste the good Government grazing on cattle that are afterward to get thin or starve on insufficient winter feed.

The practice of members of the co-operative grazing association, as outlined by Mr. Ward, is to brand and vaccinate the calves a couple of weeks before they are to arrive at the range, June 15th, the earliest date on which they are allowed there. It takes three or four days on the road. On arrival, they are turned over to the range rider, who also has about 100 head in the association. He keeps track of them, salts them and about mid-September begins to locate them definitely, for they must all be out by October 1. Mr. Ward generally figures on starting his own cattle out about September 15, and they frequently encounter a storm. Each owner is notified in regard to weather late in the season.

About one bull is sent up per 25 cows and the bulls are of much higher class than they used to be. Quite a number of ranchers bought purebred bulls last spring. Under the State law passed by the 1919 Legislature, all bulls on open ranges must be "purebred" within three years. Both Mr. Krohn and Mr. Ward say that in spite of a few kickers, the use of purebred bulls is becoming quite generally recognized as a means of getting more beef from available feed. Mr. Ward has several cows about three-quarters purebred Hereford which have wintered in better shape than his less well-bred stock. The purebred bulls now on the range are both Shorthorn and Hereford. Cows of the latter breed are preferred by M. Ward because they give enough milk for calves but not so much as to cause bag troubles. He has noted that a uniform lot of "white-faces" bring a better price than common cattle; but the same would be true of any uniform lot of wellbred stock.

Mr. Krohn tells of the County Cattlemen's Association's request that the Government should not permit any bulls on the range until they should be O. K.'d by the Association bull committee, both as to quality and number. The Government answered that it would stand by such a proposition. This has helped the sentiment in favor of purebred bulls; and a number of cattlemen who sold out, intending to quit the business, are planning to get back in with better stock and fewer head. One man is planning to raise purebred bulls in this vicinity for sale to his neighbors. Such a practice should do away with the objection that purebred stock is not hardy on the range, for these would be raised there. When cattle are to be taken off the range, about two men each with a saddle horse and a pack horse go after each herd. Mr. Ward's son brought 100 head out along with a dog during the war-scarcity of help; but it kept him hustling. The mature steers and the cows which are fat but unbred or undesirable for breeding are marketed at once. Last fall, Mr. Ward sold about 30 steers out of some 50 cows and had about a score of mature heifers which will be reserved to add to the breeding herd.

The unmarketed stock must be fed over winter. If early rains come as they did in the fall of 1918, they start grass to growing amongst the old dry feed, which is reserved on the ranches for late fall and winter. But last winter and the winter of 1917-18 required considerable feeding of hay and grain. Most of the cattlemen are also ranchers, and they raise a little grain for feed besides a considerable amount of grain hay. Mr. Ward last year had some barley and about 20 tons of hay and 40 tons of wheat straw for his approximately 100 head in addition to the ranch pastures. This year he planted about 75 acres of "corn" broadcast, intending to cut it for hay about the time it was beginning to head; but it made nothing on account of the dry winter. If no rains come before cold weather, he will have to buy feed for his stock to eat next winter until along in March. He will not be lonesome, for Mr. Krohn estimates that not over 25 per cent of the cattlemen in the county raise their own feed. It is also estimated that not more than 30 per cent of the cattle in the country are sent to the mountains for the summer. Generally those that are not, are fed in winter and marketed in the spring without holding them on dry grass feed.

Only the Jackass range is being grazed co-operatively this season, trying out an experiment which has also been tried in some other counties. It seems to be proving highly satisfac-

Facts in BLACK & WHITE

State Colleges and Public Institutions Seek Truth

The Virginia State College and Polytechnic Institute has developed, from its Holstein herd, seven of the highest record cows in the state, including Dione De Kol, holder of the state record for 7- and 30-days' milk and fat production. They also developed V. P. I. Viney Veeman, holder of the state record for senior two-year-olds. The leading state colleges and public institutions, by all tests, have found the Holsteins to be the best and most profitable of all dairy breeds.

You should know the facts yourself. Send for our booklets.

THE HOLSTEIN-FRIESIAN ASSOCIATION
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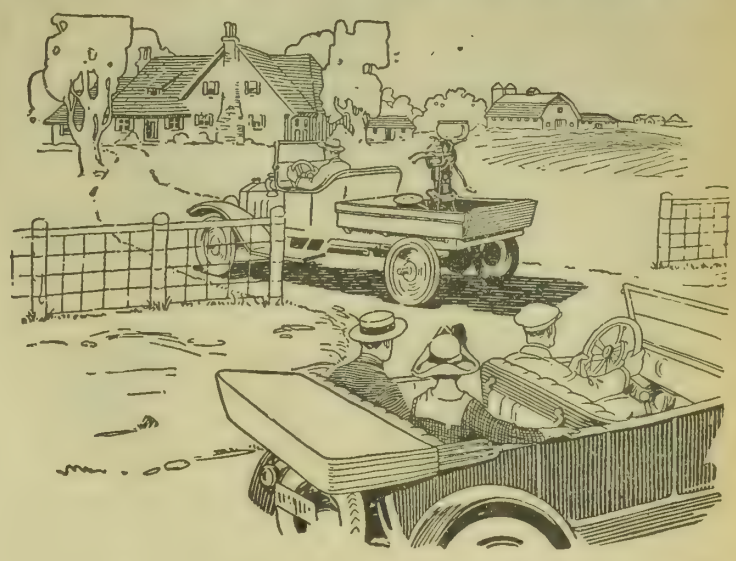
It's a New De Daval



Many new De Lavals will be delivered to farmers this summer, and they will soon pay for themselves.

In fact, De Laval Separators pay for themselves many times over; and as the number of cows increases, it pays to buy new, up-to-date De Lavals of larger capacity.

The local De Laval agent will gladly take a new separator out to your place, set it up, and let it prove by its performance that it skims clean and is easy to turn and easy to clean, even under unfavorable conditions.

A new De Laval will pay for itself in a few months because of the cream it saves—and besides it saves labor and time.

If a demonstration is wanted, call the local De Laval agent. If you do not know him, write nearest office

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It cuts, grinds, pulverizes in one operation. You feed snapped corn, alfalfa, kafir corn, corn fodder, etc. into the feed table; and feed ear corn, oats, wheat, barley and other small grain in the top—and out comes a fine nourishing feed that fattens your stock on material heretofore thrown away.

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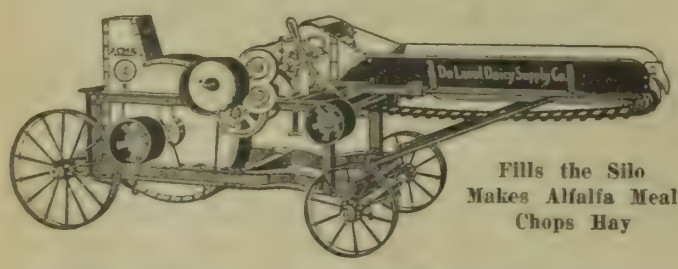

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700 2-YEAR-OLD RAMS

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Fresno, Calif.

Figures Talk Co-operative Marketing

(Written for Pacific Rural Press by Ralph Newman.)

Figures may not lie, but some fearful and wonderful deductions may be drawn from them. An American father of three children swore there must never be another in the family because statistics prove that every fourth child is a Chinaman. This, however, is not going to deter us from calling your attention to some figures, nor perhaps from drawing some conclusions therefrom.

If you will take the wholesale base prices on butter averaged monthly during 1919, for San Francisco and New York, you will discover that New York's average price for the year was 4.03 cents per pound higher than the San Francisco price.

At San Francisco, during 1919, there were received from the interior and coast regions of California 19,558,200 pounds of butter, which brought $388,195.46 less than it would have sold for in New York. Over $388,000.00 out of the pocket of the California butter business in one year, because the San Francisco market is not on a parity with New York? Why isn't our wholesale market on a parity with New York? There may be some other reasons for slight variations, but there is just one big reason why New York was 11.12 cents over San Francisco in April, and an average of 4.03 cents over for the year. That reason is surplus (spell it with a capital—Surplus). There is a beautiful illustration of the truth of this in these same figures I am using. Cast your eye over the following table:

1919	New York above S. F.	New York below S. F.
January	6.82c	.....
February	2.33c	.....
March	6.44c	.....
April	11.12c	.....
May	2.37c	.....
June	.....	80-100c
July	.....	69-100c
August	1.40c	.....
September	.....	42-100c
October	3.05c	.....
November	7.76c	.....
December	8.90c	.....

Ah, ha! New York was only 1.40 over San Francisco in August and actually a trifle below San Francisco in June, July and September. How did it happen? Well, it happened this way. For four months in 1919—June, July, August and September—one dealer in San Francisco went onto the exchange each day and bought up the surplus. For these four months the market was cleaned up daily. Before this plan operated, New York's market soared above us. While it operated, the two markets were practically on a parity. When it ceased to operate, New York soared again and continued to soar, up to March of this year (the last month reported), when the difference was 8.36 cents.

What are we dairymen going to do about it? Let the disparity between New York and San Francisco continue while we lose hundreds of thousands a year, or take hold of the situation and clean it up? If one dealer can put San Francisco on a parity with New York for four months, who says that an effective co-operative marketing organization cannot do it for all time? That one service rendered the dairymen of California may mean the difference between success and failure for many of us.

While we are figuring, here are some more figures that talk.

There is in Los Angeles a co-operative marketing concern known as the Challenge Cream and Butter Company. It handles the product of the Danish Creamery of Fresno, the Riverdale Creamery of Riverdale, and the Dairymen's Co-operative Creamery of Tulare. During 1919 this co-operative marketing agency sold the output of these creameries at a marketing cost of 3 per cent. They did more than that. They helped exert a stabilizing influence on the Los Angeles market that held it, on an average for the year, 2.48 cents higher than the San Francisco market. Dairymen fortunate enough to be able to sell, thus, co-operatively, saved 3 producers' association, selling in San Francisco through a private concern, and their butter brought almost 2½c a pound more. All this in the same state.

This same Challenge Company sold in March of this year at a cost of 1.68 cents a pound; in April and May at a cost of 1.82 cents a pound.

The average price of butter in San Francisco was: March, 61.52c a pound; April, 59c; May, 55.81c. At 6 per cent then the marketing cost was 3.69c a pound for March, 3.54c for April, 3.34c for May. See how pretty this looks tabulated:

1920	Co-op. Selling cost.	Middlemen selling cost	Loss through middleman
March	1.68c	3.69c	2.01c
April	1.82c	3.54c	1.72c
May	1.82c	3.34c	1.52c

An average loss for three months of 1¾c a pound on butter by employing a middleman to sell for us instead of selling it ourselves.

We dairymen are a funny lot. Why will we produce and manufacture co-operatively and then sell through middlemen at a cost of 6 per cent, while almost under our noses a co-operative selling concern is setting us an example by rendering the same service for 3 per cent? Are we making so much money in the dairy business that we can cheerfully donate to the cause of private enterprise in the butter market? Why not get together, do our own selling, and donate that 3 per cent to our own families for awhile?

FAIR DATES.

Sonoma County Fair, Santa Rosa, August 25-29.

Patterson Fair, Patterson, August 26-28.

California State Fair, Sacramento, September 4-12.

Humboldt County Fair, Ferndale, September 14-18.

Tulare County Livestock Show, Tulare, September 14-18.

San Fernando Valley Fair and Market, Owensmouth, September 15-18.

Kings County Fair, Hanford, September 21-25.

Ventura County Fair, Ventura, September 22-25.

Glenn County Fair, Orland, September 27-October 2.

Fresno District Fair, Fresno, September 28-October 2.

Shasta County Farm Bureau Fair, Anderson, October 1-2.

Los Angeles Livestock Show, Los Angeles, October 2-10.

Siskiyou County Fair, Yreka, October 5-9.

Tulare County Fair, Visalia, October 9-16.

Southern California Fair, Riverside, October 13-19.

Western Royal Livestock Show, Spokane, Washington, November 1-5.

Pacific International Livestock Show, Portland, Oregon, November 15-19.

GETTING MILK FOR NOTHING.

All containers used by the principal dairies around Fresno have been inspected recently by Sealer of Weights and Measures F. B. Johnson, and their tare weights were marked on them. Errors were found ranging from one-fourth pound to nearly a full pound over or under. This means a great deal when cans are used daily for years. It reminds us of a milk delivery company whose men empty the cans arriving from the country into a weigher and cooler. They do it so rapidly that as the writer observed, a pint to a quart of milk was left in each can unweighed, but amount to a great deal in the aggregate of milk obtained without paying for it.

The wide use of gasoline engines in small creameries and on farms is resulting in a material increase in the amount of butter tainted with gasoline, buyers in the Middle West report. Both cream and butter very readily absorb gas odors, with the result that the quality of the butter is materially lowered. With a view of reducing the losses incurred from gasoline-tainted butter, the University of Nebraska Dairy Department recommends that as far as possible the gasoline engine be kept in a separate room from the separator or churn; that all oils and greases be stored away from the churn or separator; and that the exhaust be outside and so situated that the fumes do not flow back into the room where

Livestock Queries and Replies

Infectious Broncho Pneumonia.—Will you please advise me the cause and remedy for a cough among hogs? I have several young pigs, shoats and large hogs that have a cough. They start coughing and then seem to raise something from their throat or lungs after which they stop for a time. When this disease first started it was among some shoats. They would eat plenty but would get poorer and poorer and finally die. They are all on barley now and have not noticed any dying lately. The large hogs are in very good shape. Pigs a week or ten days all have it.—L. J. H., Lewis.

The first thing to do whenever you have a sick animal is to immediately separate it from the healthy ones. Place them in a separate place far removed from the rest of the animals. Predisposing causes of the disease: youth, feeble constitution, poor condition of nourishment, colds secondary to other diseases. Treatment: Apply a mustard plaster to the chest, or ammonia liniment will suffice, if the attack is not too severe. Medicated steam inhalations are indicated, spirits of camphor, thrown into the boiling water will give off vapor of camphor which works wonders in the beginning of an attack. Give the following prescription: Tinct. Cannabis Indica, 2 ounces; Spirits Chloroform, 4 ounces; Ammonia Chloride, 1 ounce; Sjirits Lavander Comp. Add enough to make 1 pint. Give 1 tablespoon 3 times daily. Flaxseed tea should be used plentifully. If one should die, examine the bronchi for thread worms.—E. J. Creely.

Bay Be Tuberculosis—I bought a two-year-old heifer last fall that was very thin, her bowels were loose and continued so all winter. She was kept under shelter and fed alfalfa hay. When I put her on pasture she got worse and the scours have kept up all summer. She has a good appetite and has never had a cough nor any sign of tuberculosis. I have given her alum and ginger awhile, then tannic acid, and also a pound can of "Cow Conditioner," and nothing had any effect on her.—S. J., Ager.

I would test this heifer for tuberculosis. If no reaction occurs give the following prescription: Raw linseed oil, 26 ounces; formalin, ½ ounce; turpentine, 4 ounces, tinct. Belladonna, 1 ounce; oil of wintergreen, 5 drops. Mix and give one ounce 3 times daily. Be certain to get raw linseed.—E. J. Creely.

Chronic Indigestion.—I have an 8-year-old horse, weight when in good condition, 1600 lbs. At present he is in very poor condition considering the work and feed he is getting. The only thing I can see wrong with him is his urine; at times it contains considerable sediment. Also when he reaches into the bottom of his manger his front shoulder trembles; sometimes he will stamp the ground.—W. F. P., Orin.

Chronic indigestion, due to a projecting molar, which prevents proper mastication of the food. Cut off the offending molar and give the following prescription: Dilute nitric acid, 4 drachms; Tinct. Cardamon Compound, 24 ounces; mix and give a dessertspoonful 3 times daily.—E. J. Creely.

Muscoid Tumor of Upper Air Passage.—Would you kindly advise me what to do for a sheep that connot breathe. She is a nice big fat ewe. Seems to eat well, but cannot breathe. At times the froth runs out of her mouth and nose, and she always breathes through her mouth. Sounds like something was choking her.—W. B. S., Bend, Ore.

Feed this ewe just enough to keep it from getting hungry (no more). Give it a big dose of Epsom salts every 4th day. Syringe into back part of mouth the following: 16 ounces Saturated Solution Chlorate Potash; 1 ounce Tinct. Chloride iron; 1 ounce Tinct. Myrrh; mix.—E. J. Creely

California, the Happy Breeding Grounds

While the judging of Holstein cows in the arena of the California International Stock Show at San Francisco last fall was being delayed for the lack of one entry, few realized that the royal lady, Tilly Alcartra, for whom they were waiting, was just bringing into the world a son, who would bring buyers from four continents to bid for him, or that the price paid would mark the highest price ever paid for a youngster under six months of age at a public sale.

Tilly Alcartra's Calf Brings $50,000.

Stepping proudly into the arena from which she was led with the blue ribbon, Tilly Alcartra returned to her young hopeful, who promptly scrambled to his feet, and, with waving brush, started to fulfill his mission on earth. Less than six months later and he is knocked down to a bid of $50,000 made by two buyers from Canada.

Another California bred bull, King Korndyke Pontiac Acme, also was in demand, the bidding running up to $41,000, at which price he was sold to Mrs. Anita M. Baldwin of California.

These two bulls were sold at the first National Co-operative sale, which was held at St. Paul, Minnesota, and the animals which were put up for sale were the pick of the whole United States.

That California was able to consign such an array of talent to this sale only further proves this State's eminence as the beau ideal breeding ground of the country.

In addition to the fact that the average price paid for the California cattle consigned to this show was over State, which consigned ten head or more having the highest average sale price.

So much for the dairy cattle!

A California Bred Volt.

Now comes telegraphic advice that Inchcape, the fleet two-year-old of J. H. Rosseter, has been sold for the record price of $160,000 to S. C. Hildreth of New York.

When Inchcape stepped off six furlongs at the Aqueduct track in 1.12 under a strong pull, beating a crack field of two-year-olds, Mr. Hildreth promptly raised his bid for the colt from fifty to one hundred and sixty thousand dollars and the fleet son of Rose O'Gold and Friar Rock was lost to California, but his sire remains.

There is no climate and there are no conditions in the world which are equal to California as a breeding ground for all classes of stock. At least, that is the confident opinion of breeders in this State and the above two shining examples serve but to point the statement.

And Little Sweetheart!

Bred by the Ormondale Corporation, this Shorthorn heifer, sired by Golden Goods Jr., dam Sweetheart, goes to the Grand International Live Stock Show at Chicago, and is given the coveted Grand Champion medal as the best female shown. Little Sweetheart put Redwood City on the map!

At the Sacramento State Fair three years ago California-bred Percherons and Clydesdales topped the list, winning in every class. The running horses have more than held their own in the big events in the East, and California drafters are winning recognition as the most dependable animals

the State today has less young stock than at any time in the last ten years, and it behooves ranchers with good brood mares to breed to the best stallions obtainable if they desire to reap the profits that are sure to come with the heavy increased demand that is being felt for dependable draft stock.

ROSEDALE FARMS
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Offers for sale
20 Registered Yearling Hampshire Rams, all sired by imported rams.
Also
10 Purebred Rambouillet Yearling Rams.
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SHROPSHIRES
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We have for sale this season 400 head rams, yearlings and 2-year-olds. All purebred. Will sell singly or in carload lots.

Also 15 Head Purebred Red Polled Yearling Bulls

For further particulars apply

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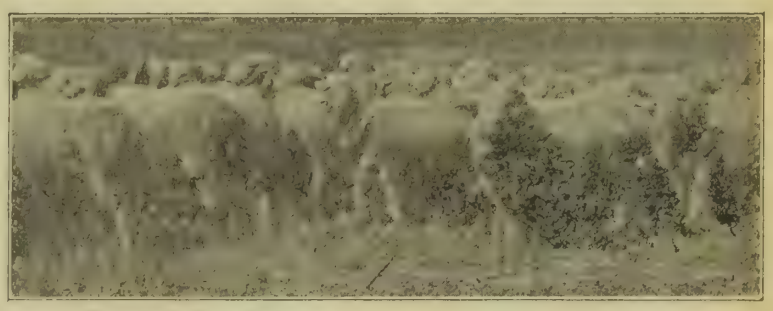

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We have a considerable number of rams, one and two years old, raised by us in excess of our own requirements, which we offer at prices guaranteed lower than rams of same quality, of either breed, may be bought for anywhere in the West. Price for either breed, $30.00 per head, f. o. b. cars Los Banos. These rams are from stock equal to the best obtainable and we guarantee them equal to any rams on the Pacific Slope.

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AUGUST 11, 1920

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20 Registered Berkshires
105 Registered Shropshires
10 Shetland Ponies

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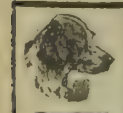

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And How to Feed
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118 West 31st Street, New York

The dates for holding the Patterson fair have been changed to August 19, 20, 21. This change was made necessary in order to secure tent accommodations.

Livestock and Dairy Notes

The Dairy.

The Dos Palos Purebred Calf Club has been started with 14 members, all of which have dairy calves.

Harry De Wolfe, one of the "sure enough" dairymen and breeders of Holsteins at Ripon says he is milking 16 cows and getting 90 gallons of lacteal fluid daily.

Centralization of milk distribution has not yet struck Los Angeles as it has most cities of that class. There are still about 70 distributing agencies operating in the angel town.

There are now 21 cows an annual test in the Morris herd at Woodland, while the J. S. Gibson Company at Williams goes them two better with 23. The annual test has come to stay and spread.

The Bodega Co-operative Creamery recently increased its capital stock to $35,000, which makes it one of the largest institutions of its kind in Sonoma county. This region is advancnig rapidly along dairy lines.

Burr Farms at Los Angeles have again come to Tulare for some of the good Holsteins owned there. The latest purchase is two heifers from R. C. Sturgeon for $1,000 each. The animals have already been shipped.

Dairy calves to the number of 14 were stolen from the ranch of B. F. Gilbert, a well-known farmer living 6 miles southeast of Tulare. Almost like old "rustling" days. Twelve were Holsteins and two Guernseys.

Tilly Alcartra, the most-talked-of cow in the world, whose last calf sold for $50,000 at the St. Paul National Guaranty Sale, has been bred to Sir Pietertje Ormsby Mercedes 43d, senior herd sire of Toyon Farm Association of Los Altos.

Premium lists are being sent out for the Dairy Cattle Congress and International Belgian Horse Show, to be held at Waterloo, Iowa, September 27-October 3d. As increased premiums are being offered larger entry lists are expected than those of last season.

Rowe and Sons of Davis are making some fine records with their milking Shorthorns. Their Countess of Heggle 3d made 64 lbs. fat from 2074 lbs. milk in April, and 79 lbs. fat from 2051 lbs. milk in May. Innisfail Daisy, a two-year-old, came across with 57 lbs. fat in May.

The Chief of the Los Angeles Milk Inspection force says there has been a 30 per cent increase in sale of market milk there in the past year. The sale of certified milk has increased 400 gallons. The price of milk advanced 2c a quart July 1st, the increase going to the producers.

Some of the dairy cows sold from the Salt River Valley of Arizona to make room for more cotton were taken to Navajo county of that State where the infant industry seems to be flourishing. The cream is collected and shipped to Phoenix. More than 1800 lbs. are sent each shipment.

At a recent "milk meeting" in Stockton things evidently got away from the notorious "Consumers' League," for the outcome was the appointment of a committee to call on all dairymen and urge those who had not done so to join the Milk Producers' Association. Facts and figures presented convinced folks that if they want milk they must not fight but co-operate with dairymen.

John Self, herdsman, who in doing fine things with the Gibson Holsteins, is some fly exterminator along with his other accomplishments. The other day we found the regular milking barn practically free from flies. John says it is because he treats them so well. He gives them all the milk they can drink and, as a special delicacy, adds 3 tablespoons of formaldehyde to each two quarts of milk. Try it.

Swine and Swinemen.

At a meeting of the Poland-China Breeders' Association, held last week, the sale scheduled for Aug. 21st was called off.

Top hogs in Fresno Farm Bureau sale last week were $16.80, but the quality was not equal to that of the week previous.

Newspapers report the death of the $40,000 Poland-China boar, "The Yankee," owned by E. Ellsworth & Sons of Goldfield, Iowa.

Bassett Bros. of Hanford will show two carloads of fat hogs at the State Fair. This will be in addition to their exhibit in the breeding classes.

Fifty head of Big-type Poland-China bred sows and gilts will be offered on September 27th by the consignors at the McCarty-Shinn-Elliott sale.

Sixteen cents per pound for a carload of hogs that averaged 100 pounds is what the Western Meat Company paid one San Joaquin county rancher recently.

Duroc-Jerseys will be shown at the State Fair this year as usual by Jack Borge of Dos Palos. He will fill most classes. California Golden Model heads his herd.

The manager of the Cudahy Packing Company at Los Angeles says the Farm Bureau system of hog auctions is improving the quality of the hogs received at the packing houses.

The barbecue at O. U. R. ranch, where Francis T. Underhill breeds Hampshires, was a very enjoyable and instructive affair. Many well-known in livestock circles were present.

Stocks of market hogs are so depleted in California that live hogs are being shipped in from points further east that usually sell their fat stuff in Kansas City and Chicago.

The Anchorage Farm at Orland has just sold two Berkshire sows bred to Natomas Grand Duke. One to E. S. Ballou, Hood River, Oregon, and the other to the Oregon State Agricultural College.

One new exhibitor at the State Fair will be the Superior California Land Company with a herd of BBerkshires covering all classes except senior yearling. They will show 6 gilts and two boars from one litter.

Fred Rood, the eastern Poland-China breeder, on a recent visit to California, after inspecting Hugh Shinn's hogs, made the statement to another breeder that Mr. Shinn had the largest September gilts he had ever seen.

Indications point to more profit in hog feeding in the future. Farmers who have shoats to feed their barley will probably get more for it that way as barley is only bringing $2.25 now and hogs are around 16 and 17 cents.

A son of Korver's Orange Wonder, and he a son of Mc's Big Orange and out of Miss Rainbow, who was sired by Goliah Chief, is the way the breeding of a young Poland-China boar imported by Hugh Shinn reads. He is a September boar and came from Korver Bros.

Johnson's Defender Jr., the herd sire of Witherow & Stafford's Duroc-Jersey herd at Live Oak, made excellent growth the first three months after he was two years old, as he gained 175 pounds in weight, increased 3¼ inches in length and two inches in height.

Duroc-Jersey swine breeders will be interested in the announcement made this week that the Diamond Bar Ranch of Spadra has secured R. K. (Bob) Walker to take charge of their swine department. Mr. Walker has been for some time superintendent of the Winsor Ranch Durocs at San Diego, and will close his engagement there this week with the big sale staged at Los Angeles. Mr. Lewis, owner of the Diamond Bar Ranch, is to be congratulated upon securing a great hog man to take charge of his magnificent herd of Durocs.

Mark Bassett in retiring from participation in the active management of the Poland-China breeding business may congratulate himself in having done as much or more to advance this great breed of hogs in California than any other man. The business will still be contined by Mr. Bassett's sons.

A party of Poland-China breeders from the vicinity of Hanford and Lemoore made a trip of inspection of the herds of that breed between Hanford and Modesto last week. All the principal herds were visited. The party consisted of W. L. Haag & Son, J. M. Bernstein of Hanford and H. D. McCune of Lemoore.

Among those who think the purebred hog business has a good future are Paul E. Mitchell of Atwater and J. F. McSwain of Merced, who will increase the number of sows bred for spring farrow. They will run them on barley stubble and alfalfa pasture the remainder of the season, which will reduce the "overhead."

Beef Cattle.

Shipments of livestock from Nevada have been very heavy during July. About two-thirds of the shipments have been sheep which were sent out in double-deck cars. Such shipments have been divided between San Francisco and Omaha.

Despite the absence of many cattlemen from their home ranges at this season of the year the membership campaign of the California Cattlemen's Association has been sped up and the results are becoming apparent in a steady growth of the association.

Cattlemen of Madera County are very well disposed toward the Hide and Brand law, realizing that they are benefited indirectly if not directly, according to President Henry Krohn of the Madera County Cattlemen's Assn. Three head loaded at Minturn not long ago were recovered by the rightful possessor because of the required inspection of brands before shipment.

A carload of straight Anxiety Polled Herefords has just arrived at the Mt. Diablo Stock Farm. It consists of 24 females and a herd bull, Disturber Anxiety. These cattle were very carefully selected from the best Eastern herds. Most of them will be seen on the show circuit this fall. Supt. E. F. Petersen states that two more carloads were purchased and will be shipped later.

Cattle had to be taken off the coast mountain ranges of Ventura and Los Angeles Counties a month earlier than usual as reported by W. E. Barnard of Hobson Bros., cattlemen who run thousands of head to supply their meat markets in coast towns and cities. Normally, as many cattle as possible are held on the ranges until beet tops are ready in August and later. Those which cannot find feed on the range are brought down to stubble fields and feed yards. This was made necessary so early by drying up of water supplies in the mountains, due to last winter's short rainfall.

The Shorthorn aged herds at this year's State Fair will consist of five animals instead of four as in former years. The additional requirement is for a cow three years old or over which makes the Shorthorn herd identical in composition with that of other breeds of cattle. Secretary Paine is sending notices to the breeders of the change, as a number of them have confused the conditions of entry in this class with the competition for single cows three years old and over. In the latter competition these cows must be shown with a calf dropped since January 1st, while in the herd competition the cow may be shown whether or not she has a calf at foot, if she is otherwise eligible.

The Imperial Hereford Herd

Stockmen are cordially invited to inspect the Imperial Hereford Herd when visiting the California Rodeo at Salinas, July 28 to August 1, inclusive.

A VIEW HERD WILL BE ON THE GROUND.

JAS. PRICE, Herdsman, Chualar, Monterey Co.
ROMIE C. JACKS, Proprietor, 614 Hobart Bldg., San Francisco, Cal.

Sheep.

Bullard Bros. of Woodland this week shipped two carloads of Rambouillets to New Mexico.

There were 51 consignors in the wool pool shipment from Stanislaus County this year. Thirty thousand pounds were shipped.

The Sheep Growers' Department of Nevada County have paid out a $10 bounty on each of 33 coyote scalps. They also shipped a carload of wool as a result of their pool.

The Federal Wool M'f'g Company is now turning out wools and yarn as a result of having begun active spinning operations in San Francisco. They are operating in a plant formerly owned by Hume & Hart until their Oakland plant is completed.

Bishop Bros. of San Ramon report a good demand for their registered Shropshires. Sales have been good both of rams and ewes according to E. G. Post, who is in charge of the herd. The Show Flock this season will comprise about 20 head and, of course, it will be of the usual Bishop quality.

Horses.

Horses have been badly affected with "loco" weed in Northern Arizona this season. The Federal Government is lending all assistance possible in trying to solve the problem.

N. W. Thompson, the draft horse dealer of Patterson, who is now in the East, wires back that he has bought a carload of young Belgian stallions. Mr. Thompson has had a very successful season according to all reports, he having sold about 40 stallions young and old.

The Blackhawk Stock Farm, in addition to its usual excellent showing of Shire horses, will show a herd of Shorthorns this year. The herd will consist largely of young stuff and all of it sired by the great bull, Radium. Mr. Ward and Mr. Lovell are both in Scotland at this time for the purpose of securing more good Shorthorn blood to add to the herd. Mr. Clayton will have charge of the shires and Mr. Will of the Shorthorns at the shows.

Livestock Miscellaneous.

Some San Joaquin County dairymen are cutting their fourth crop of alfalfa. Good crops are reported.

The management of the Ventura County fair to be held at Ventura Sept. 22 to 25 expects to have a very complete exhibit of livestock this year.

San Joaquin County expects to have the best county fair in the State this year. They are offering $5,000 in speed purses and investing $38,000 in permanent improvements. The dates are Sept. 13-18, immediately after the State Fair.

Some dairymen are stacking alfalfa green enough so that it will burn brown in the stack, claiming its palatability and feeding value are increased by so doing. This is a question that should be worked out by our research workers at the State experiment stations. The same statement has been made about barley hay, with the advantage that the beards are made innocuous thereby.

LIVESTOCK DIRECTORY.

Rate 3½ cents per word each issue.

SWINE.

Duroc-Jerseys.

DUROC-JERSEY SWINE

JUMBO SENSATION
Our new Herd Boar is one of the largest boars in the world for his age. We have some real buys in purebreds.
WHITLEY
TU-TOCK-A-NU-LA- RANCH
Ventura Boulevard and Hazeltine Ave.
Mrs. R. E. Whitley, Mgr.
Phone 160-J Van Nuys, Calif.

FIFTY DUROC-JERSEYS — Mostly bred sows and gilts. Some small pigs. Three service boars and five March boar pigs, grandsons of Mary Jane Pathfinder, the five pigs sired by Lord's Orion Cherry King. One son of Orion Cherry Pathfinder, out of Lamb's Model Lady. Elmer Lamb, Ceres, Calif.

A DUROC ON EVERY FARM—I am offering every California farmer a chance to start a registered Durocs at my expense. Write today for details if genuinely interested in

DUROCS—BIG-TYPE—HIGHEST QUALITY—popular blood lines. Herd headed by Johnson's Defender, Jr. and Western Pathfinder. Bred sows and gilts and young boars for sale at moderate prices. Greenwood Farm, Witherow & Stafford, Live Oak, Cal.

BIG-TYPE DUROCS—Herd headed by California Orion King. Am offering excellent young boars at right prices. Inquiries invited. Harvey M. Berglund, Dixon, Calif.

WINSOR RANCH DUROC BOARS—Big-type utility boars for farmer trade; priced to move. R. K. Walker, Swine Dept., Morris C. Allen, Ranch Manager, Bonita, San Diego, Co.

REGISTERED DUROCS — April farrow—one boar, Orion's Monarch, by Borge's Monarch and Orion's Lady; also gilts. Lowell Beaver, R. "C," Box 397, Fresno, Cal.

JACK LONDON RANCH, Glen Ellen.—Exceptionally good weanlings. Bred sows and gilts. One good yearling boar and one fall boar. Prices reasonable.

ROCSTEIN RANCH DUROCS headed by Lord's Orion Cherry King. Breeding stock for sale at all times. W. M. Way & Son, Rt. 1, Box 320, Modesto.

BARGAINS in bred sows and gilts. Pathfinder and Great Wonder I Am blood. Derryfield Farm, Capital National Bank Building, Sacramento, Cal.

DUROC-JERSEYS — Fine big-type gilts, tried sows and boars, Eastern and California bred. H. P. Slocum & Son, Willows, Calif.

REGISTERED DUROCS—Choice gilts and weanlings, either sex. Breeding and satisfaction guaranteed. H. E. Boudier, Napa.

BIG-TYPE DUROCS — Gilts and boars of Winsor's Giant Orion breeding. Falfadale Farms, Perris, Calif.

DECEMBER AND MARCH DUROC BOARS—Pathfinder breeding. Sterling Smith, Route 1, San Diego.

FOR THE BEST in Durocs, write June June Acres Stock Farm, Davis, Cal.

Poland-Chinas.

FOR SALE—Owing to disposal of my entire ranching interests, I am offering for immediate sale the following registered Poland-Chinas: Fresno Bob, fall boar, sired by Giant Bob, State Champion boar 1919, and out of Forest View Anna; Lady Korver, fall gilt, sired by Smooth Big Korver, and out of Lady rice 12th. Marin Mann, Ukiah, Cal.

TOHOQUA POLAND-CHINAS — Big type. A good big tried sow to sell. Has farrowed two litters of ten pigs each. Bred for August farrow. Also a dandy young boar pig from the Grand Champion sow of Glenn Co. Fair. This stuff is good, fully guaranteed and priced to sell. Ferguson and McKaig, Orland, Cal.

ELDERSLEY AND SHADY BROOK Farms big-type Poland-Chinas that make money for the Feeder, the Farmer and the Breeder. Prices reasonable. J. H. Ware, Brown's Valley, Calif.

BRED GILTS for sale. A few choice ones bred for fall farrow, to a good son of F'Big Jones, the Iowa 1920 Grand Champion. N. Hauck, Alton, Humboldt Co., Cal.

J. F. McSWAIN, Breeder of Poland-China hogs. Herd headed by Big Model Fellow, Reserve grand champion 1919 State Fair. Young stock for sale. R. 3, Merced, Cal.

WAUKEEN HERD POLAND-CHINAS — Home of King's Big Bone Leader. A few service boars for sale. Les McCracken, Ripon.

REGISTERED POLAND-CHINAS — Large type, 3 to 4 months gilts cheap. Satisfaction guaranteed. J. E. Thomas, Gilroy, Cal.

LAKESIDE STOCK FARM—Large, smooth and big-boned Poland-Chinas. Geo. V. Beckman & Sons, Lodi, California.

REGISTERED POLAND-CHINA SWINE—Prize-winners. Finest stock in the State. Bassett Bros., Hanford, California.

BIG-TYPE POLAND-CHINAS—Good as the best. Always glad to show you. Houck & Lewis, Winton.

REG. BIG TYPE POLAND-CHINAS—Service boars and weanling pigs, J. H. Cook, R. 4, Chico.

LARGE TYPE POLAND-CHINAS — Winton Poland-China Farm, Winton, Cal.

POLAND-CHINAS—Strictly large type. J. F. Lehman, Lodi, Cal.

Berkshires.

BRED GILTS.

Sired by Mayfield Rookwood 2d, a Grand Champion Boar, out of 600-700 lb. sows, and actually bred to "ACHIEVER," our English

Blood Boar, the Sire that puts more bone and pork-making qualities into his pigs.

Priced reasonably and absolutely guaranteed.
Castleview Ranch, Santa Rosa, Calif.

ANCHORAGE FARM BERKSHIRES
Orland, Calif.
HERD BOARS—STAR LEADER, Junior and Reserve Grand Champion of the World. The Grand Champion carload of barrows, over all breeds, at the San Francisco Live Stock Show, was sired by a son of Star Leader, NATOMAS BARON DUKE, grand champion of California. For sale, bred gilts, open gilts, young boars and weanling pigs. Write for booklet, prices and list of sows.

The only herd of English Berkshires in the West. Bigger, better, stronger litters. More pounds of meat for less feed. Weanling pig, $35. Satisfaction guaranteed or money refunded at once. Sandercock Land Co., 703 Market St., S. F. In charge Natomas Land Sales.

SOW PIGS and Boar Pigs sired by Ames Rival 118th, Ames Rival 70th, Ideal Royal Lee, Champion Masterpiece 8th, Escalon Majestic and Achiever, and out of prize-winning sows. A postal will bring prices. Geo. A.

GRAPE WILD FARMS—Berkshires—Guernseys. Big-type Berkshire Boars of serviceable age, sired by Big Leader—greatest son of Grand Leader 2nd. Panama-Pacific Grand Champion. A. B. Humphrey, Prop., Escalon.

BERKSHIRES—We are compelled to reduce our herd, owing to green feed shortage. Write us today. R. J. Merrill & Son, Morgan Hill, Cal.

QUALITY BERKSHIRES — Young stock, both sexes. Calac Orchards, Geo. P. Upham, Martinez.

REAL GOOD BERKSHIRES — Cholera immune. Frank B. Anderson, Sacramento, Cal.

CARRUTHERS FARMS' BERKSHIRES — Cholera immune. Live Oak, California.

Chester Whites.

CHESTER WHITES — E. E. Fulton, Fair Oaks, Cal.

Hampshires.

PUREBRED HAMPSHIRES — The "Belted Beauties"—herd of the Uneeda Hampshire Swine Farm—has been acquired by this corporation and we wish to reduce the stock to some extent before fall farrowing time. We offer 2 four-months-old boars and 4 four-months-old sow pigs at very attractive prices. Rio Hondo Rancho, Compton, Cal.

DAIRY CATTLE.

Holsteins.

TOYON FARM ASSOCIATION
UNDER STATE AND FEDERAL
SUPERVISION
SMALL FOUNDATION HERDS,
HEIFERS and BULLS
PERFECT IN HEALTH, RIGHT IN
TYPE, PRODUCTION AND
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MILLS BLDG., SAN FRANCISCO
Farms at
BRENTWOOD and LOS ALTOS
350 HEALTHY HOLSTEINS

THE LEWIS COMPANY BAYWOOD HERD
Bulls from yearly record stock.
Health under State supervision.
Terms on purchases if desired.
Herd Sire: Ormsby Segis Marie Lad.
Martin Zgragen, Herdsman
Hollister, California
THE LEWIS COMPANY, Owners
The Lewis Building, San Jose

YOUNG BULL by grandson of Tilly Alcartra, out of dam with good record. His half sister milking 68 lbs. per day as senior yearling. Also bull calves. H. M. Cross, Merced.

WANTED — First-class grade or purebred Holstein herd of 15 to 30 cows. T. B. free, to buy or lease on shares. Address direct. Chesson Bros., Durham, Butte Co., Calif.

OAKDALE HOLSTEIN FARM, Pacheco, Contra Costa Co., J. M. Christen, Prop., Breeder of registered and high-grade Holstein cattle and purebred Hampshire swine.

REGISTERED HOLSTEIN-FRIESIANS — Both sexes choice stock; tuberculin tested. Sunnybrook Ranch, H. H. Sisson, Mgr., Willits, Cal.

THE VICTORY HERD—Registered Holstein cattle and Duroc Jersey swine. H. E. Spires, Hillcrest Farms, Caruthers, California.

PALO ALTO STOCK FARM, Palo Alto, breeders of registered Holsteins. Heifers and service bulls. Reasonable prices.

CREAMCUP HERD — Registered Holsteins. Pontiac bull calves. M. Holdridge, Rt. A, Box 437, San Jose.

REG. HOLSTEINS, both sexes. World's record backing. Kounias Reg. Stock Farms, Modesto, Cal.

REG. HOLSTEINS—A. W. Morris & Sons Corp., Importers and Breeders, Woodland, Cal.

F. H. STENZEL, SAN LORENZO—Breeder of Registered Holsteins. High test producers.

REGISTERED HOLSTEINS — Best blood lines of the breed. R. L. Holmes, Modesto, Cal.

CHOICE HOLSTEIN bulls for sale. No females. Millbrae Dairy, Millbrae, California.

GOTSHALL & MAGRUDER — Breeders of registered Holstein-Friesians. Ripon, Calif.

EL DORADO HERD OF HOLSTEINS — Alex. Whaley, Tulare, California.

Jerseys.

SERVICE JERSEY BULL, bull calves. Financial King blood. Chester White boars, prize winners. Best blood, type, production. N. H. Locke Co., Lockeford, Cal.

REGISTER OF MERIT Jersey heifer to sell. Be three and be fresh and August. Nice family cow, $175. E. W. Doane, Merced.

SUNSHINE FARM JERSEYS—No females for sale. Bulls from high-testing cows for sale. E. E. Greenough, Merced.

JACK LONDON RANCH, Glen Ellen—Two fine Jersey bulls, one ready for service.

Milking Shorthorns.

REGISTERED MILK AND BEEF SHORThorns, bulls and heifers for sale; catalogue free. Thomas Harrison, Santa Rosa Stock Farm, Santa Rosa, California.

INNISFAIL HERD MILKING SHORThorns—Young stock for sale; both sexes. Owned by Alexander & Kellogg. Leased by J. D. Rowe & Son, Davis, Cal.

BREEDERS OF REGISTERED SHORThorns—Milk strain; choice young stock for sale. John Lynch Ranch, Box 321, Petaluma.

Ayrshires.

ELKHORN FARM AYRSHIRES — Choice young bulls at reasonable prices. J. H. Meyer.

STEYBRAE AYRSHIRES — Registered; all ages. E. B. McFarland, 414 Claus Spreckels Building, San Francisco, Calif.

NORABEL FARM AYRSHIRES—Le Baron Estate Co., Valley Ford, Cal.

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SHORTHORNS—The foremost beef breed—Have a limited number of stock for sale, both sexes. If you wish to start a small herd I can probably supply your needs. T. T. Miller, Hollister, Cal.

ALAMO HERD REGISTERED HEREFORDS (founded by Governor Sparks). Herd and range bulls. Reasonable prices. W. D. Duke, Gazelle, Siskiyou county, California.

RANCHO SAN JULIAN SHORTHORNS—Purebred range bulls, unregistered, for sale. Estate Thos. B. Dibblee, Santa Barbara, or Lompoc, Calif., John Troup, Supt.

REG. SHORTHORNS — Good dual-purpose animals raised without pampering. Young stock for sale. Prices reasonable. W. E. Hacker, Willits, Cal.

HEREFORDS—Sierra Vista Herd, Minturn, California. Over 100 registered animals. Fairfax and Repeater bulls head the herd. On highway.

THE NEVADA HEREFORD RANCH—Jno. H. Cazier & Son Co., Prop., Wells, Nevada. Reg. Hereford cattle. Breeding stock for sale.

JACK LONDON RANCH, Glen Ellen—Shorthorn bull ready for service, and some good bull calves.

ABERDEEN-ANGUS cattle of quality and breeding. Lilac Ranch, Escondido, Cal.

SIMON NEWMAN CO., breeders of Registered Herefords, Newman, California.

HEREFORDS — Mission Hereford Farm, J. A. Bunting, Prop., Mission San Jose, Cal.

REGISTERED HEREFORDS—H. H. Gable, Diamond G Ranch, Esparto, California.

GEORGE CALLAHAN—Breeders of registered Herefords. Milton, California.

GEORGE WATTERSON — Breeder Registered Herefords. Bishop, California.

REGISTERED SHORTHORNS — Fair Oaks Ranch, Willits, Calif.

SHORTHORNS — Carruthers Farms. Live Oak, California.

SHEEP AND GOATS.

FOR SALE—Rambouillet rams and ewes—purebred; the very highest grade of large smooth body; heavy shearers; the wool and mutton type. Immediate delivery of individual or carload lots. You can find none better or of higher grade. Address Glenn, Cal. Location, 8 miles south Hamilton City, 1 mile west Ordbend. Windell Orchards Co.

FOR AUGUST 15TH DELIVERY I offer 100 Rambouillet Ram Lambs and a few yearlings, all from registered rams of most noted breeders of America and from big-boned, smooth, heavy-shearing, purebred ewes. Special rates on the lot; also a 3-year-old registered Butterfield ram for sale. W. H. Guscetti, Loyalton, Cal.

F. A. MECHAM ESTATE, Petaluma, Cal.—Breeders and importers of Shropshire, Rambouillets and American Merinos, both sexes. Also Red Polled cattle. Take electric car at Petaluma or Santa Rosa for Live Oak Ranch.

FOR SALE—155 head of sheep, nearly all white faces. About 70 spring lambs, rest ewes nearly all young. All in good shape and will sell cheap. Box 24, McFarland, Cal.

WRITE ME for early Rambouillet ram lambs, ready for light use, by September 1. Also a few yearlings. Carl Lindheimer, Woodland, Cal.

HARRY L. HUSTON, Winters, Calif.—breeder and importer of Shropshire sheep. Stud and range rams. Prices on application.

FOR SALE — 350 grade Shropshire ewes. Excellent condition—majority under 5 year old. Box 154, Monticello, Napa Co., Cal.

J. R. BLOOM, Dixon, Calif.—Twenty-five years breeder of purebred Shropshire sheep. Rams for sale. Single or carload lots.

FOR SALE—Purebred Shropshire buck lambs and long yearlings. Address C. D. Dean, R. F. D., No. 1, Yuba City.

DORSETS AND ROMNEYS — Dorset ram lambs for sale. John E. Marble, South Pasadena, California.

H. G. BROWN, Dixon.—120 Choice Rambouillet yearling rams for sale. Price reasonable.

HARVEY S. VAN VLEAR, Lodi, Cal.—Breeder and importer of Registered Hampshire sheep.

CALLA GROVE FARM, MANTECA, CAL.—Breeders and importers of Hampshire sheep.

KAUPKE BROS., WOODLAND, CALIF.—Breeders and importers of Hampshire sheep.

FOR SALE—600 two-year-old Merino ewes. Swall & Wilson, Box 742, Bishop, Cal.

CHAS. KIMBLE—Breeder and importer of Rambouillets. Hanford, California.

BULLARD BROS., Woodland, Calif.—Breeders and importers of Rambouillet sheep.

MILK GOATS — Selling out cheap. Cash Nursery, Sebastopol.

MISCELLANEOUS.

BUTTE CITY RANCH
SHORTHORN CATTLE, SHROPSHIRE Sheep, Berkshire Hogs, Shetland Ponies, Bronze Turkeys, White Plymouth Rocks. Stock for sale at all times. Next sale all breeds, Wednesday, August 11, 1920, at ranch. W. P. Dwyer and W. S. Guilford, Box P, Butte City, Glenn county, California.

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SHE IS ALL THIS BECAUSE

The Duroc sow reproduces more rapidly.
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California's Defender
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WEANLINGS, $15.00 EACH AT RANCH.—A large number always on hand to choose from. Crates, $2.50 each, refunded when returned prepaid in good condition.
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We are offering for sale Two Proven Herd Boars

CALIFORNIA JUMBO BUSTER
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Both of these boars have made good in our herd and we are keeping many of their daughters for brood sows—that is the reason we can no longer use them.
We can also spare a few fall gilts. Priced for quick sale.

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HERD SIRE
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Mahaska Wonder — Great Wonder, Grand Lady 20th
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Write for yours from the most select herd in California.

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TWO ATTRACTIVE YEARLINGS sired by Orion's King Gano. Big-type, stretchy, heavy-boned and good feet. ONE FALL BOAR by Chief Sensation and one by Pathfinder's Likeness. Also SPRING PIGS, either sex, sired by Orion's King Gano.
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Stable Habits of Horses

(Written for Pacific Rural Press by Thos. F. McConnell.)

Much has been said during the past two or three years about the horse being a "back number, almost a prehistoric animal," and many other things indicating that the farmer is independent of his time-tried friend and burden-bearer since the glorious gasoline trio of auto, tractor, and truck have come to relieve his hardships. For all of this we should not forget that 85 per cent of the work on the farms is still being done by horses and the above-mentioned, highly exploited mechanical devices are already gasping for breath (shortage of gasoline) with only a 15 per cent performance to their credit. We read much that is good in the way of advice about the care of the aforesaid machines, but have seen but little of late about the old-fashioned burden-bearer and friend of humanity, which has been associated with man in both peace and war since time immemorial.

An inquiry from a subscriber about a certain bad habit of a horse while tied in a stall, disagreeable, but not dangerous, has brought to mind several of the same ilk that cannot be classed as diseases and that are impossible to treat as such. It is not that we have anything new to suggest along this line, but to bring to mind some of the old devices or methods to overcome such undesirable characteristics.

Some Causes.

All horses or nearly so that have bad stable habits or manners are of a nervous temperament. It is seldom that the phlegmatic, sluggish, dull animal develops the abnormalities to be mentioned later. Many times it is sheer lonesomeness and again it is an excess of vitality, an impatience at confinement that starts the trouble. Those who read this that are lovers of the horse will readily understand how an animal with a highly developed nervous organization, deeply attached to its home barn, mates and master, when suddenly separated from them, thrust alone into strange, perhaps disagreeable, surroundings, will acquire a habit or habits entirely at variancee with his former behavior.

Perhaps the new owner may be impatient and punish the new horse for some act that by a little careful handling would disappear. The animal is probably lonesome, homesick—don't laugh, only one animal has a greater love of home or has a greater homing knowledge—or irritated and manifests it in an unusual manner, which manifestations, if not eliminated by careful treatment, become fixed and recur on further irritation. Horses—some of them, at least—are hysterical and show the usual symptoms when conditions to produce them occur.

Pawing or Kicking in the Stable.

The kicking mentioned in this subheading is not the vicious act of the animal aimed at a person or other horse, but a habitual kicking of anything solid within reach like the stall partition. The pawing seems to be due to like conditions with this difference, that the first is more apt to be found among old horses and the latter causing the young horse to pound the stall floor for hours at a time, and is a bad habit that is difficult to stop. Punishment will not do any good and should never be resorted to. Nervous, lonesome horses are the ones generally affected and the trouble is more apt to manifest itself when the horse is idle, lacks exercise and is closely confined to the stall. Plenty of work and turning loose in a corral when not in use will reduce the habit to the minimum. Some horses that will paw when halter-tied will stop if turned loose in a box stall.

The kicking occurs when the horse is tied in stall or stable and no one is present, sometimes with both feet but more often with one. This kicking can nearly always be stopped by fastening a short piece of ⅜ or 7/16 chain, say two feet long, to a hind foot with a hobble strap. The horse soon discovers that the amusement obtained is out of all proportion to the punishment and soon desists. The chain treatment we have never known to be tried for the pawing.

Cribbing.

The genuine cribber and wind-sucker is a persistent fellow, and as long as he can find wood on which to bite or rest his front teeth he will continue the habit. If all wood within reach is covered with iron, or a broad strap buckled snugly about the neck will stop the practice. Do not confound this habit with ordinary eating wood, which is due to lack of salt or is a case of pica or depraved appetite, which can be overcome by proper feeding and covering the wood of stalls and corral with some repellent substance.

Halter Pulling.

Horses that are otherwise pleasant tractable animals evince a disposition to do their very utmost to free themselves when tied by the head. Practically all of them when they have succeeded will stand quietly, especially if hitched in any vehicle.

It is possible to cure some horses of the pulling habit, but more of them remain "pullers" as long as they live. Always tie them with something they cannot break and to an immovable object.

The First Duroc Sale of the Season

Duroc-Jerseys of the Lamb breeding are known all over the Pacific Coast for the qualities which make the red hog famous—a herd that had been developed along both economical and fashionable lines. Keeping the hog production end of the hog-raising game always in view while developing the size, bone and prolificacy so much desired by modern breeders, Elmer Lamb offered to the breeders and farmers of California last week a lot of hogs that perhaps excelled any bunch bred in California. The herd was the work of a constructive breeder.

All hogs listed were not sold, but everything considered, it was a successful sale. The swine-breeding business is at one of its low points, and that, coupled with the driest season northern California has ever experienced, made it a difficult proposition to sell even the best of a breed at one-half the prices obtained a year ago. For all of that the top sow, Mary Jane Pathfinder, brought $1000, and six of her progeny averaged $211, with 27 head sold, bringing $152.70 as an average.

The purchaser of Mary Jane Pathfinder was C. A. Halbot of Turlock, a new breeder who has gotten into the spotlight all at once by the purchase of a crackerjack sow at a price that was reasonable, to say the least. Mr. Talbot also bought a young boar out of Mary Jane.

Ordway & Snyder of Hughson bought Orion Cherry Pathfinder, out of an October, 1917, litter from Mary Jane Pathfinder for five hundred dollars, the top for boars of the sale.

Six of the good ones went to E. G. Stone of Modesto with H. A. Stammerjohan of Turlock getting three, two of which were gilts out of Mary Jane Pathfinder.

Among the prominent breeders of Durocs buying we notice Allen Thompson of Tulare, Carl Witherow of Live Oak, W. M. Way of Modesto and V. F. Dolcini of Davis.

Men who are well known in Duroc-Jersey circles, who were present other than those mentioned, were Walter Gatton, H. M. Berglund, J. Boyd Harrold, D. G. Cummins & Son, Jack Borge and Dr. Belknap.

Clark, Hunter and Clark of Modesto cried the sale in a very efficient manner.

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Coast's Greatest Duroc Herd

In announcing that we have secured California's leading Duroc breeder to take charge of our herd, we hardly need to mention his name. R. K. Walker, formerly of Winsor Ranch, and president of the California Duroc-Jersey Breeders' Association, is acknowledged by all to be the most expert breeder, feeder and fitter of Duroc hogs on the Coast. His name has been inseparably connected with the wonderful progress of the breed in this territory and he has started dozens of young breeders on the road to success. He now comes to the Coast's greatest Duroc establishment and will endeavor to make it even greater.

Best Breeding

In this wonderful aggregation of Durocs is found not only the World's Grand Champion herd, headed by Ace of Pathfinders, but championship breeding galore. In fact, every brood sow in the herd is either a prize winner herself or the daughter of prize winners. The herd is rich in the blood of Pathfinder, Great Sensation, Great Orion and Big Bone Giant, Great Orion Sensation, Ace of Pathfinders, etc., and there are pigs coming on by the world's most noted sires.

BUY NOW

Pork prices are going up and the one who takes up hog raising now with the right kind of stock will make big money. We can start you right, no matter what you want. While quality is high, our prices are most reasonable. Call or write.

R. K. WALKER

The Diamond Bar Policy

In securing R. K. Walker for the Swine Department of Diamond Bar Ranch I have found a man who not only stands at the top of his profession, but also can be depended upon to carry out the Diamond Bar policy of giving customers entire satisfaction.

The business of this ranch is built upon the broad and solid foundation of integrity in all dealings, justice to every customer, and absolute fairness in every transaction. I guarantee that every animal sold will be not only as represented, but also will satisfy the purchaser fully. No arguments or quibbling, either, but prompt, courteous adjustment in any case of dissatisfaction.

We will make you glad you purchased from us, and will prove to you that

The Diamond Bar Way Makes Hog Raising Pay

Diamond Bar Ranch

FRED LEWIS, R. K. WALKER, Hog Dept.

SPADRA, (Los Angeles County) CALIF.

A GREAT PRODUCTION RECORD.

When we read of a record being made by a dairy cow now-a-days, we think immediately of the particular preparation of the animal to begin with. Then the days, weeks and months of exacting care and attention given to keep the milk machine going at its highest production points. In the case of Poppy's Dortha, a junior 3-year-old Jersey cow owned by Frank E. Lynn of Perrydale, Oregon, these conditions did not obtain, especially during the first six months of her lactation period. We give the detail of management of the heifer in Mr. Lynn's own words:

"I was not doing testing when this cow freshened and had no intention of starting her, so she had no grain of any kind for two months before freshening and was not prepared for a test in any way. It was only after she started milking so heavily that I decided to again start testing. Even then I had no idea that she could make a world's record.

"The man who milked and fed her during the first six months had never milked or fed cows on test. He did not realize the need of regular feeding and milking. Had it not been that Dortha was wise enough to eat only what she wanted, she would have been overfed many times.

"It was only after six months that I realized she really had a chance to make a remarkable record, and she was then fed and milked at regular intervals, although she was not coddled in any way. She has never had a blanket on or had her drinking water warmed in the coldest weather.

"Her feed for the last six months of her test was 12 pounds mill-run, 9 pounds chopped oats, 6 pounds beet pulp, and 3 pounds oil meal. She also had 50 pounds of silage and 30 pounds of kale per day until the first of May, when she was turned on pasture.

"One of the cow's peculiarities is that she knows when she has had enough to eat, and will not take any more feed than is good for her."

The record of this remarkable young cow was 994.25 lbs. butterfat from 17,804.1 lbs. milk for the year. This makes Poppy's Dortha the champion Jersey 3-year-old, gives her the fifth highest fat record and sixth highest milk record in the Jersey breed. She promises to make a better record for the coming year.

Oregon seems to have a monopoly of Jersey records on the Pacific Coast. We think everything of our climate in California, but it does not seem to produce Jerseys with record-breaking proclivities.

RECREATION AND THE NEW CALL FOR COWS.

(Written for Pacific Rural Press by C. H. Shinn.)

Every day the observer of events as they come along finds something new. June is here, and more than a million people will somehow get a glimpse of the California forests. But an uncounted army of mothers will be saying "I wish we had fresh milk for the children."

The word goes around; a few far-sighted cattlemen take some milch cows to the mountain meadows and supply the nearest camps. Several neighbors who have the traditional "one cow apiece" join issues, take their livestock along, and are surprised to find how much good it does the children and how much it improves the animals.

What's going to happen is this: The age of the expensive, poorly-kept, rather low-grade "one-cow dairy" has departed forever. Each little neighborhood of people all over California will have someone who will keep enough cows to supply every family——in other words, will begin to create a worthwhile, well-managed and movable dairy which will have its summer home back in a National Forest, and will eventually draw campers to its vicinity. Then the tired mothers will say, when school closes: "Now we will all of us go to the mountains!"

Nothing really new in all this. Norway, Sweden, Switzerland, even far-off Iceland, learned long ago that the neighbors could take all the cattle, sheep, goats, follow the grass to the snow-line, make butter and cheese of the very best quality, and return to the valley homes renewed in body and spirit. But the American combinations of better roads, automobiles, summer recreation centers, tourist travel of every conceivable sort, and the fullest use of grazing resources in our forests makes the age of small mountain dairies a certainty. Many of them are bound to be co-operative and will probably so continue when the neighbors return to their valley homes, for the "one-cow dairy" is an unadulterated nuisance; she storms through fences, ruins the garden, smashes a young tree, eats her head off several times over. She went very well with the pioneer period when the forest was at the door and half a dozen youngsters did the chores. In these days the farmer who milks cannot leave for a night until he finds some one to come, perhaps three miles, and see to his one cow!

There is probably need for well-managed small summer dairies this very year in a hundred places throughout our California mountains.

DO YOU BELIEVE IN SIGNS?

It certainly is a question that has been asked and debated by all classes of people "so long that the memory of man runneth not to the contrary." We all believe more or less in the signs of rain or fair weather, as the want may be at the particular moment. We all believe in the signs that the merchant has over his place of business, as it would cause serious inconvenience to us all if we had to inquire at each store or office if this was Mr. Jones' place of business, and did he deal in whatever we might need at that certain moment. Is it not just as true of the farmer and stock-man? How many of them have attractive signs at the entrances of their farms and ranches? The writer will say about one in five hundred. From Red Bluff in the north to Bonita in the south and Paradise in the east and Jenner-by-the-Sea on the coast, very, very few have signs telling the public what each particular one has for sale. Stock men are coming to realize the value of such signs, and some few have erected them. There is room for many more, however, and if the ranchers generally realized the need, the roadways would be lined with them.

Duroc-Jerseys Are Prolific and Profitable

They raise *big* families. Hardy, easy-feeding, quick maturing. That is why Duroc-Jerseys today outnumber any other breed in the United States. Out of *all* the hogs marketed in 1918, 51 per cent were Duroc-Jerseys.

WRITE FOR BOOKLET—"DUROC-JERSEY HOGS ARE PROFITABLE" published and mailed free by the largest swine record association in the world (over 10,000 members) for the benefit of hog raisers everywhere.

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—because Calco Farm Products, made of galvanized Armco American Ingot Iron and cast iron, **last.** They resist rust, and hogs or stock cannot chew them to pieces.

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—because they save the time of yourself and costly farm help. The watering fountain—the automatic grain feeder—save hours—and money.

—because these feeding products are so constructed that they save grain and other feed—another vital saving advantage.

—because the actual money cost is small.

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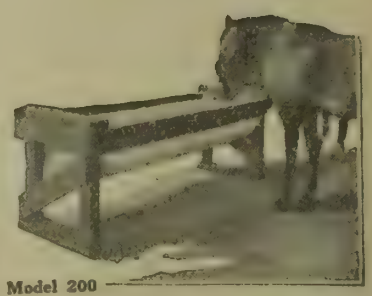
Send for description and price list.



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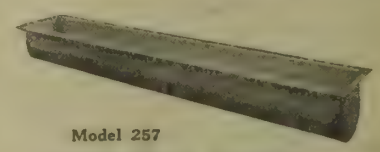

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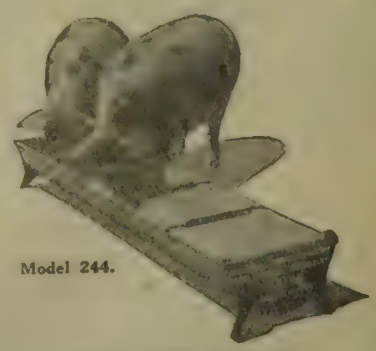

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Poultry for Profit

HENS NEED CRUSHED SHELL.

To the Editor: My hens are getting so they can't lay their eggs. Do you know what it is? I had one hen that died and another is the same way. Do you know what causes it? I think I will lose half of my hens that way. Is there any cure for it. Eggs seem to start. I never had hens before that way. We sent for them when they were baby chicks.—D. A. B., Anderson.

Perhaps these hens are not supplied with crushed shells with which to provide material for making the egg shells. If they are supplied with shells the trouble is most likely due to intestinal fat, which interferes with the normal formation of the eggs, in two ways. This fat prevents the digestion of the crushed shells, or a proper distribution of the digested material for use in making the egg shell; and this fat also more or less compresses the egg sac and this obstruction frequently causes the partially coated egg to break before the hen is ready to lay it. This intestinal fat may be present and at the same time the hen may not appear to be out of condition when observing her running with the flock. She may look very similar to those hens that are in proper laying condition. Usually, however, the entire lot of fowls are very much in the same condition because nearly always the trouble is the result of feeding too little mash and too much grain, seeds, etc., that are rich in starch and fats. Give the flock a dose of Epsom salts in a wet mash. Use one ounce of the salts for each dozen fowls. Make them scratch in deep litter for all the grain fed them. This exercise reduces the fat and at the same time develops the muscles that propel the egg during its last stages of formation.

FOWLS OUT OF CONDITION.

To the Editor: I have five hundred white Leghorn pullets four months old. They look fine, but some of them seem in poor condition. They have pale combs, are weak and sleepy. They have diarrhoea; droppings are white and green. I feed them wheat twice a day, morning and night, and give them Suregrow at noon. The quantity fed each day is about one ounce each grain and mash—is that right?—J. M., Oroville.

As most of these fowls look fine it seems reasonable to believe that nearly all are in good health at present. The quantity and proportions of grain and mash are about correct, but some very vigorous pullets will, at this age, eat more than two ounces unless they are fed a liberal quantity of greens in addition. Possibly the warm weather has hatched a large number of mites, which are sapping the vitality of the pullets, but as yet only a few show the effect. Examine the premises for fowl ticks—also known as blue ticks. The fowls may have worms. Smell the wheat to see if it is musty or smutty. Give the entire flock a dose of Epsom sales at the rate of one ounce for each 15 pullets—about two pounds for the flock. The salts may be given in the drinking water, but it is usually more satisfactory to administer the dose in a wet mash. If this does not afford immediate relief it would be well to kill one of the poorest of the ailing fowls and make a careful examination of the internal organs, including the wind pipe. Such an examination may at once disclose the exact nature of the sickness, in case the pullets are suffering from a disease.

DEPLUMING MITES.

To the Editor: I would like to know how to treat what we call deplumage mite on chickens in order to cure it. About one year ago we noticed our spring chickens were commencing to lose their tail feathers and did not know what was the matter. But one day we read an article in the Pacific Rural Press how to cure the disease and that was to dip the chickens in sheep dip about one to seventy. We started to dip our pullets and we dipped them twice last fall, but that did not check it. The same chickens kept on picking and losing more feathers. We started to dip again this spring. We dipped twice—about one week between times, but today those same chickens are naked on the rear half of their bodies. Our young stock is getting the same trouble this year, and I would like to know how to get rid of it. The hens that have the deplumage mite seem to lay eggs fairly well.—L. C. L., Paso Robles.

It is generally considered that these depluming mites yield readily to treatment, even to two or three dustings of powdered sulphur, but our correspondent may have developed an unusually vigorous strain of these mites, therefore, we recommend using one of the following ointments: Balsam of Peru; or, one part oil of caraway mixed in five parts vaseline; or, three parts flowers of sulphur, one part carbonate of potash mixed in twelve parts vaseline Apply by rubbing into the skin and repeat every four or five days until the trouble is entirely cured.

EGG RETENTION CAUSED BY INTESTINAL FAT.

To the Editor: One of my hens, a Rhode Island Red, has something protruding from the vent which resembles greatly the unlaid eggs found in a hen when she is opened. This is about the size of a laid egg and is accompanied by a white diarrhoea. She has a good appetite and seems well and lively, but often acts as if she were trying to lay an egg.—M. L. W., Yolo county.

The object described is probably a soft-shelled egg that has become glued to the egg passage. Possibly another and more recently formed egg has broken which would account for the whitish excrement. If this is the cause of the trouble it will be difficult to effect a cure, but it may be well to try. Fill a basin part full of tepid water in which is mixed a little peroxide of hydrogen and hold the rump of the hen in it. This may soften the mucous sufficiently to release the obstructed egg. When this is accomplished, with a soft-pointed syringe inject a solution of one part tepid water and one part peroxide of hydrogen. Repeat in about thirty minutes. An hour later inject warm castor oil or sweet oil. Provide drinking water but little feed. The hen is suffering from the result of an accumulation of intestinal fat. If she recovers make her scratch for her grain.

DOUBLE MOLT.

To the Editor: I have a flock of 100 Leghorn hens, which, the last of May, I changed into a new pen with an entirely different arrangement of roosts and nests. This seemed to throw them into a pretty bad nervous state and their egg production dropped to 30 per cent, gradually coming up to about 42 per cent, when I started giving a tonic, which is suggested on bottom of page 134 of your "California Poultry Practice." I gave every day for about three weeks with an intermission of a few days; then twice a week till the present time. None of them were sick, but I foolishly thought a tonic would bring up the egg percentage. For the last week they have dropped to 18 and 20 eggs a day and are losing their feathers. They are absolutely clean of lice, and are fed dry mash with beef scraps all day, with oyster shell grit and charcoal before them; also milo and rolled barley night and morning, and plenty of green alfalfa. Their combs are in good red condition and they show all qualities of good laying.—L. T., Stockton.

The excitement caused by the moving of hens to strange quarters in connection with the continued use of the tonic—which contains quite a quantity of flaxseed meal—has brought on a premature molt. If the hens are spring-hatched fowls, it is likely that they will also molt again the coming fall. The best way to get the most eggs under the conditions described is to continue to feed liberally with a ration carefully balanced for egg production. For 100 hens we suggest a daily supply of 11 or 12 pounds of mixed grains and an equal quantity of mash. An abundance of greens will greatly increase the number of eggs.

MAKE THE PULLETS WORK.

T the Editor: I have 150 White Leghorn pullets four months old that are picking out their tail feathers. Some have only two and three feathers left. Sometimes they will pick them and make them bleed; then the others will pick them to death, unless I take them out of the yard.—C. T. B., Escalon.

Fowls whose ancestors have been fed large quantities of raw meat frequently inherit a blood-thirsty disposition; it is possible the depluming mite is the original cause of this trouble; but it is more likely the result of want of sufficient opportunity to scratch and keep busy, or a total lack of salt in the feed. Pullets that must work hard for their grain feed by scratching in deep litter, seldom develop this trouble. Prepare an ointment made of one part powdered sulphur mixed in four parts vaseline, and apply to the base of the tail feathers. Make the pullets work hard to find their grain feed.

Many poultry people have discovered that the big secret of success in poultry work is producing your own feed on the place where it is fed.

Poultry Breeders' Directory

Rate 3½ cents per word each issue.

BARRED PLYMOUTH ROCKS —"Nothing Better in Poultry." Wonderful layers. Choice hens and pullets for sale; also fine cockerels that will improve your flock. Now booking orders for hatching eggs. I have made a specialty of Barred Rocks for over twenty-two years. That's why our birds win at all the leading shows. Catalog free. Chas. H. Vodden, Box 3, Los Gatos, Calif.

SANTA CRUZ CHICKS are in demand. Our hatchery will run full blast this fall, supplying Leghorns, Anconas, Minorcas, Rocks, Reds, and Orpingtons. We also offer W. L. Hyde's cockerels from Pen 1, with trapnest record 236-284 at $5.00. Write for folder with chick price list. B. W. Archibald, Soquel, Santa Cruz Co., Calif.

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PACIFIC RURAL PRESS

SAN FRANCISCO

HOMES IN THE MAKING AT DELHI.

(Written for Pacific Rural Press.)

Early in the spring the writer drove past the State Land Settlement at Delhi. It was then mostly "project" —and blow sand. But for a great faith in the good sense and scientific knowledge of the men behind the plan, the question writhing within certainly would have risen to the surface, Can any good thing come out of of this Nazareth? The other day business took us that way again, but this time the question didn't even stir. A siding from the S. P. main line is in and a big warehouse is up, which will be the future home of a co-operative buying plant. The administration building is finished; without, it is a thing of modest beauty, and within, a hive of optimistic activity. The town site of this first unit is emerging in outline from the sand. The school house is there and two or three attractive bungalows are nearly ready for the occupancy of the administrative officers.

The park, the bank, the community center, the stores, the trees and lawns, the flowers—these are all there, too, in the vision of the superintendent, and I'll be hanged if he doesn't almost make you see them as you walk over the bare ground with him.

On a number of farm laborers' allotments cozy little homes are ready with more springing up, and on a few of the farms home buildings have put in an appearance. One other interesting thing is there, too—a pipe factory turning out cement pipe for the irrigation system. They talk about pipe down there by the mile. But the most striking fact about this factory is that settlers may go into it, and, in spare time, make for themselves, the pipe needed on their own farms, paying simply actual costs for the materials used. Due to topography and the nature of the soil, water will be distributed to the entire settlement through pipes. It will perhaps be the largest single pipe system in the world—something like 200 miles when complete.

It was not the material evidences of progress, however, that sent us away rejoicing in and with Delhi. It was the intangible but very real spirit permeating the whole thing. You breathe it in here just as you do at Durham. The men guiding the enterprise seem possessed of the great, big co-operative ideal, but their feet are firmly planted on the ground. There is such a thing as practical idealism. If you don't believe it, study the two D's—Durham and Delhi.

Here are settlers, most of them potential farmers, with training enough or gift enough to make it fairly certain that the latent agriculturalism may be made actual, and that, given half a chance, they can and will succeed. They are home builders with the homing instinct and with a rural home as their aim. They go at their hard task, for it is a hard task and they know it, not only with bravery but with a cheerfulness that to a hardened old mossback is almost pathetic. Two things, perhaps, account for it.

For the settler here, this is home from the start. Every nail in the house, every board on the barn, every furrow turned, every seed sown, every tree planted, spells home, together with the self-employment so many are longing for and beginning to demand in the whole industrial world. To be sure, 90 per cent of it may not be paid for yet, but there are years ahead instead of months in which to pay for it. And because it is home there is an interest in the work that nothing else could inspire. Elsewhere, when a young couple of limited means set their hearts on a farm home, what happens?

An acceptance of some rosy real estate scheme where, according to the prospectus, a man can make a small payment down on the land and, with no capital and little guidance, go ahead to competence and rural bliss in two or three years. Either that or years of tenantry, followed by other years of part ownership, until the once young couple are old and broken before a farm is really theirs. All the former scheme has done has been to fill the pockets of sharks, litter country-sides with crumbling shacks, and send back to the city disappointed, broken-hearted folks to swell the army of discontent. As for the latter course, I have just read an apology for tenantry in which the writer claims that we should be glad owners are willing to lease, as tenantry is the only way many young people can ever hope to finally own land. More's the pity, there is force in the argument as we run things now, but growing in the soil of Delhi, did we but know it, is the germ of a far better plan. Here the years of tenantry are cut out entirely and the young folks start in as part owners with the state as banker. And this fact certainly does put the "pep" and the courage and the ability to whistle into them.

The other thing which accounts for the land settlement spirit is the fact that here a man feels that he does not stand alone. It isn't just the expert advice and guidance he receives from experienced men employed for that purpose, though this is no small item. To know positively when you buy a tract of land that it is good land and certainly adapted to the crop recommended for it, to know that the most careful, scientific survey has been made and is back of a recommended crop, to know that intelligent, disinterested advice is always available in getting a quality crop, and to know that enough others in close proximity are growing enough of the same thing to give the aggregate product a commanding position in the market—all this is comforting to nerves and inspiring to ambition. But there is more than this to it. There is genuine community interest—an embodied co-operative spirit. Whether the settlers are here because they were real co-operators before, or whether the plan has awakened co-operation in them, I do not know, but I do know it is here as you do not find it among an equal number of farmers in very many places. The old-fashioned word "neighbor" here receives a reincarnation. They know how to do team work, these settlers; there are opportunities for team work, and team work is done with a will.

As one studies these two California land settlements, the question propounded of old about the loaves and fishes is apt to rise, "What are these among so many?" Well, remember the loaves and fishes were multiplied.

BERRY JELLY.

Editor Home Circle: Last year I put up blackberry and loganberry juice without sugar, and I have just opened it and made most delicious jelly from it. The present high price of sugar makes it wise to do that this year and this is my method. I prepare and cook my fruit as usual, then drain and heat to boiling. Then, instead of adding sugar and making jelly, I can the juice in air-tight jars and put away to be used as needed. Some people consider the jelly is better if it does not rest on the pantry shelf too long—that there is a freshness to jelly that has just been made. But, personally, I like to view the finished product on the shelf, only that just now it seems wise to wait for sugar to grow cheaper before using it so freely.—Mrs. E. W. S., Sonoma.

MUSIC IN THE SCHOOL.

The use of the phonograph is growing in the rural schools. It is considered invaluable in connection with English and geography and for the folk dancing and singing, which form part of the daily work.

Thanks to exercise in public schools and colleges, we are creating a better, healthier race of men and women.

College men today are two inches taller and nine pounds heavier than they were thirty years ago. Girls are one inch taller and ten pounds heavier. Short skirts, loose corsets, or none, plus open-air exercise, have done wonders.

CALL TO PRAYER.

"Let us put by some hour of every day
For holy things! whether it be when dawn
Peers through the window-pane, or when the noon
Flames, like a burnished topaz, in the vault,
Or when the thrush pours in the ear of eve
Its plaintive melody; some little hour
Wherein to hold rapt converse with the soul;
From sordidness and self a sanctuary,
Swept by the winnowing of unseen wings,
And touched by the White Light Ineffable!" —Selected.

A LIGHTED DOT.

Fort Hill, East Africa, desired electric lights, and the demand went to London by a telegram down the Uganda Railway, that iron thread which has pulled civilization behind it from Mombasa on the coast into the interior. In due time the word that electricity was desired for a dot on the map of Africa was received in a London office where providing electricity for dots on maps is considered a commonplace incident. The dot was a small one and the contract was small in proportion.

Many English engineers have gone to the war front. For the most part this leaves in the profession only the invalided, or those who are not available fodder for the jaws of war. When the electric light company looked around for an engineer to send out to Fort Hill to make the preliminary survey for lighting up one speck of the dark continent, only one man proved available. Pearson was the man, a man badly lame from birth, not overstrong in other ways, and unwilling to leave England. Still, he was employed by the electric light company and it was considered a compliment to his professional ability that the offer was made. After much indecision he accepted.

Some miles from Fort Hill is the Senal River, and Pearson was commissioned to examine this water course, preliminary to its subduings with concrete and its chaining in turbines. It can be mentioned that the jungle along the river had been but slightly explored, that fatal insects and the most venomous of the reptile tribe were abundant, and that wasting fevers were to be expected, even for the most robust of man. Any one who spent months on the banks of Senal River was likely never to spend another month on earth. Pearson knew all this and many more things connected with the work he had undertaken.

The engineer was unfortunate. Before he left Mombasa he had a touch of the fever. It was a chalk-faced, limping young fellow who presented himself to the authorities of Fort Hill, but in less than a week, with a small company of black laborers, Pearson dragged himself to the falls of the river. He had been advised by the resident physician at Fort Hill to take the next steamer back to England.

"I'll do the bit back to London when my job is finished," stubbornly replied Pearson.

The preliminary survey lasted six months. Always Pearson's face grew more gray, and always his khakis hung more loosely on his wasting body. With more and more difficulty he added to his notes, and when the plans were complete and the blue prints finished, it was but a skin-covered skeleton that the bearers carried on a litter back to the hospital at Fort Hill.

"You're—well, my man, you're in bad shape," said the physician, when he leaned over Pearson's cot.

"But you're going to have electric lights here instead of those hot things," replied the engineer, pointing with a claw-like hand to the lamps above him; "and," he added, "Somehow I'm going to take the plans back to London."

Somehow he did, and the graunt shadow of a young man limped into the office of the electric light company.

With eyes that held moisture, the manager looked at Pearson. All he said, however, was "Tough job. Afraid it would be." After a moment he added, "See here, old man, you're only half yourself. You'll have to rest up a bit; but we need you to supervise the construction."

For a moment there was silence. Pearson's face took on lines of horror. He shook his head.

"No," he said. "You'll have to find another chap. You can never understand what those electric lights for Fort Hill have cost me. No, I cannot do it."

"But with the war going on we can not find anybody else. Besides, you've been there and you know the job; and we're bound, you know. We've accepted the contract. We cannot back out. Sorry to push you, but—well"—

"If I could go to the front—yes, I'd be glad to go. But out there—in that jungle"—

"After a few weeks you'll feel better about it," said the manager.

"Perhaps," replied Pearson. "Only —well—I'm sure—you understand, sure—that I would never come home."

Back in Fort Hill hospital the doctor had told the engineer that his was not the physique which could endure the climate of the East Coast; but he needed no doctor to tell him that, and to throw away your life because a dot on a map needs electricity might be thought absurd. Yet Pearson held to the ideals of his profession, and the engineering profession has ideals. For proof of this you have only to read the records of any construction work anywhere.

Then came an offer for Pearson's services in an electric light plant in Manchester. The salary was a bit larger than he was receiving, and he consulted with the manager of his company as to the advisability of accepting the offer.

"I really cannot advise you," said the manager. "As to the Fort Hill lights, as you know, we must begin work before January first or we lose the contract. There is just time to get a man out there. We can find no one but yourself—the war! Don't like to push you, but you might as well understand that if you do not go we drop the Fort Hill contract."

"My preliminary survey?"

"Labor and expenses wasted," replied the manager. "Of course Fort Hill will get its lights; but there'll be a delay of a year or so. Probably Sampson and Company will take the contract. They are always at our heels."

"I need not assure you that it isn't a matter of money with me," said Pearson.

"I understand, my good fellow, and we cannot afford to offer more than you are receiving."

"Give me until tomorrow to make my decision," said Pearson, as he turned to his routine duties.

That evening at his lodgings the landlady wondered at Pearson's scowling forehead and his abstracted manner. All night he tossed on his bed. The horrors of East Coast fever returned the pestilent odors of the Senal River banks seemed to pollute the air and all that his body and mind had suffered as he lay in the shack beside the falls of the river changed his neat room with his little store of books and knickknacks into a miserable cabin, where delirium torments were within and the horrors of a tropical jungle without. His was not a body fitted for heroic endeavors, and no one knew this better than himself.

But with a face hardened as if cut out of rock, Pearson entered the office of his company the following morning.

"You've decided to go out," said the manager. "I see it in your eyes. Thank you."

"I have just sent a refusal to Manchester," replied Pearson. "I'll take the steamer which leaves on the fourteenth."

Once more the black laborers aided a chalk-faced man to the falls of the river, and again for months he lived

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in a hut and warded off utter prostration of mind with the grim determination to finish the job before he could do no more. Twice he was so badly gone with fever that if it had not been for a kindly old black body servant he would have never left his cot. Day after day the gaunt semblance of a man directed the work. Night after night, amid the sweltering miasmas of the river bank, he weakly leaned over his drawing-table and planned for the next day. Before the turbines were in place it was but a trembling, fever-smitten shadow of a man who issued his orders from the cot in his shack. At length all was completed. A man had been sent by the town to take possession of the works, and Pearson was carried back on a litter and laid in the hospital. Here for some weeks the physicians had faint hopes that they could pull him through. This was impossible.

The last thing the dying engineer saw was the cluster of incandescent lights opposite him against the wall. The lights glowed in front of the government buildings, and at the outskirts of the little town, black men with iron rings around their naked bodies pointed above them and told in hushed voices how the white masters had pulled away bits of the sun to light the night.—Ladd Plumley.
New York, N. Y.

CANNING CORN DEMANDS BOTH SPEED AND CARE

Corn seems to give the average home canner more trouble than any other product. It is especially important, therefore, that extreme care be used and that directions be carefully followed. Much depends upon the age and condition of the corn. Select fresh, tender, juicy corn which has not reached the starchy stage. A little experience in selecting the ear and the ability to recognize corn that is just between the milky and dough stage are important.

Have the utensils in readiness before starting. The jars (already tested for leak) and tops should be boiled 15 minutes and then be left in the hot water until ready for use. The rubbers should be placed in a hot soda solution made with 1 tablepsoon soda and 1 quart of boiling water. If a hot-water bath canner is used (either homemade or commercial), have the water heating in it before starting to cut the corn from the cob. A steam-pressure canner is recommended for use in the canning of corn. If used, the water in it should be started to heating beforehand. A container of boiling water should be in readiness in which to blanch the corn.

Remove husks and silk; blanch (boil) corn for 1 to 5 minutes on the cob. Dip for an instant in cold water. After cold dip, cut immediately off cob with a sharp, thin-bladed knife.

Speed is requisite in successful canning of corn. The best results can be obtained when one person cuts the corn from the cob and another fills the containers. Pack the corn to within one inch of the top. Add one level teaspoon of salt and one-half teaspoon of sugar to each quart. Fill the jars with boiling water. Put rubbers and tops into position on the jars. When using jars with glass tops, which have wire bails the top bail only should be put in place.

Place the filled jars on false bottom of wood in the water-bath canner or into the steam-pressure canner. With the hotwater bath canner have the water above the tops of the cans.

When one period of processing is used, boil steadily for 180 minutes, starting to count time after the water is boiling vigorously. If the intermittent processing is used, boil 1½ hours the first day and 1 hour on the two succeeding days, allowing only 12 to 18 hours between the first and second processing periods. Tighten the jar tops after each boiling and loosen just before starting the successive boiling.

Only one period of processing is necessary with the steam-pressure cooker. When one is used, process corn 80 minutes under 15 pounds pressure at a temperature of 250 degrees F.

When jars are removed from the canner, tighten tops immediately. Cool in a place away from drafts, test the seal, and store in a cool, dark, dry place.—United States Department of Agriculture.

FEEDING THE FAMILY.

Mrs. Mary Swartz Rose of Columbia University is the author of a book on "Feeding the Family," and in charge of the nutrition work being done by the University among the chil in New York, so her ideas are of great interest.

"Fifteen years ago we didn't give children vegetables until they were three years old," she said. "Now, we start at three months, if they are artificially fed and show the need of it. We used to think the baby must have orange juice as an anti-scorbutic, but experiments on London babies during the war showed that raw turnip juice did just as well. American workers found that tomato juice, either canned or raw, is equally good.

The science of nutrition has made rapid strides in the last ten years. With the discovery of vitamines many of our old ideas changed. We have learned very closely the energy requirements of children and the value of establishing health and habits of health in the first years. Most of the poor health of adults can be traced back to early childhood. The close relation between food and health has been discovered. Experimenters even claim they can fix the rate at which animals grow old by altering the diet. Yet, in spite of this, insurance statistics show that great numbers of people are as old at thirty-five and forty years as they should be fifteen or twenty years later. This is especially true in rural districts. Hardening of the arteries and kidney trouble now appear at forty years, where it used to be at sixty.

"Modern research shows that much of the trouble is due to a lack of one mineral and of these minerals, the most common shortage is calcium. A pint of milk a day will take care of the calcium requirements of a child. A quart will give it sufficient proteins. Milk contains three times as much protein as cereals and six times as much as peas and beans.

For the growing boy who can't be filled with a regular meal, Mrs. Rose advised rice pudding made with milk and dotted with raisins. Any cereal pudding is good. She got in strong with the boys by telling the mothers to let them have five or six regular meals a day—that is, at regular hours, but spoiled it by firmly declaring that they must eat bread pudding.

The recent campaign of weighing and measuring had her hearty indorsement. She stated that some schools showed one-third of the children below par. One child who looked the picture of health was twenty-five per cent underweight. Examination by a physician revealed a bad heart, which had not been suspected.

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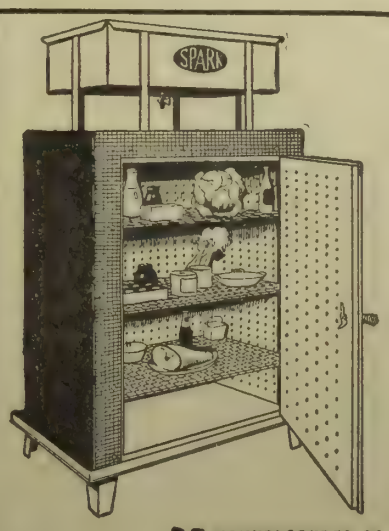

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THE MARKET REPORTS

Compiled from Independent Sources.

SAN FRANCISCO

San Francisco, July 28, 1920.

WHEAT.

A little more activity is gradually developing in future wheat trading, but the market continues weak with most buyers inclined to hold off for expected lower prices.

BARLEY.

August barley is neglected and spot trade dulled with prices ruling lower. Indications point to further declines.

Red Feed, ctl. .....$2.85@3.00
Shipping ..... Nominal

OATS.

In common with other grains oats are lower and there is no prospect of higher prices ruling lower. Indications point to further declines.

Rolled Barley .....$58.00@59.00
Red for seed ..... Nominal
Black for seed ..... Nominal
Recleaned Red or Black for seed....Nominal

CORN.

Corn is scarce, with no demand. Quotations are nominally unchanged.

Egyptian, white .....Nominal
do, brown .....$3.65@3.75
California ..... $3.80@$3.85

HAY.

Receipts of hay for the past week were 2,838, compared with 2,346 tons the previous week. The arrivals are light for this time of the year, but the demand is still lighter. Most of the receipts are for immediate consumption, there being little market trading or purchase for storage. Sales are only effected by concessions in prices and all grades are selling a little lower than market quotations. Interior trading has been a little more active as lower offers have been accepted; but the great bulk of this season's crop is still in first hands. Alfalfa is weaker, dairymen having satisfied their first demand, and now holding off for lower prices before stocking heavily. A large northern supply and a lower export rate than here has a tendency to depress prices still further.

Old Hay .....Nominal
Wheat Hay, new .....$26.00@28.00
Tame Oat Hay, new .....$26.00@28.00
Wild Oat Hay, new .....$20.00@22.00
Barley Hay, new .....$20.00@23.00
Alfalfa, new .....$20.00@25.00
do, 2nd cutting .....$24.00@28.00
Stock Hay .....Nominal
Barley Straw, bale .....Nominal

FEEDSTUFFS.

The drop in the grain market has caused a sympathetic weakening in the price of feedstuffs. Quotations on rolled barley, rolled oats and alfalfa products have all been lowered. The only display of strength is on cracked corn, which has been marked up a dollar due to the light supply.

Rolled Barley .....$64.00@65.00
Rolled Oats .....$61.00@65.00
Alfalfa Products .....$42.00@45.00
Cracked Corn .....$86.00@87.00

POTATOES, ONIONS, ETC.

(Wholesale prices paid by commission houses.)

Potatoes are weak, with receipts heavy and demand light. They are hard to move even at the reduced quotations. On the other hand, onions are bringing higher prices and their position is decidedly strong. Most vegetables have dropped in price in the past week, including beans, cucumbers, tomatoes and egg plant. Peas and beans were not of the best quality.

Peas, Bay, lb. .....6@7c
Beans, wax, lb. .....5@6c
do, green, lb. .....5@6c
Carrots, per sack .....$1.25@1.50
Green Corn, each .....$2.50@3.50
Lettuce, crate .....$1.50@1.75
Cucumbers, Alameda, lug box .....50@75c
Tomatoes, River, large box ....$1.00@1.50
do, Merced .....50@75c
Rhubarb, Strawberry, box 40 lbs..... $1.50
Summer Squash, box, 35-40 lbs. ...50@75c
Egg Plant, box $1.00
Potatoes, new Garnet, cwt. ....$3.00@4.00
do, New River, cwt. .....$3.00@4.00
Onions, Bermuda, wax, 50 lbs. ....40@50c
do, Red, sack .....$1.25@1.50
do, Clarksburg, cwt. .....$1.75@2.25
Green Onions, box, 25 lbs.....$1.25@1.50

BEANS.

(Wholesale prices. Buying prices made on sample.)

Outside of bayos the bean market is quiet and inclined to lower prices. Bayos have been advanced 25 to 50 cents, but Blackeyes and Garbanzos are quoted 25 to 50 cents off of last week's prices. Weather conditions are reported generally poor for the growing crops.

Bayos .....$12.00@13.00
Blackeyes .....$ 7.50@ 8.00
Cranberry .....$ 6.75@ 7.00
Pinks .....$6.40@ 6.60
Red Mexican ..... $ 8.50
Garbanzos .....$ 8.50@ 9.00
Large Whites .....$ 6.00@ 6.25
Small Whites .....$ 5.90@ 6.15
Limas, Ass'n prices, South $11.42
do, Baby, Ass'n prices, South $11.42
Limas, S. F. prices .....$11.40@11.60
do, Baby, S. F. prices ....$11.40@11.60

POULTRY.

(Wholesale prices made by commission houses.)

Broilers are in light supply and the demand sufficiently strong to raise the price about a cent. They are getting about cleaned up, with no prospect of lower quotations. Hens are firm at the old quotations, especially the larger sizes. Light receipts have caused Belgian hares to stiffen in price.

Broilers .....35@36c
Hens, mixed color .....32@36c
do, Leghorns .....20@27c
Roosters, young .....42@45c
do, old .....17@20c
Fryers .....33@35c
Squabs .....55@60c
Geese .....28@30c
Ducks .....22@25c
do, old 18c
Belgian Hare, live .....18@20c
do, dressed .....22@25c
Jack Rabbits .....Nominal

BUTTER.

(Exchange quotations less commission.)

Trading was quiet throughout the week. However, with light receipts and a little demand developing toward the close for local requirements, the accumulation of the early part of the week was reduced. In fact, the supply of fine butter the latter part of the week was short of requirements and as a consequence prices on 92 score butter worked a full cent above the close of the previous week. However, the market was not any too firm because local prices were inviting offers from the North and inhibiting eastern shipments. Medium and undergrades were in plentiful supply and in some instances were moved into storage rather than to sell at available prices. Storage holdings were increased 35,376 lbs. against 24,695 lbs. the week before and 28,633 lbs. for the corresponding week last yar.

	Thu.	Fri.	Sat	Mon.	Tu.	Wed.
Extra	56	56½	57	57	57	56
Prime 1sts	55	55½	55½	55½	55½	55½

EGGS.

(Exchange quotations less commission.)

Extra eggs developed strength at the close of the calendar week, prices Friday and Saturday being 2½ cents higher than on Thursday. Monday and Tuesday they held firm at a half-cent lower, but on Wednesday the market weakened another half-cent. The other descriptions also showed strength. Extra pullets jumped three cents Tuesday, and undersized eggs were four cents higher on Wednesday than they were seven days before. The receipts are showing a decline and eggs to storage have not equalled the out-of-storage movement in the past week. The balance in storage is 140,128 cases, as compared with 119,961 cases a year ago.

	Thu.	Fri.	Sat.	Mon.	Tu.	Wed.
Extra	54½	57	57	56½	56½	56
Firsts	50½	..	..	..	..	..
Dirties	50½	50½	50½	50½	50½	50½
Ex. pullets	46	46	46	46½	49½	48
Undersized	34	36	38	38½	38½	38

CHEESE.

(Exchange quotations less commissions.)

Although fancy California cheese was scarce in the past week, the demand was light and prices receded a cent and a half in the seven days. Firsts likewise showed a decline of 2 cents during the week, whereas other varieties were steady. Upon heavy receipts from Oregon, storage holdings have continued to increase. On Monday alone 34,960 pounds went into storage.

California Flats, fancy 30½c
do, Flats, 1sts 25½c
Y. A., Fancy 31½c
Y. A. Firsts 26c
Oregon Triplets 28½c
do, Y. A. 31½c

FRESH FRUITS.

(Wholesale prices made by commission houses.)

There is a good supply of Gravenstein apples, but Red Astrakhans are about gone. The market has been about steady on practically all fruits, although peaches and cherries have inclined toward higher levels, and figs have stiffened up some on account of increasing scarcity. On berries the situation is unchanged, except on blackberries, which are lower. Cantaloupes continue firm.

Apples, Gravenstein .....$$2.25@3.00
do, Red Astrakhan .....$1.75@2.00
Plums .....$1.25@2.00
Cherries, loose, lb. .....5@12½c
do, box .....$1.50@1.75
Apricots, lb. .....5@7c
do, box .....$1.25@1.50
Peaches, 4 baskets .....$1.25@1.50
Pears .....$2.00@4.00
Figs, box, 1 layer .....$1.50@1.75
Strawberries, 6 12-oz. boxes....85c@$1.25
do, 6 8-oz. boxes, drawer .....50@75c
Blackberries, drawer, 12-oz. drawers..40@50c
Raspberries, drawer .....70@90c
Loganberries, drawer, 12-oz. boxes..75@85c
do, 8-oz. boxes .....50@60c
Cantaloupes, Standard $4.50
do, Ponies $3.25
do, Honeydew, crate $1.25
Watermelon, lb. 3c

CITRUS FRUITS.

Citrus fruits are at a standstill, oranges moving slowly and lemons showing no activity.

HONEY.

Honey is coming in slowly, and the demand is light. Indications are for a fair crop, particularly on sage honey, while the crop of alfalfa honey will be light to medium.

DRIED FRUITS.

The market is quiet on all dried fruits. The prospect of higher freight rates has not stimulated the movement East to a noticeable extent, buyers generally being inclined to hold off placing orders until all the associations have named prices on the new crop. It is expected the raisin company will name prices on August 9th, and that the prune association will do likewise about the 12th or 14th.

Raisins, 1920 .....18½@20c..
Prunes—40-50s, 1920 crop basis 17c
do, 50-60s 15c
do, 60-70s 13½c
do, 70-80s 12c
do, 80-90s 11c

SPECIAL CITRUS REPORT.

Los Angeles, July 27, 1920.

At New York the California orange sales opened the week in the auction market by advancing 25@50 cents per box. Demand was strong and all offerings were taken. The lemon market made a slight gain. Valencia oranges, $3.15@9.70; majority of stock selling around $6.50 per box, very few lots selling for less than $4.50 per box. Lemons, $1.80@2.20; depending upon quality. Grapefruit showed much strength, $3.15@5.55 per box.

Boston—Demand for oranges equal to supply; market strong at $4.50@6.85 for Valencias. The lemon market as rotten as the fruit, from 30c@$1.25 per box. Twelve cars of lemons selling from 30 to 90 cents per box. Grapefruit market in splendid shape, $4.25@6.30; ½-boxes, $3.05.

Pittsburgh—Orange market firm. Valencias, $4.50@6.50, one car averaging $2.80. Lemon market weak, 65c@$2.90.

Cleveland—Orange market in splendid shape, $5@6.75, one car averaging $3.75, in poor condition. Lemon market fair, $1.35@2.95.

Special Livestock Market Report

San Francisco, July 28, 1920.

CATTLE—The cattle market continues stagnant. The quality of the offerings is good, but the market is being forced by too many cattle from holders not having feed to carry them. The market is therefore weak, and likely to continue so as a result of the scarcity and high price of feeds.

Steers, No. 1, 1000-1200 lbs..... 9½@10c
do, 1200-1400 ..... 9 @ 9½c
do, 2nd quality ..... 7 @ 8c
do, thin ..... 6 @ 7c
Cows and Heifers, No. 1 ..... 8 @ 8½c
do, 2nd quality ..... 6 @ 7c
do, thin ..... 2 @ 4c
Bulls and Stags, good ..... 4 @ 5c
do, fair ..... 3 @ 3½c
Calves, lightweight .....10½@11c
do, medium ..... 9 @10c
do, heavy ..... 8 @ 8½c

HOGS—Hogs are the one strong feature in the livestock market. All offerings are eagerly picked up and more could be absorbed. In the East there has been a general advance of $1 per hundred in the past week, and even medium and cheap grades are not a drug on the market.

Hard, fat, grain-fed, 100-150 lbs.....15½c
do, 150-225 lbs. 16c
do, 225-300 lbs. 16c
do, 300-400 lbs. 14½c

SHEEP—All mutton stock is plentiful, but there is a fair demand for lamb stuff. An over-accumulation of lambs, which is a possibility, may force some shipments eastward.

Lambs, milk .....11@11½c
do, yearling ..... 8@ 8½c
Sheep, wethers ..... 7 @ 8c
do, ewes ..... 5½@ 6c

Los Angeles, July 28, 1920.

CATTLE—There is no change in this market from a week ago. The offerings of both steers and cows continue good, and most of the cattle coming in are in very good condition. Killers buying cautiously and market weak.

Per cwt. f. o. b. Los Angeles:

Beef steers, 1000@1100 lbs. ....$8.50@10.50
Prime cows and heifers .....$8.00@ 8.50
Good cows and heifers .....$7.00@ 7.50
Canners .....$4.50@ 5.00

HOGS—Not many coming in and the market the past week was both steady and firm. Killers, however, only buying for the dressed meat trade. Hence no change in prices.

Heavy, averag'g 275@350 lbs. $12.00@12.50
do, 225@275 lbs. .....$14.00@14.50
Light .....$15.50@16.50

Rough docked 20 lbs. piggy sows 40 lbs. and stags, 40 per cent.

SHEEP—Not so many offering the past week, yet the receipts were equal to the demand. Lambs continue in very good request and there was some little call for ewes. Wethers still dull.

Prime wethers .....$ 7.00@10.000
Yearlings .....$ 6.00@10.00
Prime ewes .....$ 8.00@ 9.00
Lambs .....$10.00@12.00
Spring lambs .....$10.00@12.00

Portland, Ore., July 27, 1920.

CATTLE—Steady. No receipts. Choice grass steers, $10.50@11.00; good to choice, $10.00@19.50; medium to good, $9.00@10.00; fair to good, $8.25@9.00; common to fair; $7.00@8.25; choice cows and heifers, $8.00@8.50; good to choice cows and heifers, $7.00@8.00; medium to good, $6.00@7.00; fair to medium, $5.00@6.00; canners, $3.00@4.75; bulls, $5.50@6.50; choice dairy calves, $13.00@15.00; prime light, $11.50@13.00; medium light, $9.00@11.00; heavy calves, $7.00@9.00; best feeders, $7.50@8.00; fair to good, $6.00@7.50.

HOGS—Steady; no receipts. Prime mixed, $17.25@17.75; medium, $16.75@17.25; smooth heavy, $14.00@15.75; rough, $12.00@14.00; pigs, $12.50@16.00.

SHEEP—Steady; no receipts. East of Mountain lambs, $11.00@11.50; valley, $9.25@10.25; culls, $7.00@8.50; ewes, $2.25@6.00; yearlings, $6.00@7.00; wethers, $6.00@6.50

EASTERN.

Chicago, July 26, 1920.

CATTLE—Receipts, 15,000. Opened slow, quality poor; early sales, best yearling handyweight steers and good butcher cows steady; all others tending lower; stockers slow; bulk beef steers, $12@16; she stock, $6@11; canners and cutters, $4.25@6; veal calves, $16@16.50.

HOGS—Receipts, 42,000. Opened 15 to 25c lower; latter fully 25c lower; one load sold early at $16.25; bulk light and light butchers, $15.10@16.10; bulk packing sows, $13.75@14.10; pigs, steady bulk, $14@14.50.

SHEEP—Receipts, 28,000; slow, steady, to 25c lower; quality fair; good Western lambs, $15.25@15.50; good native lambs, $14.75; choice held higher; choice heavy ewes, $7.50.

LOS ANGELES

Los Angeles, July 27, 1920.

BUTTER.

Receipts were good, but the demand was equal to the supply. Distributors reported a good, strong and steady demand for all extras coming in. The question now is rather the want of supply than demand for all high-scoring goods. Receipts for the week, 355,800 pounds.

EGGS.

A firm and fairly active market was had the past week for all fresh ranch eggs coming in. Receipts by rail for the week only 839 cases. Prices are ruling now much the same as a year ago and are higher here than in the East, and the consumption being such as to hold prices firm at quotations.

Fresh ranch, extra 52c
do, case count 49c
do, pullets 46c

POULTRY.

The market was hardly so active the past week. There was a rush of broilers in and demand only fair, but prices steady. Friers coming in more freely and sales slow. Heavy hens scarce, firm in good demand and higher. Light hens in oversupply, slow sale and market weak. Ducks selling only fairly. Turkeys scarce and what few arriving selling without trouble.

Broilers, 1 to 1½ lbs. 34c
do, 1½ to 1¾ lbs. 28c
Friers, 2 to 3 lbs. 32c
Hens ..... 20@35c
Roosters (soft bone), 3 lbs. and up..... 38c
Ducks .....17@20c
Turkeys .....40@44c
Geese 25c

VEGETABLES.

Market well supplied the past week and all good fresh stuff met with a good demand. Prices were generally steady, the exceptions being tomatoes, which are now coming in freely and are sharply lower. Lima beans are also off and so are green peppers, but demand fair at the decline. Corn in fair demand and steady. Lettuce a little lower and slow sale. Cabbage steady, but demand light. Potatoes coming in more freely and lower. Some northern coming in now, which increased the supply, and demand only fair. Onions steady but dull. Receipts were light, but so was the demand.

We quote from growers.

Potatoes .....$4.75@5.25
Potatoes, local cwt.....$4.75@5.25
do, Northern, cwt. .....$3.75@4.00
Onions, Stockton, yellow, cwt. ..$1.25@1.35
do, Coachella yellow, cwt. ....$1.40@1.50
do, local, crate .....60@75c
Cabbage, per 100 lbs. .....$2.50@3.00
Lettuce, crate .....50@65c
Rhubarb, per 30-lb. box .....50c@$1.00
Peas, lb. .....9@11c
Carrots, doz. bunches .....30@35c
Summer Squash, local lug .....50@60c
String beans, green, lb. .....2@3c
do, wax, lb. .....2@3c
do, Kentucky, lb. .....4@5c
Cucumbers, lug .....50@60c
Tomatoes, home-grown, No. 1 lug.. 75@85c
do, No. 2 .....30@50c
Bell peppers, lb. .....10@11c
do, Chile, lb. .....5@7c

FRUITS.

Market well supplied the past week, and demand good for all choice to fancy fresh stuff and prices ruled steady. Plums, figs and cherries all unchanged from a week ago, and what coming in selling without trouble. Apples are a little lower, but sold well and at prices that are still good. Peaches were not only in good supply but quality better and were moved without trouble. We quote from growers.

Cherries, Black Republics, lb. .....18@20c
do, Royal Anns, lb. .....18@20c
Apricots, lb. ..... 4@ 5c
Plums, Beauty, lb. .....6@8c
do, Santa Rosa, lb. .....8@9c
do, Satsuma .....7@8c
do, Kelsey, lb. .....6½@7c
do, Burbank, lb. .....5@6c
Peaches, Freestones ,lb. .....7@8c
do, Clings, lb. .....7@8c
do, extra, fancy clings, lb. .....9@10c
Figs, black, lb. .....10@12c
Crabapples, lb. .....4@5c
Grapes, lb. .....7@12c
Apples, Red & Wh Astrachan, bx $2.50@2.75

BERRIES.

Not many in the past week. What are arriving sold readily and brought steady prices. Strawberries, blackberries and raspberries were all in light supply and good demand. We quote from growers.

Blackberries, 30-basket crate.... $4.75@5.00
Raspberries, 30-basket crate ....$5.00@5.50
Strawberries, 30-basket crate... $5.00@5.25
do, poor to choice, crate ....$4.50@5.00

MELONS.

But few were shipped in in the past week, home-grown now having the market. Offerings fairly good, but so was the demand. Like all first arrivals they brought good prices. But the market may be expected to work lower with increased receipts. Quality of the offerings so far very good. Honey Dew Melons steady and Casabas coming in more freely; slow sale and lower. There were some local watermelons in the past week and they sold well and brought good money.

Cantaloupes, home grown, tip-top, crates ..... $2.75@3.00
Watermelons, lb. .....3@3½c
Casabas, lb. .....1@1½c

HAY.

A dull and lower market was had the past week. Receipts were good and buyers held back, taking only such lots as needed from day to day. Barley hay broke $1 a ton and alfalfa $1 to $2 a ton, and clearances were hard to make even at this decline.

Barley hay, ton .....$23.00@25.00
Oat hay, ton .....$25.00@28.00
Alfalfa, Northern, ton .....$30.00@32.00
do, local, ton .....$28.00@33.00
Straw ..... $14.00@16.00

BEANS.

The market the past week held steady. There was no trading, however, as usual this time of year, buyers holding out of the market. Holders, however, are looking for a fair movement with the coming of cooler weather.

MARKET COMMENT.

Bartlett Pear Market Easier.

Owing to heavy shipments of Bartlett pears during the past two weeks, the markets have shown some weakness, however there has not been the break that ordinarily occurs under such pressure. Shipments have been going out at the rate of 80 to 100 cars daily for two weeks. On Saturday July 24 there were 130 cars of Bartletts shipped, however, on the following day, Sunday, there were but 18 cars, but the average shipments are around the above named figures. Notwithstanding the heavy shipments sales for the week run as follows on straight cars of pears. New York—$2,600, $2300, $2600, $2263. Boston—$1641, $2032, $1908. St. Louis — $1791, $1749. Pittsburg — $1974, $1984. Philadelphia—$1460, $1485, $1630. Cleveland —$1862, $1945.

Plum Market Still a Wonder.

The plum market continues to hold the center of the stage in prices, there seems to be no let up, occasionally a car falls below the $1800 to $2000 mark, that is not the fault of the market but condition of fruit on arrival. We have before us a sale of the early part of the week, made in St. Louis. Tragedy prunes $3.30 per crate. Burbank, $3.10 car, grossed $1,763. Philadelphia same date a car grossed $2,341. Baltimore $2,047. Detroit $2,590. New York $2,828. Minneapolis $2,516. Boston $1,828. Pittsburgh $2,4[illegible]. Cincinnati $1,919.

Cherries Becoming Scarce.

Cherries have about seen their day. Oregon has been supplying the market for some time but the stock is inferior. Rain has caused the fruit to crack which of course makes it undesirable, selling at 10@12½ per pound for Blacks. Fancy Bings 15 @18 cents per pound. Royal Ann 10 @15 cents per pound. Boxes $1.50 @$2.25.

Large Shipment of Pears Condemned.

Horticultural Commissioner Seulberger of Alameda County swooped down upon a shipment of 20,000 boxes of Bartlett pears that arrived in Oakland for cannery purposes. Seulsberger claims that the pears were infested with mealy bug and if fumigated, they may be allowed to pass muster.

Cantaloupe Market Remains Good.

Notwithstanding the heavy shipments of Canteloupes the eastern markets are holding up remarkably well. Daily arrivals in New York from California have reached as high as 70 cars in addition 20 cars from Southern markets. Prices ranging from $3@$3.50 per crate, poor stock as low as $1.75. Ponies $1.50 to $2.50.

Berries Plentiful.

Berries of all kinds of the bush variety have been plentiful, so much so that the market has had a tendency to weaken. Raspberries, per drawer 85@$1. Loganberries, local, red per drawer 50@75. Local, black, per drawer 45@50 cents. Strawberries, Peninsula, 12-oz. drawer, $1@$1.25; 8 ounce drawer 75@$1.

Onion Market Practically Dead.

The onion supply is far ahead of the demand, and the local market is filled to overflow with a large reserve in the producing districts. Prices ranging from 75 cents to $1.50 per hundred cwt. for red and silver skin, $1@$1.25 for green onions per box.

Citrus Market Quiet.

The local wholesale dealers report the orange market at a standstill and practically no market for lemons. Grapefruit is scarce at the present time but stock will be replenished by fresh arrivals from the South in a few days.

Potato Market Easy.

Owing to continued heavy arrivals of potatoes from the Delta and Colma districts, prices have eased off with prospects of going lower. Quotations at the present time River's, per pound, 3@4 cents. Colma varieties, 4@4½ cents.

Local Market Active.

Nectarines and cling peaches have made their appearance on the local market commanding prices of $2.50 @$2.75 per crate. Large size free stone peaches are at a premium. Baskets of the best fruit selling at $2.

Red June Apples High.

Red June apples that put in their appearance some days ago, dropped out of sight for a few days, to appear again selling at the top price of $3 @$6 per box, a splendid price for a poor grade eating apple.

Sweet Potatoes Scarce and High.

Sweet potatoes are arriving slowly, as the season has not fairly opened, however, prices are high, ranging from 15@20 cents per pound.

Peach Market Weak.

During the past week the Eastern peach market on California stock has been weak, due largely to poor condition on arrival.

BREVITIES.

Sweet clover sowed broadcast among willows on bottom land along the Stanislaus River has greatly increased the pasturage according to an up-to-date rancher.

The Orange county unit of the California Lima Bean Growers' Association held a picnic and barbecue July 24. Speakers from the State Association were scheduled.

The walnut crop of Southern California will probably amount to approximately 80 per cent of the 1919 crop of 56,000,000 pounds. Approximately 7 per cent of last year's crop remains unsold.

Placer County Chamber of Commerce are planning to make an extensive fruit exhibit at the State Fair. It is also their intention to include vegetables, grains, grasses, nuts, wood and minerals.

Horticultural Commissioner Day of San Benito County states that the recent hot spell has rushed the ripening of apricots all over the country and there has been a hurry-up call sent out for extra help.

It is reported that all the cars have been supplied which were necessary for shipment of fruits and perishable products from California during the past few months, and that the present supply will meet the requirements for the time being.

The apricot season is about through. Those arriving are showing the effects of the hot, dry weather, and are not holding up well. Fancy stock in crates, $1.25 to $1.50; in lugs, $2.00 for fancy, while medium are selling at $1.50 to $1.75.

A heavy apricot crop characterizes the orchards almost all over Ventura County. Trees are propped in many cases, though the system of pruning requires a minimum of props. The fruit and trees ar efreer from disease than was formerly the case.

Apricots which in former years thrived in the Arroyo Grande Valley of San Luis Obispo County and were pulled out for lack of profitable markets are again occupying the land. Walnuts also cover considerable acreage here. Yields promise to be fair this season.

Gridley has again come to life in the matter of canning work. It has been eight years since there has been active work, but at present it is the center of canning operations by the new Libby, McNeill and Libby cannery, who are now employing a force of 300 women and 100 men. As the season progresses the pack is expected to reach 100 tons a day.

The almond and prune growers of Butte County are satisfied that there will be no shortage of labor to handle the coming crop. A meeting has been held by the growers to discuss the labor situation and scale of wages, and it was decided that the scale would remain about the same, which is 50 cents per hour for day work; the same scale for almond hulling as last year.

VEGETABLE UNION HAS "FAMILY DINNER."

As an appreciation of the splendid co-operation among the officers and employees of the California Vegetable Union, at a recent "conference week," in which all members of the staff took part, a "Family Dinner Dance" was held at the Los Angeles Athletic Club. A splendid dinner was served in which California products were featured. Dancing followed until a late hour. Every detail had been worked out so that the affair was a most enjoyable one. Only those directly connected with the organization with their ladies were guests, making the ccasion strictly a "family getting together." Such gatherings are becoming more and more common with the fruit and vegetable shipping concerns. They are treating their help as human beings, not as slaves, as was the case many years ago. As an employee under the old regime, we fully appreciate the change of heart being exhibited by the younger set of employers.

J. D. Rowe & Sons, Davis, lessors of the Innisfail Herd of Dairy Shorthorns, report the following records: Princess Clay, 57.29 lbs. fat; Countess of Heggle 3rd, 50.29 lbs.; Innisfail Dairy, a 2-year-old, 48.15 lbs.; Grenhill Caroline, 51.9 lbs.

Classified Advertisements.

Rate, 3½c per word. Cash must accompany all orders.

COUNTRY LANDS.

IDEAL DAIRY RANCH on State Highway for sale in Humboldt's finest dairy district. 54 acres of land, 40 of which may be cultivated, two wells and tanks, good fences, dwelling house of 12 rooms with running water, etc. Barns, garage, also large store building and dance hall. Sandy loam soil suitable for all dairy crops and particularly adapted for potatoes. Orchard of 75 apple trees in bearing. Chickens and brooder house for approximately 5,000 chickens. Price $22,000. Box 2130, Pacific Rural Press.

LAKESIDE ORANGE GROVE
Splendid Buildings, $2500
Seven acres bordering beautiful- 5-mile lake; 300 orange and grapefruit trees in bearing; extensive bearing vineyards; cottage worth $2800, beautifully situated, overlooking lake; good water, telephone, oak shade; other buildings; quick-action price, only $2500. Full details, page 64 Strout's New Catalog, Orange Grove and Other Tropical Farms. Copy free. STROUT FARM AGENCY, 503FA, Wright-Callender Bldg., Los Angeles, Cal.

80 ACRES—Honey Lake Valley, good location, near county seat, schools, banks, S. P. station. Good improvements. Good irrigation system. Raise fine alfalfa seed, hay and grain. $16,000.00 cash. A good buy. Box 280, Standish, Lassen Co., Cal.

POULTRY RANCH, small orchard—big money-maker. Exceptional opportunity for experienced poultryman with small capital. Rinconada Poultry Ranch, Campbell, Cal.

RANCH FOR SALE—Wih stock, implements, orchard in bearing. Will not trade. Write to C. G. Brochu, Placerville, El Dorado, Cal.

WANTED DAIRY RANCH on shares—from 40 to 50 cows. Box 4, Velta, Cal.

MISCELLANEOUS.

WANTED—A number of experienced men to cut grain with old-fashioned cradles. Will pay 75c per hour. Six weeks or 2 months' steady work. Apply C. S. Jurges, Willows.

AGENTS WANTED—To sell seeds, plants, trees, spray, garden supplies, etc. Large firm, liberal commission. Be the first to apply from your town. Give age, reference, photo, etc. Fine opening for young man or lady. Boys and girls can make good money during vacation and after school. I send you the packages of seed free—you pay as sold. Write at once to Wm. E. Dart, Box 414, Santa Rosa, Cal.

WANTED — Farmer, permanent bach, to charge going place, 40 acres, 25 in orchard; energetic, who knows how and will attend to trees. Will furnish everything. Consider shares to right party. Santa Cruz district. References. Box 2120, Pacific Rural Press.

CORN HARVESTER — One-man, one-horse, one-row, self-gathering. Equal to a corn binder. Sold direct to farmers for twenty-three years. Only $28, with fodder binder. Free catalog showing pictures of harvester. Process Corn Harvester Co., Salina, Kan.

REMANUFACTURED PIPE.
All sizes standard pipe and wrought iron screw casing. All kinds of fittings. Guaranteed good as new. Write for prices. Weissbaum Pipe Works, 160 Eleventh street, San Francisco.

WANTED — Capable, energetic, practical farmer, single, 38, wishes to get in touch with live, progressive party with a view of securing position as manager of ranch, stock ranch preferred, or may develop tract of land for stock ranch. Wide experience in stock, fruit and general farming. Best of references. Box 2110, Pacific Rural Press.

FOR SALE—24-inch steel grain separator, self-feeder. Will thresh all grains, including rice. Right size for community thresher. Terms to responsible parties. Price, $500.00. Box 2100, Pacific Rural rPess.

PARTIES INTERESTED in securing plans for the best and cheapest evaporator of large capacity on the market will find it to their interest to communicate with F. C. Chapman, Modesto, Cal.

RELIABBLE CABBAGE SEEDS—I grow them. You want them. Let's get together. Write for special offer on what you need. Isaac F. Tillinghast, 32 Podel St., Santa Rosa, Calif.

ALL SIZES OF PIPE and screw casing, both new and second-hand, dipped and undipped. Guaranteed. Prices right. Shecter Pipe Works, 304 Howard St., San Francisco.

FOR SALE—Two Monitor Bean Separators, size 5-E; condition as good as new. Call or write, California Almond Growers' Exchange, 18th C Street, Sacramento, Calif.

CROLEY'S BALANCED HOG FEED—The cheapest feed to fatten hogs. Write Geo. H. Croley, Townsend St., San Francisco, Calif.

FOR SALE—Portable Smalley Alfalfa Cutter, 26 inch, with mealing attachment and sacker. Box 2080, Pacific Rural Press.

FOR SALE—Mariout Barley Seed—clean and good quality, weighing over 100 lbs. per sack. J. D. Rowe & Sons, Davis.

WANTED IMMEDIATELY — Experienced budders and tiers. Address or phone, Kirkman Nurseries, Fresno.

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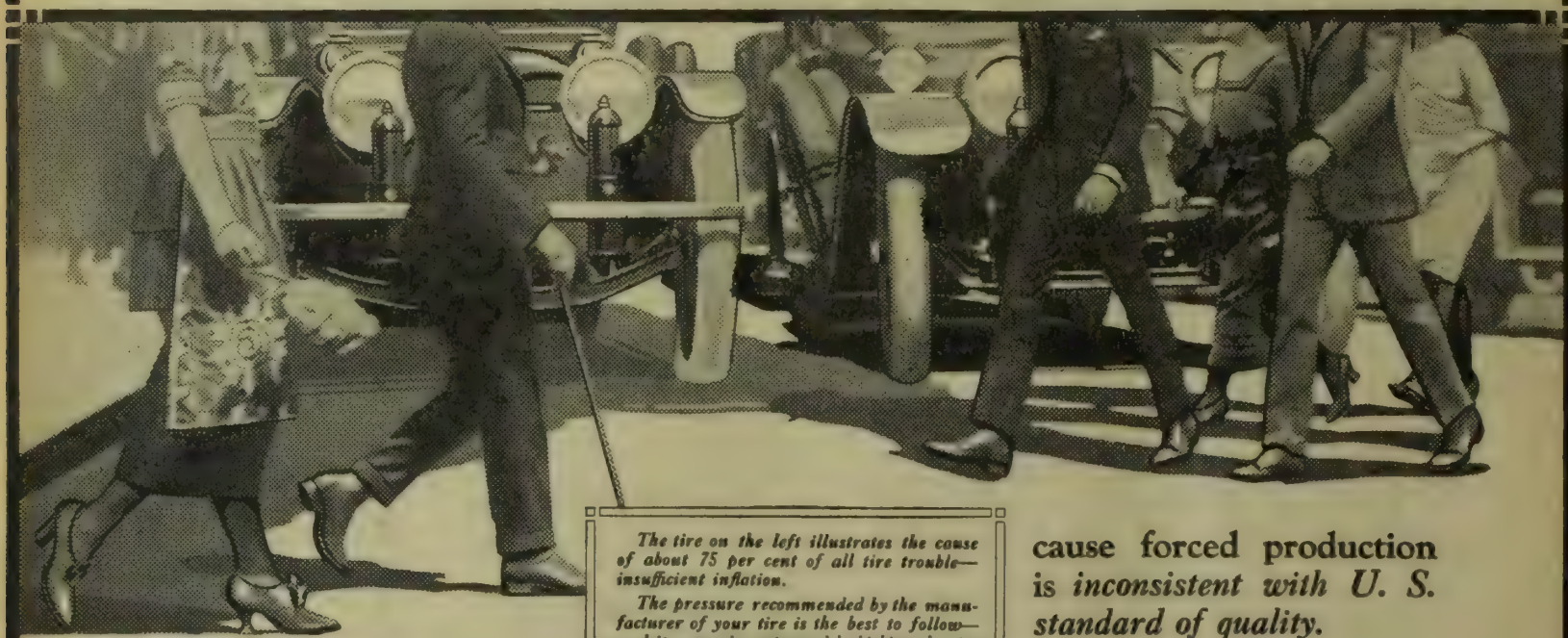
Opinions about Tires should be *Weighed* as well as Counted



The tire on the left illustrates the cause of about 75 per cent of all tire trouble—insufficient inflation.

The pressure recommended by the manufacturer of your tire is the best to follow—and it cannot be estimated by kicking the tire or punching it. The regular use of a reliable air gauge is the best safeguard against punctures, rim cutting and fabric breakdown.

THERE is hardly a motorist who hasn't at some time or other in his experience had a tire dealer attempt to sell him a tire by representing it as the fastest seller in town.

More attempts are probably made to sell tires by playing to the motorist's alleged weakness for "crowd of buyers" than by any other known method of selling.

* * *

The *experienced* motorist, of course, refuses to surrender his individual judgment to any crowd or mass of whatever size.

Too often he has seen the results of accepting opinions at their face value, without first finding out *what they are based on.*

And you will find him going more and more to the dealer who has something to offer in support of his tires other than "crowds of buyers" and "numbers of sales."

* * *

The opinion in favor of U. S. Tires is not based solely on the number of them in use.

Great as that number is, it is due to something besides clever arguments.

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The United States Rubber Company's enormous investment—greater than that of any concern in the industry—has always been aimed *solely* at quality.

Building a *tire* first and a market afterwards. Thinking of the *individual user* instead of the number of sales.

One of the reasons, perhaps, why there is now a scarcity of U. S. Tires.

* * *

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Two hundred and thirty-five Branches

VOL. C—No. 6 Fiftieth Year

THE PACIFIC RURAL PRESS

SAN FRANCISCO AUGUST 7, 1920 LOS ANGELES

California State Lib 7-1

A CALIFORNIA MAIDEN SURVEYING WITH PRIDE THE UNEXPECTED FAMILY OF WHITE WYANDOTTES, AT TWO MONTHS OLD.

THE more miles you ride on Goodrich Tires, the greater your wonder grows that so many more miles of service are still left.

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"Best in the Long Run"

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The Goodrich Adjustment Basis: Silvertown Cords, 8000 Miles; Fabric Tires, 6000 Miles

General Agricultural and Horticultural Review

AGRICULTURAL NOTES.

Baled alfalfa hay is selling at $28.50 per ton f. o. b at Tipton, Tulare county.

Cotton growers in the San Joaquin Valley are talking of $1.00 cotton this coming season.

Oakdale ranchers are shiping baled hay to San Francisco and receiving returns of $25 per ton.

There will be 350,000 sacks of barley harvested in one field alone in the Tulare Lake grain belt.

Exports of breadstuffs during the fiscal year 1919 totaled $808,471,226 as against $954,647,337 in 1918.

During the first quarter of 1920 more than 100,000 pounds of rice were exported from San Francisco to Japan.

During the first six months of 1920, 57,080,740 pounds of rice were exported from San Francisco to foreign ports.

Rents of San Joaquin delta lands, which are $30 and $35 this season, are expected to jump to $40 as a minimum next season.

Exports of flour for 1919 aggregated $21,651,261 barrels, valued at $240,574,670, as against 24,181,979 barrels, valued at $267,966,269 in 1918.

Wheat exports for the fiscal year of 1919 amounted to 122,430,734 bushels, valued at $38,183,023, compared with 178,582,673 bushels worth $424,543,010 in 1918.

Cotton growers in Kern county are planning to go to Colorado for pickers this October and November. Laborers in beets there are laid off at about this time.

Four thousand farmers and families of Alameda county are expected to attend the Concord Farm Center barbecue and picnic, which is to be held in Michell Canyon, near Clayton, September 11.

Conservation of credit resources by the Federal Reserve Banking system in preparation for the autumn demands for crop moving purposes has been indicated by the weekly statement of the banks just issued

More than 300 acres of American Durango cotton is being grown in Stanislaus county this year as an experiment. The Agricultural Extension Bureau Service is encouraging the project by having from one to ten acres planted on different farms.

Lake Tahoe water used in Nevada for irrigation projects is obtained from the Truckee river which is the outlet of the lake. According to statistics submitted at the recent hearing at Reno, the present level of Lake Tahoe is higher than the lowest mark registered in 1889.

The Department of Commerce has issued a report that the cotton exports during the fiscal year ending June 30 exceeded those of the year before by more than 1,500,000 bales. In June, however, cotton exports were only 241,449 bales, compared with 690,169 in June of last year.

Eleven hundred students from the University of California at Davis were shown over the farms and through the orchards of Sutter county a few days ago, under the direction of Professor Guy L. Phelps of the University of California, and Horticultural Commissioner H. P. Stabler.

The potato crop of the Merced-Stanislaus Sweet Potato Growers' Association is making splendid progress toward maturity. The harvest will be two weeks late owing to a set back by late rains on plants before leaving seed bed. The acreage is expected to turn out 65 to 75 per cent of a full crop

J. B. Hall, a bean grower of Merced, and the California Bean Growers' Association are still at it. The second fight has been won by Hall in the Justice Court of Madera, when the Court ordered the Association to produce its books in court. Hall is suing the Association for an accounting for several thousand pounds of beans, consigned to it two years ago for which he has not been paid in full

Oats rank next to corn and wheat in crop acreage and value in the United States, reports the Department of Agriculture.

Antioch uses 500,000 gallons of water daily during the summer. The diversion for irrigation purposes in the valley is declared to be much larger.

Sacramento employment agencies report that calls for ranch labor have slumped materially, which would indicate that ranchers were well supplied with help.

The State Land Settlement Board is to pay the Turlock Irrigation District $54,071, or at the rate of $16.77 per acre, for the 3,224 acres of Delhi Colony land district

A great deal of alfalfa which growers producing for market would have plowed out last season has been kept by dairymen, even though it is too old or thin or weedy to yield well.

Potatoes of the first crop must be matured before they may be planted for the second crop, say agricultural authorities at the University of California.

Wheat around Merced totals a very light tonnage this year, according to H. K. Huls, of the Merced Elevator Co., who was expecting only three or four thousand sacks of this grain to come in to his place.

The Department of Agriculture reports that wheat from last year's crop carried over into 1920 totaled 109,318,000 bushels July 1, compared with 48,561,000 of the 1918 crop on hand the corresponding day last year.

There are many junior colleges in California, but only one junior college of agriculture. It is hoped that more will be established ere long, according to F. L. Griffin, Prof. of Agriculture Education at Berkeley.

More alfalfa on the Salinas River! The Salinas Land Co. is clearing 100 acres on the bottom land three feet above the river bed on which alfalfa is to be planted this fall. A well is being put down for irrigation.

The price of watermelons soared to $43 per ton in the street market in Turlock last week, setting the record for the price of this product in that district, the highest price heretofore shown being under $30.

J. S. Townsend, gin expert, will manage the installation and operation of the cotton gin at Arvin, Kern county, financed by the Arvin Cotton Growers' Association. The building will be in readiness to handle the coming crop.

The Department of Agriculture reports that wheat on farms, in country mills and elevators and in points of long accumulation, all showed on July 1, 1920, an increase over 1919 totals. This year farmers held 47,756,000 bushels, against 19,261,000 bushels in 1919.

A novelty in the shape of a cauliflower nursery bed with about 1,000,000 plants is now being experimented with at Lindsay, Tulare county. It is being conducted by R. O McDonald, manager of the Native Sons Orchard Company, and Dr. P. A. Bonchquet, Tulare county plant pathologist.

The first step in securing California's position among the good roads states of the country has been achieved through the campaign to place the initiative petition increasing the interest rate on the state highway bonds, and relieving the counties of interest payments upon the November ballot.

A discovery has been made in Butte county, by which the June drop of Washington Naval oranges, which causes a loss of thousands of dollars annually, may be averted, by the growing of a summer cover crop. A demonstration of this fact may be found in the Bates orange grove in Thermolita. Cow peas were used as the cover crop.

HORTICULTURAL JOTTINGS.

The Southern Pacific has put a fruit express train on the Clovis branch to handle the large crop being harvested there.

Fifty members of the Women's Land Service are engaged in picking the crop of Bartlett pears in an orchard south of Marysville.

Wineries at Healdsburg are offering $90 a ton for black wine grapes and $80 for black and white mixed. The grapes will be used in making sacramental wine, etc.

Fresno district fruit-shipping concerns say there are plenty of cars in sight, and they fear no immediate shortage as is customary at this time of the shipping season.

The Hanson ranch near Reedley has been purchased by Frank Sims. It is improved to Thompson seedless grapes, peaches and apricots. The consideration was $40,000.

During the last year reports show a holdover approximately 10,500 tons of figs and a considerable part of that tonnage is yet in the hand of the growers and in the packing houses.

At the California Packing Corporation's plant in Yuba City, with eight hours as a limit for cutting fruit, the women and girls are making from $3 to $7.50 per day and the canners $6.

An apiarist at Los Banos reports that his bees are making honey faster than he can care for it. The alfalfa is putting forth an unusual amount of blossoms, due to lack of labor and late cutting.

Improvements totalling $17,600 are being made by the California Co-operative Cannery at Modesto. The improvements include the erection of 35 two-room cottages for use of cannery employees.

F. W. Barkhaus of Newcastle, who has one of the largest fruit ranches in Placer county, has decided to embark in the fruit-shipping business and is erecting a large packing and shipping warehouse.

H. E. Woodworth, county horticultural commissioner of San Mateo county, has tendered his resignation to the Board of Supervisors to accept a position with the faculty of the University of the Philippines.

H. E. Ross, representing the Isthmian steamship lines, has been in Watsonville for the purpose of interesting the dried apple brokers in shipping dried apples by steamer to New York, when that steamship line opens up August 15th.

A. E. Wray, secretary of the San Joaquin Valley Fruit Growers' Association, believes that this year the so-called fruit packing season will be greatly lengthened, because as soon as the fruit season is over there will be a demand for cotton pickers throughout the valley.

The Hunt-Jewett-Bontz company of Turlock have just finished up a contract, entered into with the Merced Growers' Packing Company, by the terms of which it marketed for the latter 125 cars of tomatoes, 25 cars of onions, 20 cars of Italian squash, 10 cars of bell peppers and two cars of garlic.

The pear growers of Sacramento, Placer and Eldorado counties are very much exercised over a new trouble which has increased during the present season, in the shape of blossom end rot. An effort is being made to have the Federal Department of Agriculture send an expert into the field to investigate.

Division of Plant Inspector of the Territory of Hawaii has ruled that on and after July 1, 1920, no shipment of potatoes or apples shall be permitted to be imported into the Territory of Hawaii from ports on the Pacific Coast of the United States unless such shipment is accompanied by a certificate, signed by a qualified officer of the city, county, or state from which the shipment is made.

Arthur Small of Tulare county has shipped a heavy crop of plums this season by the carload to eastern markets.

The first carload of Zante currants ever shipped from Fresno county went from Fowler and Wahtoke last week.

President Wylie M. Giffin estimates the 1920 raisin crop at 165,000 tons. This is approximately the same as the 1919 tonnage.

S. Kitamura, a Japanese farmer near Denair, was fined $25 for offering for sale cantaloupes that did not conform to the standardization law.

The first carload of Thompson seedless grapes to be shipped from the Weed Patch district of Kern county sold in Chicago at an average of $4.40 per crate.

Shipment of Thompson Seedless grapes is now under full headway in the Fresno district. The first cars shipped went by express and were sold at $100 per ton.

The ravages of brown rot in Georgia peaches are causing them to arrive in bad condition, which of course is of advantage to the California peaches, which are selling at fabulous prices.

Every peach cannery in the Fresno district is now running on full time. Tuscan and Orange Clings are being rushed to the canneries. It is estimated that 100 cars per day are being canned.

According to Horticultural Inspector Starr of Stanislaus county, 2,000 crates of cantaloupes, equal to six carloads, were condemned in two days recently, on account of failure to come within the standardization law.

The Oakdale almond yield will not be quite so heavy per acre average as last year; but there will be more pounds total because of increased yield of young orchards; and the total value will at least equal the $250,000 received for last year's crop. Some orchards have a heavy crop; others are surprisingly light.

Prune growers of the foothill regions and in non-irrigated sections of Santa Clara county are starting to harvest their crops. Many growers are listing their needs for help at the State Free Employment Bureau. There is no scarcity of fruit workers and a large list of waiting men are in readiness to commence work.

The best varieties of currant grapes can be made to produce regular and good crops in the raisin grape section of the United States. The United States annually imports about 34,000,000 pounds of dried currants from Greece. This supply, specialists say, can be produced in this country, largely in the wine-grape regions of California, and the product will be superior to the imported one.

Horticultural Commissioner Rutherford of Stanislaus county presided at a meeting at Turlock on July 23, when the matter of standardization and inspection of cantaloupes was discussed. A number of commissioners and inspector from counties interested in this work were present. After the meeting a practical demonstration of the proper method of inspecting cantaloupes was presented on the street and principal sheds by Mr. Starr, Rutherford's chief inspector.

Horticultural Commissioner Ryan of Los Angeles county has made the following report to Director Hecke on Standardization work for the year ending June 30, 1920: Held for various reasons, 14,592 packages of fruits and vegetables. Some were returned to the growers, some were sorted, some were jumbled and some were sent to by-product factories. A total of 61 arrests were made and fines were imposed by various judges, ranging from $10 to $100. Total amount of fines imposed was $2,345.

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EDITORIAL

THEY ALL LIKE THE FARMERS.

WE HAVE RECENTLY had so much fault to find with the human race, from the first man, Adam, who ate his bread in the sweat of his face, to the last man, Christiensen, who launches his presidential prow upon the perspiration of others to which he contributes only lingual sudation, that we are in danger of forfeiting the reputation for sunny optimism with which our friends have credited us for many years. In the presence of this danger we solemnly resolved to assemble a lot of words this week which would indicate that there might be something in the world which can be set forth, not only without regret, but with thinksgiving. And so we thought that such an effect might be sought and some service rendered, if we should present the good things which the presidential platforms and nominees say about their intention to make farming more attractive and profitable by relieving farmers from the discriminations which are now being practiced upon them. This scheme has not worked well so far, though we may find something in it later. All that our researches have compassed so far is the conviction that all the declarations are so much alike that so far as learning how to vote by studying declarations, the farmer might as well take his draw from a hat-full of them. They all express the most profound respect and admiration for farmers; they all say in effect that farmers ought to have what they want—if some other group which pays more attention to voting as it preys does not get it away from them; they all seem to promise that farmers shall have representation of their own choosing in all public affairs—providing representatives can be found who do not antagonize voters attached to other interests which are trying to dominate public affairs their ways. In short, they all seem to be out to catch farmers' votes to hang them on their own strings and throw them over their political backs—just as we boys used to do with bull-heads and suckers, so that we could parade them along our homeward highways to demonstrate our piscatorial patience and prowess. Well, that surely is a jolly thought; we are getting along beautifully with our plan to be nothing if not joyful this week. "Why don't you laugh, Coldstream?" Ha!

WHY NOT HAVE A FARMER AT THE TOP?

A friend of ours who has a real interest in farming held us up the other day with this blunt inquiry:

"Why not have a real farmer for governor of California? You keep on making us believe that farming is the biggest thing in the State, now and hereafter. You show conclusively that farmers are beaten about and preyed upon by everybody, except in the industries which they are controlling by special organizations. Why do not such organizations get together and elect a governor who is a real farmer, who knows what is fair to farming and will be strong enough to get it?"

That is a very pertinent question. What is the matter with the proposition? In the first place a man ought not to be elected governor because he is a farmer any more than he should be chosen governor because he is a lawyer or a merchant or a labor-leader. It is true that the aggregate value invested in farming is greater than in the other activities, and that the farming interest is more fundamental and necessary to general prosperity than any of them or all of them combined, but as between men and men, no man should be elected governor simply because he belongs to a class, a group, or an interest, but because he is a masterful, patriotic, wise, judicial and thoroughly representative American citizen. American farmers are broader in their views of public policy, in their knowledge of industrial interests, and in their sense of fairness in the adjustment of them than any other vocational class. They are outspoken in their opposition to special privilege because they have suffered so much from its operation against them. They hate it with an abiding hatred as the product of class domination, and they desire no more to possess special privilege than to suffer from it. They abhor the whip—no matter whether they hold the stock or get the cut of the snapper. Therefore, you could not elect a farmer as governor of California, simply on the ground that he is a farmer—because enough farmers would not vote for him.

CAN WE NOT HAVE A FARMER-GOVERNOR?

Oh, yes we can; easily enough—because we have so many men and women who are farmers, and add to their farming knowledge and point of view such a breadth of statesmanship, such a sense of industrial fairness, such experience in practical operations of finance and trade and such disinterested humanity and patriotism withal, that they are singularly qualified for the chief magistracy of this State. We will not mention such a one among those now living, because he might not be a subscriber to this journal, if such a thing is imaginable, and therefore would not, according to modern standards of availability, be entitled to our support! However, to illustrate what we mean, we may say that if John Bidwell, who was beaten for governor of California in 1875 and in 1890, were still alive and in the form he presented in those years, he could easily be elected. Why? Because he had all the qualifications we have noted as essential in a man who is a farmer, and more, and because he would be recognized as a man who would not stoop to all the contrivances of addition, division and silence by which candidates for office at the present day endeavor to advance themselves and requite their friends. Such a man as General Bidwell could be elected governor now because we have now enough farmers of both sexes to recognize in him the sort of man who would fairly represent their interests, aspirations, and requirements, would stand for no special privilege to them, nor to any other population-group, and would administer the affairs of the State for the honor and prosperity of the commonwealth and with fair play and no favor to every citizen. We have plenty of such men now. In fact, California has in her population a higher per capita percentage of such men than any other State in the Union—largely, of course, because other states have had such men born and bred to give them, and the children of them, to us. When one thinks of such men and contrasts them with the common run of place-seekers, so largely composed of snipers, pussy-footers, and smart Alexanders, who are striving to trade themselves into place by bidding against each other for the services of grafters, demagogues, penny-matchers, and all-around trimmers—how one does long to rock the boat! And that is what the farmers of California are just about ready to do at this moment. Oh, yes; we can have a farmer governor in California!

HOW CAN WE GET SUCH A GOVERNOR?

There is, of course, only one way, and that is by organization. We have ample membership in co-operative organizations to constitute the promotive push which such an undertaking requires, and we have beginnings toward affiliation of co-operative and other existing farm associations which only need to be carried through. There are no such obstacles as political managers to be overcome as they formerly had to be. They are still scuttling around, it is true, and did you have a fine laugh a few weeks ago seeing them polishing the boots of Senator Johnson, which they formerly spat upon? They are now the hodcarriers of a candidate's construction—not the architects of it. It is true that the substitution of the primary for the convention makes personal requirements upon candidates which many good men cannot meet, and it has sometimes seemed that men who would serve profitable interests had now the advantage, but that is only because broad interests and friends of public welfare are not sufficiently organized. It is up to all citizens to remedy this defect and disinterested civic organization can be counted to support such an agricultural initiative as we have described as the only one which the farmers themselves can be counted upon to authorize and promote. And when the farmers do get under motion in a direction which leads to their conception of what is good for farming, because it is good for the whole State, then you will hear the primaries hum, and the purposes for which they were installed will be realized.

But this, of course, will not do itself; nor will the mere starting of it bring it through; nor are the special things which are now being insisted upon by the national farm organizations all there is in it. They are, in fact, only the beginning. Farmer-representation in legislative and administrative concerns, making and executing laws which have to do with agricultural affairs; regulation of great corporate institutions, which place raw farm products into commercial forms; regulation of transportation in the interest of the public, and not a tie-up of owners and operatives for a pinch-out of producers; conservation of national resources against both waste and private aggrandizement; non-interference with the right of collective selling of farm productions by the producers thereof—these are all sketched in the presidential platforms and acceptances in such similar lines that we can hardly tell the allegorical figures apart. They are all rather more definitely outlined than they used to be some years ago, and that is a gain, of course. So far as we can judge, both the leading candidates will make good in these things, though in other things there is, in our view, great difference between them. Therefore the efforts of organized farmers for their own particular things have attained success.

GREATER THINGS COMING.

And so we are very optimistic this week, and readers will credit us with having scolded nobody in one issue at least. We are sure to have one of two good editors in the White House, and they both promise us that we shall have a good farmer, and not a near-farmer, in the secretaryship of agriculture. And so for four years the administration of the country and the craft will be out of the hands of lawyers, professors and the like. And it delights us to think that when the editorial dynasty is over the farmer will resume the national leadership. Washington, the farmer, made the country, and Franklin, the editor, ran around to get the money to keep it going. Now, a successor of Franklin will run the nation, and the farmers, as usual, will put up the money to keep it going. People have a wrong idea of the financial resources of editors; they have been classed with preachers and school teachers in credit-value, while the fact is they now roll up every week as much as the boss-butcher pays for his chopping-block artists, or the milk-dealer pays for his delivery chauffeurs. Editors have had a great financial uplift, which will prepare them to resume Franklin's job when the farmer takes up again the scepter of Washington!

Now to get a farmer-governor for Governor of California, or a farmer-president for the United States, you must make your conception of the qualifications for those officers, and the functions of them, very high and very large. They elected Washington because he represented the farming and the patriotism of his day, and they elected Jeffersin for the same reason and because, though he was a lawyer-farmer, he invented for farming the iron plow, which was the progenitor of all plows,

which have made America famous, which is a greater thing than he ever did for the law. In those days farmers created and administered our government, not only because they belonged to the creative class, but because they were great statesmen and great patriots. Seeking the same requirements today will attain the same results, both in the qualifications of candidates and the attitude of the electorate which passes upon them. It is time that the whole current conception of qualifications for office and the ways to get office should be scrapped.

WHAT THE FARMERS REQUIRE.

Offices should go to masterful men and women, who will serve their country for their country's good and not for their own, nor for the interests of their followers. Offices are now largely secured by mediocre persons, who figure around to get place by trading service to clamorous classes and by blinding the eyes of the well-disposed, honest people with flashes of fallacious philosophy and pseudo-humanism. No great fraction of the farmers is ever misled by such wild dreaming, though it is constantly being thrust into the public eye as an agricultural obsession. Agriculture is a great proprietary industry. It owns the land which it earns and it owns its own producing agencies and materials, and it is entitled to own what it can earn and use, but not what it ostensibly owns to keep idle and thus limit the earning and owning of others. The use of land and of water has in these latter days become essential to reasonable ownership. The principle of ownership, based on earning, is, however, the same as always. And this is the fundamental reason why agricultural conceptions of qualifications for leadership in public affairs must be broad and not based upon class interests. The farmer administers the land as a public trust. It is up to him to keep the world alive, and he acquires land and capital to operate it, to the end that he can discharge his duty to the world. This duty he cannot adequately perform if he is dominated from above by individuals and corporations desiring to own everything, and dominated from below by class organizations which desire to own nothing—not even the tools they work with. Therefore, the farmers abhor special privilege and class domination; they do not desire it for themselves; they cannot tolerate it in others. Therefore, also, they cannot affiliate politically with those who seek class advantage and control of public affairs. Yes; you can get a farmer for Governor, or a farmer for President, but you must pick a big, broad one, or the farmers themselves will not vote for him! He need not be a big farmer, but he must be a big man!

QUERIES AND REPLIES

By the Editor.

Inquirers Must Give Full Name and Address.

Answered questions also on other pages.

Bridge-Grafting.

To the Editor: I have some 2-year-old almond trees that the rabbits or squirrels have eaten the bark clean off for a distance of 10 to 12 inches. Can I save them by bridge-grafting? Can that be done now, and how?—L. S. L., Paso Robles.

To the Editor: I have just discovered that some of my apricot trees have been girdled by gophers. Please give instructions about bridge-grafting, stating also which would be the best time to do it. Some people say such grafting can be done only in the winter when the wood has fully matured; others say that some kind of bridge-grafting can be done at any time by bending down a branch and grafting the end of that branch into the root.—R. M. W., Palo Alto.

Bridge-grafting is usually done by removing the earth so as to expose the upper surfaces of healthy roots and springing-in long scions from proper places on the roots to healthy bark above the injury. Care has to be taken to connect the inner bark at both ends and wax carefully. If the scion is a little longer than the distance to be traversed it usually pinches in tightly and holds itself in place. Watch must be kept to remove shoots, which may start on the scions, and keep them carrying sap through instead of using it on their own growth. Such bridge-scions are usually less than a foot in length, but have been used in spanning pear blight to a length of four feet.

Bridge-grafting is usually done while the tree is dormant, but we would be adventurous enough to try it now, though we must acknowledge we do not know what would happen. Take scions of last year's growth (good, hard, not new growth) and follow instructions given above, especially as to a good fit and good waxing. The chances are that they would take quickly just as a bud does, and then it is up to them to pass sap up or down when there is pressure enough either way. Either way would be good for the tree. If the scions do not take, you are no worse off, for you can put in others next winter. We presume grafting in branches bent down would work also, but the old trunk would probably die and the whole outfit might blow over later Besides, if not, you would have a sort of banyan tree—very ugly and inconvenient.

Sweet Clover and Bermuda.

To the Editor: I have been told that sweet clover will kill out Bermuda grass. Is this true? Could one sow sweet clover this fall after honey sorghum comes off to fill a silo, the sorghum having been sown after oats came off, and have it come on for early pasture in the spring? Or would it be better to sow it in the spring?—S. E. P., Newman.

We have no faith in sweet clover killing out Bermuda or grass in a straight fight between the two than we have of Sir Thomas Lipton ever getting away with the American cup—unless it be a cup of tea. Sweet clover has not as good a chance of keeping down Bermuda as alfalfa has, because it is a biennial and has to start again from the seed after the second year, while alfalfa is rooted to keep up the fight for twenty years perhaps. The Bermuda will be always ready to prevent the sweet clover from getting a fresh hold. The best way for you to do, perhaps, is to fight it all summer, as you have this year, and you ought to tire it out. Put in your sweet clover early this fall, get your winter pasturage from it, and then keep the land jumping for the silo all next summer and fall. Do not think of sowing sweet clover in the spring to beat Bermuda!

No Flies on Eve?

To the Editor: Is there any spray one can use on screen doors and windows that will keep the flies from gathering there to roost. We live in a dairying settlement and I suppose that accounts for the large number of flies. I agree with the write of "If Not Simple Life, then Co-operation," especially in regard to clothes. Every wash-day I am mad at Eve for wearing the fig-leaf.—E. M., Montague.

We do not know of any such thing. So long as your kitchen gets up such inviting perfumes you can hardly blame the flies for trying to get in. The poor fly knows the smell of a good dinner as well as a man, but he does not know so well how to break in. You can kill the flies by painting tangle-foot on the wire screen, but what a mess it would make! This, however, can be avoided by frequently changing sheets of sticky fly-paper pinned to the outside of the door. If you cook and eat out of doors, as Eve did, you would probably have no more flies on the screen doors than she did. And why should you be angry with Eve for the fig leaf? Ought you not to admire her foresight in settling the laundry problem before it arose? It never has been settled since.

Melon Wilt.

To the Edtior: I have muskmelons which look fine on the whole, but some vines begin to die back and in a couple of days they are gone. I lost about ten vines. The soil is rich and light. I keep plenty of water on the plants. What is the cause of it, and what is the remedy?—F. M., Concord.

The cause is a fungus which carries over in the soil and in manure in which old melon vines have rotted down. There is no cure by treatment of diseased plants. Dig out and burn them and plant melons next year on new ground on which melons have not been grown for several years.

Budding-over the Peach.

To the Editor: Can I graft an Early Crawford peach set out 3 years ago in January to an Elberta, with hopes of success? The Crawford has always had leaf curl badly, although sprayed freely last spring with Bordeaux, and bears no fruit. The Elberta set at the same time has had no leaf-curl and last year bore quite freely, and this year will have fully two bushels. These trees with 54 prunes have made an average growth in this time of 3 inches in diameter. I attribute this remarkable growth in the free use of water from a 30-foot curbed well, 2 h.p. electric motor and 1½-inch centrifugal pump, in irrigating strawberries set between trees—two pumpings per day, giving about 100 barrels.—J. A. C., Santa Rosa

The peach is best transformed by budding in August or September when kept growing, as yours will be. Put in buds on the tops of branches as low down as you can find good places. Cut away part of the top next winter and cut back again near to the bud, when it starts out growth.. Grafting peaches is more difficult and should be done without splitting the stock, or it is hard to get a sound stump. Your trees are surely having a high old time. If they are in a frosty place, do not keep them growing too late.

Alkali as a Fertilizer.

To the Editor: I have sandy land free from alkali. They say if some alkali is in the land, it bears very good crops; that about 3 or 4 hundred pounds of alkali spread on sandy land makes it keep moisture and produce better crop?—H. G. N., Dinuba.

This is an old dream of the San Joaquin and many of our old friends in that district passed away while still dreaming it. The amount of alkali which you mention would have no more effect on an acre of land than a glass of modern, legitimate beer would have on the happiness of an old-fashioned toper. The effect would be imperceptible. And if you keep on making the applications, as you might by irrigating with slightly alkaline water, for instance, it would make the soil crusty, rebellious and finally destructive to plants. The saline substances in ordinary alkali are not plant food; they are plant poison. They are not improvers of soil texture; they are destructive of it. If you wish to increase the retentiveness of sandy soil, fill it with organic matter in the form of stable manure, cover crops and other green stuff. You can do it with dry stuff, such as straw, hay, vine prunings and leaves, etc.—providing you can keep moisture enough present to decompose them.

Manures for Sandy Soil.

To the Editor: I have Thompson grapes on sandy land which I think needs to be fertilized. Which is the best fertilizer—chicken, sheep or barn manure? Is it good to fertilize with manure, and also with nitrate of soda?—H. G. N., Dinuba.

So far as direct plant-food substance is concerned, fowl or sheep manure is worth two to three times as much per ton as barnyard manure from horned stock or horses, but to improve sandy soil, both with direct plant-food substance and to improve its retentiveness of moisture, barnyard manure is worth nearer the price of sheep and fowl manure. Barnyard manure with nitrate of soda added is a good proposition if you work in the manure near the beginning of the rainy season and broadcast the soda near the end of it.

Apricots Fifty Feet High.

To the Editor: If possible, please let me know where the apricot trees, fifty feet high, are located. I read about them in your book, "California Fruits and How to Grow Them," chapter xviii, page 217.—E. H., Paicines.

Reference to trees of such height, etc., was inserted during the revision for the third edition of our book, which was printed in 1900. Previous to that date, such trees were growing on the place of the late Senator Joseph Routier on the American river near Sacramento. Perhaps some reader living in the vicinity will tell us whether the trees still stand, or whatever else befell them.

CALIFORNIA WEATHER RECORD

The following rainfall and temperature record is furnished the Pacific Rural Press by the United States Department of Agricultural Weather Bureau at San Francisco for the week ending August 2, 1920.

Stations—	Rainfall Past Week	Rainfall Seasonal To Date	Rainfall Normal To Date	Temperature Highest	Temperature Lowest
Eureka	.00	.12	.11	66	52
Red Bluff	.00	.01	.00	102	62
Sacramento	.00	.00	.00	100	52
San Francisco	.00	.00	.01	72	52
San Jose	.00	.00	.00	88	48
Fresno	.00	.00	.00	104	64
San Luis Obispo	.00	.00	.01	90	50
Los Angeles	.00	.00	.00	90	60
San Diego	.00	.00	.00	78	64
Winnemucca	.00	.00	.17	96	48
Reno	.00	.00	.14	98	50
Tonopah	.00	00	.33	92	64

Worn-Out Grain Lands Now Great Orchards.

Written for Pacific Rural Press by R. E. Hodges.

Many a day the writer earned his daily grub manipulating a shovel over the concrete-mixing platform before mechanical mixers became common. You might think that in such work the fellers were right when they reminded us that the prime qualifications for a concrete mixer were a strong back and a weak mind. Yet in our work at various times, with probably several hundred different men, we observed and learned that the man with brains behind his shovel turned far more concrete in a day and was more ready for sport at the end of the ten-hour grind. It so turned out that a fall from a bridge robbed the writer of his strong back, and he was thrown largely on the resources of his—mind. Later these resources got behind the pen. In our work with the pen, it has been our pleasure and profit to meet thousands of California farmers. Among them we occasionally run across one who sneers at the college of agriculture, the farm bureau, the farm papers, and even science in general, classifying contemptuously all who use these aids to farming as "book farmers." These ranchmen who proclaim that they know more about real faring than all the colleges and farm paper writers classify themselves as the kind who believe in making their living by their strong backs. They are rather rapidly being shoved off the map as surely as a glacier moves a boulder in front of it. The boulder's puny weight of a few tons is nothing against the resistless glacial pressure. But ere this class of rancher has disappeared, another class will be finding themselves ground between the high costs of production and the low prices of farm products. Whatever we may say of Darwin, in the natural world the law of survival of the fittest is ultimate.

Our daily observation of men shoveling concrete back East and other men ranching in California has shown beyond question that a strong back is badly handicapped in either case if it lacks well-trained, scientific mental direction. On the other hand, if headwork is done first, a lot of strong-back work is avoided and a lot of opportunities are gained that would otherwise never appear. Not in the long run, but in a very short run, the strong-backed farmer is shoved off the boards.

Brains and Capital Transforming Country.

For two years we have been watching a particular project in the upper reaches of Monterey county, where headwork was completed generally in advance of backwork. In November, 1917, 8,000 acres of bench slope between mountains and river were purchased by the Salinas Land Co., with the avowed purpose of showing what brains could do with thousands of acres which had been robbed by grain for several generations without fagging anybody's mental endowment.

Use of brains implies courage to risk good money on projects growing out of careful exercise of good judgment. (We do not say that capital invested in agricultural ventures always has brains behind it. Where it does not, capital is still less useful than a strong back with the same lack of brains.) In this case scientific studies and accurate records had been made of soils, drainage, water possibilities, rainfall, wind, temperatures, and previous production. C. C. Teague, John Lagomarsino and A. L. Hobson furnished capital for the enterprise.

Grain yields had dropped to average not enough above the amount of seed planted Each year or two the ground had been plowed just like father and grandfather did it, though perhaps not quite so deep. A flinty plow pan several inches thick wore off the shares which ventured three or four inches deep. In many areas plows skipped over the top of the ground; and there were spots in this grainfield where manure from stubble-grazing cattle had not been plowed under for years.

Condemned Methods Worked Wonders.

Deep-plowing, to a limited extent, was the first con-demned thing they did after acquiring the place. Beans and grain responded unmistakably. Last August one piece of this plow-pan land, which had raised a crop of beans, was subsoiled about 24 inches deep with a three-point subsoiler cutting five feet wide and taxing a 75-horsepower tractor to the limit of its power, according to Manager A. G. Baker. The ground was plowed nine or ten inches deep after the first rain. It was worked down and drilled with about 50 pounds of barley per acre. The second con-demned thing about it was that the seed was placed at least four inches deep. After it was up six or seven inches tall, Mr. Baker was condemned by onlookers for tearing it up with a springtooth. The deep plowing had caught all the winter rain, deep planting put roots to moisture and safety from the harrow, and caused the grain to stool eight or nine straws per seed. The harrowing seemed to kill a great deal, but it just came up thick again; and with the crust broken, moisture was saved, which matured a crop of 25½ sacks per acre, besides what shattered in the wind and covered the ground rather thickly with barley for the hogs. The chief mistake made was in planting too thickly. The same procedure will be followed on all the ranch next season if practicable, except that only 40 pounds of seed will be used and the harrowing will be done a little sooner. Neighbors who condemned Mr. Baker's work harvested about three sacks per acre from the same kind of land. Their barley goes for feed at 95 pounds per sack, while Mr. Baker's averaged 109. "Deep plowing ruins the land. Dry plowing takes too much power. Deep planting won't come up. Too much fussing. Wait till the money runs out," said strong-backed farmers; but the well-worked soil will return more money than it takes, and the "waiting" farmer will wait a long time.

Beans Profitable on Old Grain Land.

"Would beans do well under these conditions? And if so, what varieties?" was a question which confronted the promoters. So in the first year of their possession, they and their tenants raised ten or twelve thousand sacks of beans of many varieties. Last year, ten acres of regular limas produced ten sacks per acre. Who would have guessed it, so far from the coast! An extensive planting of pinks averaged about nine sacks per acre and small whites yielded about six. This year about 3,000 acres of the ranch are producing beans, part under direct control, part raised by tenants. Regular limas have multiplied to 400 acres and prospects now are for a better crop than last year. About 600 acres of Henderson-Bush limas are doing well, but seem to be excelled by the Callis Sievas (another variety of baby limas), of which there are 200 acres. The rest are pinks and small whites. Certainly the bean variety demonstration should prove valuable; and it ought to stir up the thinkeries of some folks who have raised grain all their lives.

Fruit Tried and Multiplied.

Temperature and climatic conditions indicated that this country would produce good fruit in quantity. The indications seemed proven by old apple and pear trees at headquarters and a good crop of almonds on old trees owned by a neighbor. Resolution was strengthened by looking at the fruit trees in Greenfield colony not many miles distant. But before risking capital and brawn on extensive fruit plantings an experiment was to be tried. Forty-five hundred deciduous fruit trees of many kinds were planted on the tract in the winter and spring of 1918. They are now a monument to the sagacity of the planters—big vigorous trees. Meanwhile all things proved so favorable that the projectors determined to plant more fruit. So they hatched the horticultural egg into an independent corporation and named it the California Orchard Co. This company is capitalized at a million dollars and includes many people besides those in the original deal. Its secretary and manager is Carlyle Thorpe, manager of the California Walnut Growers' Association.

The Orchard Company also used brains before brawn. Samples of soil from many auger holes were taken, tested, and the findings recorded before their land was selected. Holes six feet deep were filled with water and the time required for it to drain off was recorded. A rain gauge tells how much moisture has fallen—5½ inches last winter. A thermograph automatically registering the temperature at every minute of the day is located near the lower edge of the tract. Another is located at the upper edge. Another registers temperatures at a point half-way between the two. Water to irrigate this tract was known to be available because sixteen wells were operating at high production on the original ranch. With all conditions known in advance, it required but little courage to put money into extensive orchard operations here.

The California Orchard Company bought 1900 acres from the Salinas Land Co., and began development last January. Four wells have since then been put down near headquarters. Plowing, cultivating, surveying and staking for trees were pushed. Tree planting began February 1 and 100 acres per week were decorated with expensive fruit trees during the next four weeks.

Many Varieties Planted.

Almonds, apples, apricots, peaches, pears, walnuts, prunes, grapes, and plums have been planted, each on the soil and location for which it is most suited; and notwithstanding a long wait for water to irrigate much of the acreage, Supt. Goodspeed estimates that over 85 per cent of the trees lived. Many of them, just being irrigated for the first time in July, looked tired when the writer called, but the blocks which had received water had freshened up, and where water had been furnished all season they had made good growth. A fortunate combination of soil and temperature for the almonds was found in the light gravelly wash along the upper edge.

Some difficulty in getting fruit trees last spring led Mr. Goodspeed to engage then nearly enough for next spring's planting; and a twelve-acre nursery contains 130,000 fruit tree seedlings, on which budding will begin in August to supply the ranch in 1922, as well as the outside demand which is expected. Fifty thousand apple seedlings arrived last spring from Kansas after six weeks en route. They were planted in four days and 85 to 90 per cent lived.

Vegetables and Small Fruits.

To prove out the adaptability of the region for small fruits and vegetables, many varieties were planted in a big garden at headquarters and they not only supplied the ranch, but some were sold on the markets. The garden as we saw it included almost every common vegetable and small fruit besides many uncommon varieties. Sunflowers and corn are used in the garden for windbreaks, the former standing the wind better and furnishing much good chicken feed.

Tomatoes, peanuts, beans, peppers, corn, etc., are thriving this season as intercrops between the young trees to help pay the expense of bringing them into bearing; and the system will be expanded next year.

Elaborate Economical Irrigation.

The Salinas Land Co. owned a ditching machine in which the Orchard Co. bought a half interest. This began laying the underground cement pipe water distribution system March 1.

The Land Company also owned a pipe-making machine, which had already made enough cement pipe on the ranch two years ago to lay fifteen or sixteen miles of it. The Orchard Company is using this machine now, making about 1,000 feet of pipe per day to keep up with the ditcher.

The irrigation system is interesting. Sixteen-inch deep-well turbine pumps lift water 65 or 70 feet to the surface from the level of the Salinas river water-table and force it past water meters through 1¾ miles of 20-inch steel underground pipe rising 134 feet in that distance and fixed to deliver to concrete laterals, which cross the place 600 feet apart. At the upper end is a booster station, where two centrifugal pumps force the water eighty feet higher through a mile of 20-inch pipe, and another centrifugal forces 2,250 gallons per minute by means of a 150 horsepower electric motor to a point 160 feet higher. The force-line runs up a slight ridge to the hills, so the water gravitates at an angle in one direction for 900 acres and in the other direction for 1,000 acres. About fifteen miles of 10 to 15-inch cement lateral pipes have already been laid on the 900 acres, and about 17 miles additional will have been covered on the 1,000 acres before summer is over. The laterals discharge at the head of each row through an orchard standpipe. Each of the latter is numbered. Each irrigation line is numbered. There will be a definiteness in giving directions regarding the actual work of irrigation that will minimize mistakes and lost time.

Mr. Goodspeed is enthusiastic in his praise of the men who worked wholeheartedly day and night during the rush work to bring forth the big accomplishments of this season. Head work on details was done at night and plans so laid were carried out in the daylight following. Mr. Goodspeed, himself a young man, has young men to help him. He takes them to town about twice a week for relaxation; and they have a clean, modern bunkhouse to live in. They are loyal, hard workers.

Machinery Adds Efficiency.

But the best brain, capital and brawn must in these days be supplemented by up-to-date machinery. Thus on the orchard ranch we found the ditcher, tractors of 45, 35 and 22 horsepower, with another 45 to come, a two-ton motor-truck and two smaller ones, three utility automobiles, a gas engine to run the air compressor, drills, emery wheel, etc., in the blacksmith shop and garage, five electric motors of 150 horsepower each, and two of 75 horsepower each, running the deep-well turbine pumps and the centrifugal boosters. Twenty-two horses are kept for their kind of work.

On the Salinas Land Company's ranch, aside from implements owned by tenants, the company has equipment, as shown by Foreman L. V. LaVelle, including a 75 horsepower tractor, which keeps going eight months of the year, a blacksmith shop and garage, with another 75 tractor and two smaller ones to come. Mr. Baker mentions the sixteen wells all running, thirteen of them containing sixteen-inch pumps and three containing twelve-inch pumps, all operated by electricity.

Based on the facts already proved on these two projects and the one at Greenfield, we expect to see all the territory between the latter place and King City occupied with fruit and cultivated crops within a decade. May similar projects multiply all over the State and furnish happy, prosperous homes for thousands of the families who are coming to help us appreciate the lavish favor with which God has endowed California!

America's Almond Acreage Confined to California

Written for Pacific Rural Press by W. S. Killingsworth.

From a commercial standpoint the almond is absolutely and unequivocally the Lord High Chancellor in the horticultural family on the American continent—even better than that, California is the only State in the Union that produces them, and it may be said that there are only restricted areas that are adapted to their profitable culture. This restriction makes their culture profitable—being scarce, the price is high, so much so at times that a liberal use is practically prohibitive, which elevates them to the class of luxuries. However, there is a steady demand for them, price being no object.

Birth of the Co-operative Idea.

In order that we might enlighten the readers of the Pacific Rural Press with a comprehensive understanding of what the almond industry means to California, we called at the office of the California Almond Growers' Exchange, in San Francisco, where we met T. C. Tucker, Manager of the Exchange. In brief we explained to Mr. Tucker the purpose for which we called; we wanted to learn something about the workings of the Exchange, and at once set about to bombard him with questions to which replies came freely and accurately. Mr. Tucker said in part: "The California Almond Growers' Exchange was organized in 1910 by J. P. Dargitz, an almond grower of Acampo. Local associations of almond growers were formed in 1897, for the purpose of pooling the community crop, and these improved conditions somewhat locally; but they soon found that communities were competing with one another, and the problem of obtaining fair and profitable prices had not been solved. Mr. Dargitz conceived the idea of bringing together the almond growers of California through the medium of a State-wide organization. He finally induced nine associations to come together, and upon this showing the Exchange was incorporated. Our

Plan of Operation is Simple but Effective.

"Where there are sufficient almonds to warrant, a local association of growers is incorporated under the Non-Profit Co-operative Horticultural Law of California for the purpose of improving the quality of the almond by better methods of handling and packing; also for the purpose of affiliating with other like associations in a State-wide organization also organized under the Non-Profit Co-operative Horticultural Law of California. The association is incorporated on the membership plan, and has no stock. Each member contributes his pro-rata share of the expense of marketing, and his pro-rata share of the expenses of warehouse and equipment, where such is necessary. Each association is independent in the matter of owning its own warehouse. As this is the case each member's assessment for the building and maintenance of the warehouse is prorated on the volume of the amount of tonnage he delivers."

System of Representation.

In answer to the query, Has each local exchange a vote in the mother exchange? Mr. Tucker replied, "Yes; on the basis of one vote for each association, unless three associations call for vote on tonnage, in which case the voting is on tonnage." Do the representatives from each exchange elect the board of directors of the mother exchange? "Yes; five of their number are selected as a board, and they have supervision over the management of the policy of the Exchange." Where there are not a sufficient number of growers in a locality to support an association, what action is taken by the Exchange? "Where it is impossible to form an association by reason of isolation or limited number of growers, the Exchange has authority to market almonds for the growers so located, on a special contract basis which provides that the grower shall accept the same pool net as regular members of the organization, and shall receive the same treatment."

Crop Estimates and Foreign Production.

How do you obtain your crop estimates? "From association members exclusively." How do you get an authentic report of foreign production and exports? "The Exchange maintains a salaried representative in Europe, who reports from time to time on the European almond crop and market conditions. By this means the Exchange keeps well posted on world-wide conditions."

Do your eastern brokers keep you advised as to market conditions and imports? "Yes; they keep in close touch with the Exchange, and we know at all times the condition of the markets and the import supply." From these reports are we to assume that the coming season's price is based thereon? "Reports, of course, enter into it, but the principal determining factor of establishing prices is the market conditions of the United States." As with many co-operative associations, have the directors the power to regulate prices when they deem it advisable? "The representatives have the right of determining the opening price, but that price can be later raised or lowered by the Directors, who for a number of years have left that in the hands of the management."

Functions of Sacramento House.

Is it true that all almonds are handled through your Sacramento plant? "The Sacramento house is the consolidation warehouse for tail-end of crops of various districts, and for the accommodation of growers who are not members of any local association. In addition, we handle such manufacturing problems at Sacramento as may be necessary, and we now have under construction a five-story concrete building—cost $150,000.00." We learned from Mr. Tucker that the membership of the Exchange, July 1, 1920, was 3,635. In 1919, the Exchange did a business of $3,500,000. Their overhead expenses in 1918 were 2½ per cent; in 1919, 1½ per cent. Another feather in the cap of co-operation. In a jocular way we asked Mr. Tucker who ate all of the almonds—if they had any qualities as a food staple. He handed us Bulletin No. 185, he was sending out to the almond growers, on the back of which was a chart something like this: "One pound of almonds equal in food value 3.78 pounds of lean mutton, 5.20 pounds of eggs, 9.18 pounds of chicken, 8.55 pounds of milk, and 12.15 pounds of oysters. These figures are compiled by Dr. J. H. Kellogg, of Good Health Magazine. At the present high cost of living a few of us had better resort to an almond diet.

We found Mr. Tucker optimistic as to the future of the industry. He feels that it depends upon the extent that growers hold together for the development and protection of the industry. It is the intention of the Exchange to continue the Nation-Wide Advertising Campaign, inaugurated in 1919, one item of which will show the extent to which it was carried. The Exchange has on its mailing list 83,000 retailers of almonds. The cost of postage on one circular sent out to the trade is $830.00. The window display they have in all of the large cities is maintained at a very heavy expense, but it has been demonstrated that such advertisement is a paying investment. The marketing feature being well in hand, what about production?

The Almond a Nut of Limited Area.

When the prospective orchardist declares his intention to enter the field of almond culture, unless he has had experience along that line it will be wise for him to proceed with caution, as there are some points of vital importance, spelling failure, if not carefully considered. In considering the adaptability of localities to the production of almonds, the two most important factors to be taken into consideration are soil and climatic conditions. It is a well-known fact that the almond is very exacting in its climatic requirements, much more so than that of soil. Unlucky for the almond that its climatic requirements for successful production are of limited area. As the almond is one of the earliest blooming trees the natural protection by proper location is of vital importance. Though a deciduous tree, it is dormant a very short time, it being the first to leaf and the last to drop its leaves, unless they are prematurely injured by the effects of red spider. When on soil suited and properly cultivated, it is a thrifty grower. It is a long-lived tree. There are some trees in California 45 to 50 years old that are still producing heavy crops.

The Best Varieties.

The varieties best adapted to the general conditions throughout the State are the Nonpareil, IXL, Ne Plus Ultra and Drake Seedling. In most of the districts the Nonpareil has proven quite satisfactory, while the IXL has not met with equal favor. It's merely a matter that the Nonpareil will bear more heavily each year, while the IXL will take a rest. Like the cherry, the almond tree, to be a successful producer, should be planted alternately as to varieties, as the cross-pollenizing insures a more even and better crop. In planting an orchard of almonds the same rule should be followed as in the planting any variety of deciduous fruits, that there may be a sequence in ripening this prevents a lull in the harvest, which assists greatly in retaining help. The following varieties will ripen in rotation—IXL, Ne Plus Ultra and Drake Seedling. In the selection of trees care should be exercised as to what root is best adapted to the soil in which they are to be planted. In many cases the bitter almond root is preferable, while on heavy or poorly drained soil the Myrobalan root would be more desirable. The peach root is sometimes used, but there is complaint of its not holding up on certain kinds of soil.

The Almond's Ills and Ailments.

The almond tree, not unlike its neighbors, is also a target for a number of pests and diseases. The red spider, unless checked at the outset, is an annual visitor of damaging proportions attacking the foliage at a time when the fruit is in the greatest need of protection against the heat.

This spider or brown mite has been a deadly enemy to the almond tree for years, and as a matter of fact it does not confine its work to the almond alone, as other stone fruits are attacked as well. We have seen the red eggs so deposited on the trunk, limbs and twigs of the almond and prune tree that were very perceptible to the naked eye. Their familiar place of abode is in the crotch of limbs, but when the tree is badly infested they are not at all particular where they pitch camp. The adult mites are to be found extensively from April to August; however, most of their work may be noticed in June and July.

Practically the foliage of the entire tree becomes infested; their usual mode of procedure is to scarify the epidermis of the leaf and suck the sap, which naturally reduces it to a sickly state; eventually it drops, leaving the fruit exposed to the heat. This sudden defoliation not only checks the growth of the fruit, but the fruit buds for the ensuing season. As soon as these conditions are discovered the immediate use of spray is necessary.

The Suisun Valley orchardists of Solano county have met with splendid success in the use of atomic sulphur, applied at the rate of 10 pounds to 100 gallons of water. By the use of atomic sulphur there is little danger of burning the foliage. A dormant spray of lime-sulphur 1-10 is also valuable. The use of dry sulphur applied with machine made for the purpose has been found very effectual when the spider is at work. When a power sprayer is used it is necessary that the minimum pressure should not be below 150 pounds in order to force the sulphur under the web.

California's Almond Acreage.

It may be a surprise to the average orchardist even to know that almond growing in California is no longer to be considered an infant industry. From an acreage standpoint it ranks with many of the leading members of the horticultural family. In 1919 the State's production was 7,000 tons. However, it must be remembered that a large acreage is non-bearing.

Now that the product is proving of such value, more attention is being given to the care of the trees, more particularly in the matter of pruning. For a long time the tree was allowed to grow at random, so to speak,

As a starter the tree should be headed low—say, knee-high; then pruned and shaped for three years. After that time little pruning should be done. Simply cut out unnecessary growth, such as water-sprouts and limbs that will never produce. To allow the tree to grow rank with water-sprouts not only retards growth of tree but reduces the strength of fruit-producing wood. We doubt as to whether there is any tree that there is the difference of opinion in the matter of pruning, as there is in the almond. Some think it injurious to dehorn the almond, or dehorn them for the purpose of grafting over into a plum or prune. We know of many almond orchards in Suisun Valley that have been thus treated. They are now producing splendid crops. There will, naturally, be a large number of sprouts continuously growing from the body of the dehorned tree, and it would be well to thin them out and bud a number of them. In this way a substantial, well-proportioned tree will soon take the place of the old has-been. A striking example of this kind of work may be found on the great Hatch ranch at Suisun, Solano county.

Australian Fruit Fly Poison

To the Editor: I notice in the Pacific Rural Press of July 17th that European orchards are being wiped out by the fruit fly.

Some five years ago, in West Australia, an absolutely sure method of eradicating the pest was discovered. It is to boil up some cull oranges, pour off the juice and add molasses and arsenate of lead in the proportions of 4 gallons of juice to 1 lb. of molasses to 8 ounces of arsenate of lead or thereabouts. This mixture was sprayed on the foliage of every fourth orange tree next to a bunch of oranges, where the early morning sun would catch it. The fly on waking up would go on his accustomed rounds. Smelling the mixture, which hangs in drops from the points of the leaves, he takes a drink and that is the last of him.

So effective was this remedy that in the Harvey orange district in West Australia, the pest was wiped out in a season. Before this people had been rooting up their orange, peach and fig trees in despair of ever getting rid of the pests. A company got hold of the formula and immediately tried to keep it secret. They started putting out tins of molasses, concentrated orange juice and arsenate of lead, which they sold for about a dollar for a 2-lb. tin.

It looks to me as if this formula has never leaked out, for surely, if it had Europe would have heard of it by now.—W. E. Barker, Seguin, Wash.

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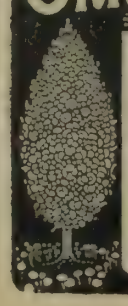

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MORGAN HILL—CALIFORNIA

Timely Work in the Orchard

(Written for Pacific Rural Press by W. S. Killingsworth.)

The Drying Season Is Here.

We have talked fresh fruit so much this season that the uninformed would naturally think that California had thrown off on the dried fruit end of the game, but not so. As evidence of that fact, a trip through the great San Joaquin Valley, Santa Clara, Sacmento, Suisun, Vaca, and others too numerous to mention, would satisfy one's mind that there is something doing every minute. While the apricot season is practically at an end the prune, peach and pear are now entering the transformation stage, and we are wondering if the orchardists are in readiness to meet the "issue"? Every rancher knows how easily trays and lug boxes are smashed. Then, again, he knows how easily they can be repaired if gone at in the right way, and must be done if effectual work is accomplished on the dry yard. In the matter of repairing trays, the expense may be lessened by using material from those too badly demolished in repairing those of less disfiguration. That suggestion is prompted by the present high cost of new material. In the old days tray lumber was cheap in comparison to what it is now. Many orchardists on rainy days and dull seasons had the hired help do the patching act. In the repair of lug boxes, the use of the better material from those that have been stove in, is seldom practiced, as in most cases it is unfit and new parts are used in such repairs. Every orchardist, of course, knows that all trays should, from a sanitary standpoint, be well cleared by washing and scraping. We have been informed that there is a tray-washing machine now on the market claiming to do the work cheaply and effectually. The aforesaid repairs should have been made ere this, as it is late to buy the dress after the child is born.

Grade Cannery Fruit at Home.

Under the head of "Timely Work in the Orchard," there is nothing that should interest the orchardist more than the timely grading of his fruit intended for the cannery, the commercial drying plant, and for eastern shipments. A great campaign of education is being conducted by the State Director of Agriculture, his deputies and the county horticultural commissioners on the grading and packing of fruits and vegetables for state and interstate shipment. Little attention has heretofore been given to the inspection of fruits and vegetables going to canneries and dry yards, as they were assuming that such shipments would come within the law, but developments during the past few days go to prove that many shipments of Bartlett pears received by the canners are not within hailing distance of the law, and the result has been that Fred Suelberger, horticultural commissioner of Alameda county, has swooped down upon, not a few boxes, but cargoes of Bartlett pears infested with insects and diseases not compatible with the views, not only of Suelberger, but the growers in the localities where this fruit is being landed for canning and drying purposes. All of this trouble and expense may be averted by the grower properly grading and inspecting his products before they leave his ranch. There will be no let up in this rigid inspection, so a word to the wise should be sufficient.

Dried Fruit Emergencies.

The September, 1918, deluge is yet fresh in the minds of many dried fruit producers in the State. Such a catastrophe is liable to occur at any time during the drying season, but may be averted by the timely construction of a dehydrater, many makes of which have been successfully tried out in seasons past, not only in California, but in other fruit-producing states. Climatic conditions have been, and may continue to be, such that necessity may demand the use of dehydrating plants, especially on the late, drying fruits. We will not go into detail as to the many advantages, to be derived from the use of the dehydrater, as all of such will be cheerfully given, upon request, by the manufacturers of these plants, some of whom are making their advantages known through the Pacific Rural Press. We firmly believe, however, that a reliable plant is the best asset a dried-fruit producer may have on the ranch. Season after season it might go unused, then a season might come when it would pay for itself. Look into the matter.

Raze the Old Trees.

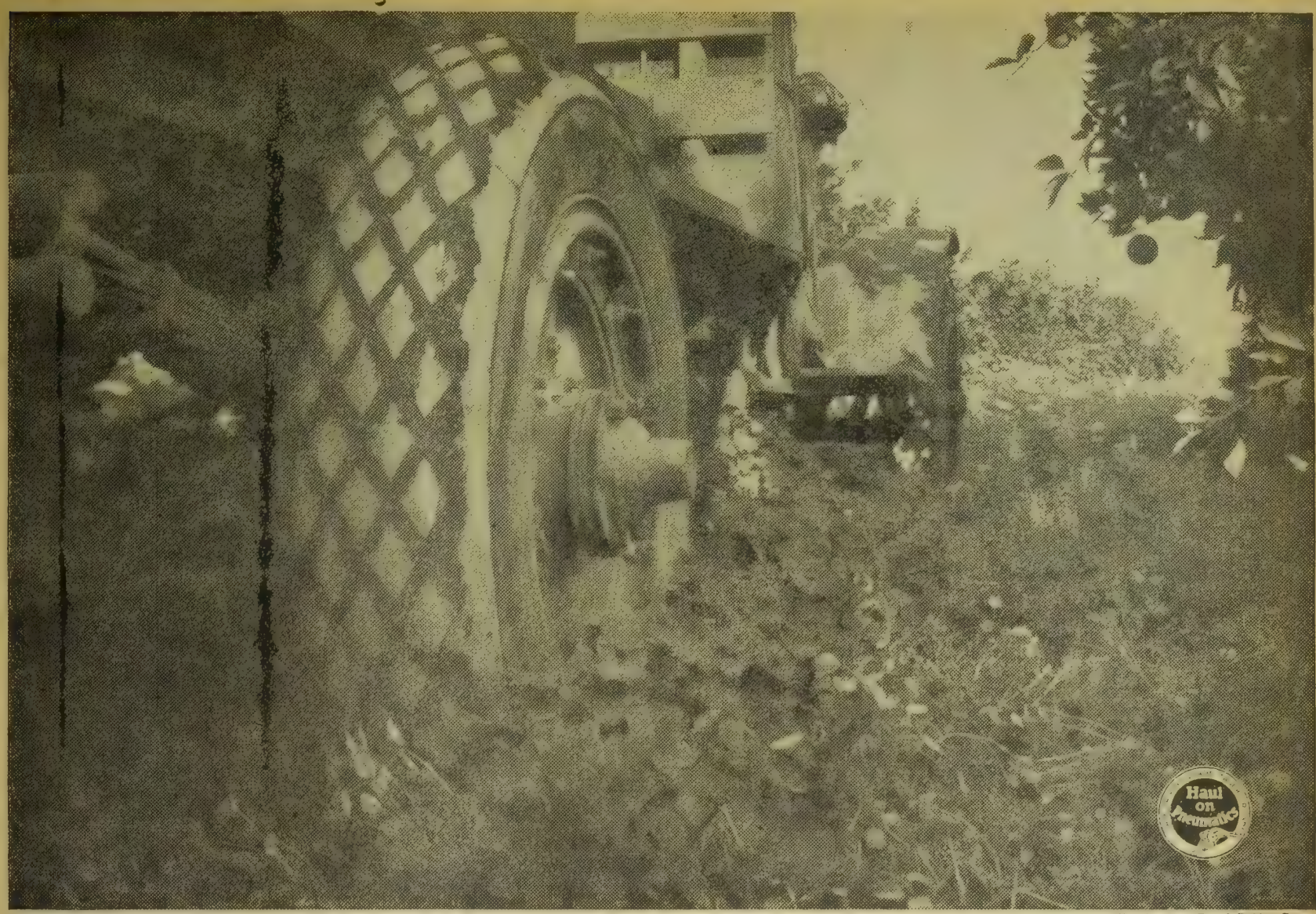
In every orchard of any duration, there may be found at the close of each fruit season a number of dead trees, or those that have served their usefulness, which should be relegated to the wood pile. They may be either dug or blasted out. There is no objection to either method, provided care is used in doing a good job, the substance of which is to remove as many roots as possible. If digging is resorted to, as the earth is removed, distribute evenly over the adjacent ground, or as far as many be easily thrown with the shovel. The excavation should be of such proportion as to reach all of the larger roots at least. Trim the brush from the tree, placing it in the hole from which the tree has been taken and when sufficiently dry, it may be burned, but allow the hole to remain open until time arrives to replace the old with a young tree. First fill the hole with top earth, then plant the young tree, tamping the ground well around it, and after the spring rains are over and the orchard has been plowed, hoe the tree well and follow the practice during the season at intervals of about four weeks. The same method may be practiced should the old tree be blasted. Of course there will not be the excavation as in the case of digging, but the ground will be loosened and the majority of roots will be uprooted. Burn the brush and allow hole to remain open. Some may argue against this; we would, unless we knew to what extent the excavation had been made. Should a post hole be dug merely to remove the immediate trunk of the tree, the replacement of any variety of young tree would be useless. We have tried both plans, and not until we had lost a number of trees did we learn how it should be done. And it worked to perfection in practically every case.

Order Nursery Stock Now.

We cannot place too much stress on the importance of ordering nursery stock at the earliest possible moment, for we are informed by the nurserymen of the State that the supply will fall far short of the demand; as a matter of fact, some varieties are entirely sold out. In several former issues of the Pacific Rural Press we have given in detail the varieties of fruit that have been agreed upon by the canners, dryers and shippers, with the California Nurserymen's Bud Selection Association, that will be propagated by the association. That agreement, of course, does not affect those nurseries not members of the association, but merely to show what the canners want propagated for their use, the dryers for their use, and the fruit-shipping concerns for their use, all of which is a wise move, as there are innumerable varieties of fruit being grown today that the consuming public are not partial to.

A fall crop of sweet corn is proposed by Wilson Bros. of Los Angeles county on land that has already produced a sweet corn crop this season which grossed a great deal over $200 per acre.

The Oakdale Irrigation District has more water this year than last; and water was still running over their dam early in July. Alfalfa growers felt assured of at least four crops.



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IN rural hauling like this and in farm duty radically different, the use of Goodyear Cord Tires on trucks has been found productive of a variety of important advantages.

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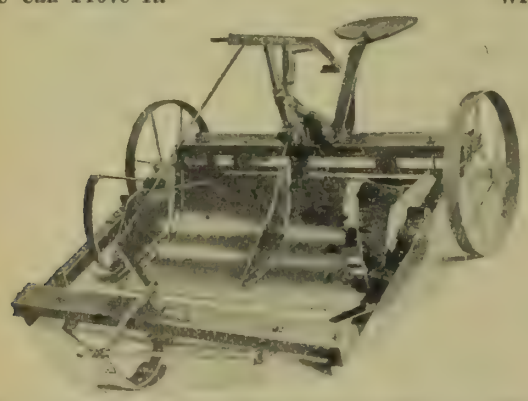

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Plant Now August is a good month to plant. Growers who planted last July and August have already harvested over 15 tons per acre, netting $1000 eleven months from planting. For further information, write

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RHUBARB SPECIALIST

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Here and There in the Fruit Business

Big Dehydrator at Arroyo Grande.

About the first of September a new dehydrator of 25 tons per day capacity will begin a five-months run on fruits and vegetables at Arroyo Grande, San Luis Obispo county. This district is rapidly coming into prominence for food production; but the dehydrator proved desirable on account of transportation distances. Eighteen thousand feet of floor space are provided in the building now being erected by local people with B. E. Short in charge. Mr. Short says that the building will cost about $25,000, and that the Caldera Produce Co. of Atascadero will spend about an equal amount on equipment for the coming season's run. This includes two drying tunnels, built under patents controlled by the Caldera people. Next season four more tunnels are to be added, raising capacity to about 75 tons per day. A cannery will later be included in the outfit. Apricots, of which the valley is producing about 800 tons green this year, are largely being shipped to the Caldera drier, which has been running two years at Atascadero. They will be handled locally next season and the annual run is expected to last seven or eight months. This year string beans and pumpkins are growing in the valley under contract for the dehydrator, but other vegetables and apples are available.

Fredericksburg Brewery Transformed.

The old Fredericksburg brewery of San Jose will not go into the discard, but has been leased by the Greco Canning company, in which they expect to store 750,000 gallons of grape juice. The Greco company will build a pipe line from its present cannery to fill the great brewery vats. The juice will be concentrated into syrup. About 2,250,000 gallons of juice will be handled during the grape season.

Overstocked with Dried Fruit.

The American Consul at Malma, Sweden, has cabled the United States Government that the Swedish market is overstocked with imported dried fruits, a situation that has caused a serious loss to the Swedish industry. When the importations of dried fruit began after the armistice, the demand was enormous. Large shipments continued during the first six months of last year. Some firms, which did not understand the market situation, misjudged the demand and placed too large orders. Likewise, foreign firms piled up large stocks in southern Sweden, intending to ship them to Germany. When the trade opened with Germany the exchange situation prevented the moving of the dried fruit stocks and large quantities of these goods remained in Sweden. Many large dried fruit firms have tried to dispose of their holdings at auction, but this resulted in decreased prices. Importers still have the 1918 crop on hand, which is deteriorating.

Raisin Co.'s Principles Unimpaired.

The members of the Associated Raisin Company are elated over the report given out by resident Giffen, in which he analyzed the finding of the Federal Trade Board as an important victory for the association, in their right to fix prices not being objected to, but is apparently conceded, based on a recent ruling of the United States Supreme Court in the case of the steel trust. President Giffen finds that so far as violation of the Sherman law is concerned, every act objected to has been already discounted, except the contract with the California Packing Corporation. "The continuance of this contract is not vital to the association, while we do not believe at this time that it is of value to us, and would, if we were only considering ourselves, be very glad to comply with the recommendations of the commission, but this contract was entered into with good faith at a time when we believed we were in need of the help of the California Packing Corporation in the marketing of the crop."

Apple-Box Shook High.

A new feature will mark the movement of Watsonville apples the coming season. On account of apple-box shook reaching practically prohibition prices, many of the apples will be shipped in bulk. Box shook has reached the unprecedented price of 26 cents each in carload lots and 30 cents for anything less. This it must be remembered does not include the price of nails, packing, paper, or the making of the boxes. The entire cost of preparing a box for shipment, including materials, is 50 cents, when if the apples are shipped in bulk this amount is saved, plus loading charges, but there would be a loading charge even though packed in boxes. We would not advocate shipping fancy stock in bulk as fruit is more or less bruised. Then again the fancy trade demand a package in which fruit will be preserved and show off to the best advantage.

Los Angeles County at State Fair.

Los Angeles county is preparing to have a wonderful exhibit of citrus fruits at the State Fair. The exhibit will be a facsimile of the exhibit last year at the National Orange Show held at San Bernardino. The fruit will come from San Gabriel valley, and the settling will be the same as used at the above show when it took the big prize. The exhibit is surmounted by a graceful figure of the goddess of fruits, Pomona. This is only part of the big exhibit which is now on the way to Sacramento.

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From Farmer to Farmer

BUNYIP, BAYAH, and DARTS IMPERIAL SEED WHEATS

Hard White Australians; California acclimated; best milling; higher price for products.

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Large yields; quick growth; early maturity; more drouth resistant than other varieties known to us.

There is in California a very limited quantity of choice wheat and barley seed of these varieties. All our seed grown on new soils, one irrigation only. All water from deep wells; no Bermuda Johnson or Morning Glory. Orders booked as received, shipments following consecutively. No orders received for less than one sack lot.

Less than carload prices, f. o. b. Southern Pacific R. R. at Westhaven, in clean new sacks, per hundred pounds; Bunyip wheat, $4.75; Bayah wheat, $4.75; Darts Imperial wheat, $4.85; Mariout barley, $3.20; Beldi barley, $3.20.

We also have limited quantities Early Baart wheat seed at $3.75, Sonora at $3.65, Dieners Hybrid-Baart at $6.00 and Dieners Hybrid Sonora at $6.00 per hundred pounds. This is our first year with last two varieties. Our data not yet sufficient to permit our making definite conclusions or recommendations. Both tiller well permitting light planting, and neither shatters so badly as Sonora. In our judgment Bunyip, Bayah and Darts Imperial wheats and Mariout and Beldi barleys yield more or less soil moisture and shatter less in wind than any grains we have grown.

We are also now booking cotton-seed orders for late fall and winter delivery: Durango at seven cents per pound; Mebane at six cents per pound. All seed grown by us from selected, hand-rogued fields. We do our own ginning, carefully avoiding seed mixing.

We invite trial of our seeds for results with least moisture.

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VENTILATED Sublimed Sulphur — Impalpable Powder, 100% pure, in double sacks, for Dry Dusting and making Paste Sulphurs.

For LIME-SULPHUR SOLUTION, use our DIAMOND "S" BRAND REFINED FLOUR SULPHUR. We can furnish you this sulphur at such a low price that it would pay you to mix your own solution and net you a profit equal to the amount paid out for labor in spraying your orchard, even if you pay your men $5 per days for making the solution and applying same.

To create additional available plant food, and prevent smut in grain, drill into the soil 110 pounds per acre of TORO BRAND SPECIALLY PREPARED AGRICULTURAL SULPHUR or our DIAMOND "S" BRAND REFINED POWDERED SULPHUR. This soil treatment has increased various crops up to 500 per cent. Send for Circulars No 6 and 7, and circular letter of information, "To Whom It May Concern."

Also PREPARED DRY DUSTING MATERIALS, Tobacco Dust, Dusting Sulphur Mixtures, etc.

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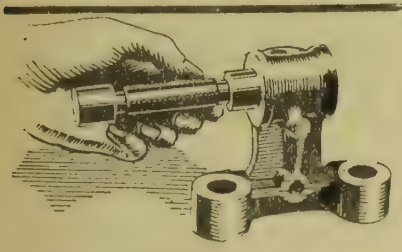

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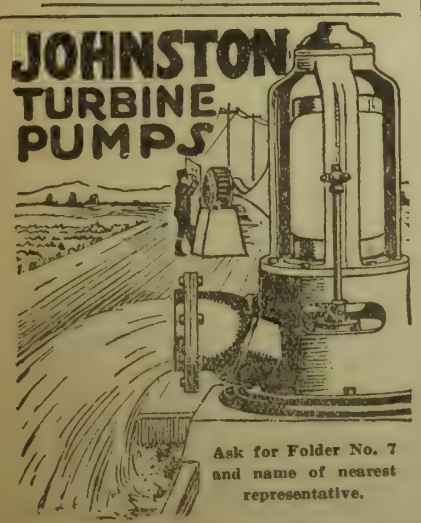

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AMERICAN WELL & PROSPECTING CO.,
407 E. 3rd St., Los Angeles

On the Wilson ranch at Chico there has been a loss of 5,000 acres of grain by fire. Estimate of damage is $20,000. A portion of the crop was saved.

CALIFORNIA'S DECIDUOUS CONTRIBUTION IN 1919.

(Written for Pacific Rural Press.)

Wouldn't there be a rubbing of eyes and a stretching of limbs if those who inaugurated the system of fruit growing and shipping in California could "return from the tongueless silence of the dreamless dust" and look over the figures appertaining to deciduous—fresh, canned and dried—fruit shipments for 1919?

The figures, as compiled by Director Hecke, in the language of my old nigger mammy, "Don't look human"—41,550 carloads. Of this number, 27,162 cars were in the fresh state; 14,381 dried. Of the fresh shipments, grapes headed the list with 18,920 cars; pears next, with 4,274 cars; plums next, 2,918; balance about equally divided between apricots, cherries and peaches, the latter of which amounted to 273 cars. But for the shortage of refrigerator cars, there is no telling to what extent the shipments would have reached, the shortage occurring at the height of grape shipments. This variety suffered most, but for this they would probably have reached the twenty thousand mark. Had all varieties that were canned and dried been added to the fresh shipments, the number of cars would have been as follows: Peaches, 25,560 cars—peaches shipped, 273 cars; apricots, 11,000 cars—apricots shipped, 420 cars; pears, 4,650—pears shipped, 4,274 cars; plums, 340 cars—plums shipped, 2,918 cars.

It may readily be seen that a very large percentage of the apricots and peaches produced in California are canned and dried. The tonnage in dried fruits is lead by the raisin, with 1,104,000,000 pounds; prunes, 675,000,000 pounds; peaches, 350,000,000 pounds; apricots, 145,000,000; apples, 126,000,000 pounds; figs, 44,000,000 pounds. The tonnage in cannery fruits is led by the peach, with 314,600,000; apricots, 143,000,000 pounds; pears, 61,000,000 pounds; plums, 8,750,000 pounds; apples, 7,500,000 pounds. Total of entire tonnage produced for commercial purposes, 2,284,300,000 pounds. Barring drouth and climatic reverses, the foregoing figures are a mere bagatelle compared to what they will be when the acreage now producing and the non-bearing acreage reaches full maturity.

MARKETLESS ONION GROWERS ORGANIZE.

(Written for Pacific Rural Press.)

Of the 1,500 carloads of Bermuda onions produced in Coachella Valley, Riverside county, last spring, half went to market and half staid at home. Part of them were plowed under. Opening prices for the first few crates shipped were $2.40 gross per crate. Prices immediately dropped, until finally they didn't sell for the 40 cents which the crates themselves cost the growers. Those still being held in Southern California are rotting and require frequent re-sorting. Growers are hot all through. They have been shipping on consignment. Hereafter, they intend to do better, or do nothing and do it in advance.

On July 23, about 100 growers representing all parts of the valley got together at Coachella and asked F. N. Bigelow of the State Market Commission what could be done about it. As a result, a resolution was passed unanimously, approving the organization of a marketing association under direction of the State Market Commission; and a committee of about 15 was appointed to proceed with the details. It was brought out at the meeting that not a grower had made money from his onions; largely due to the overloading of certain markets while others were not sufficiently supplied. Two forms of organization were considered: One would involve the association's establishing its own eastern connections as so many California associations with larger tonnages to market have done. Probably the form most favored is a non-profit, non-stock association, employing one of the several available shipping firms to handle the entire crop under supervision of association officers.

We Insure Pear Orchards Against Blight

in the MAIN-LIMB CROTCHES, in the TRUNK, and in the ROOTS—the most vital and vulnerable parts of the tree—provided you plant our blight-resistant Chinese seedlings, the genuine CULTIVATED type of

PYRUS U-SU-RI-EN-SIS,

and (after properly branching them) bud or graft the branches to the commercial varieties of your choice.
Below the point of union, THERE WILL BE NO BLIGHT.
Such trees will never die from this (the worst) disease of the pear, nor will your orchard investment be wiped out by blight—at present the outstanding menace to security and profit in this most profitable branch of horticulture.

> Should any tree or trees covered by this invoice die within TEN YEARS from the date hereof from pear blight (Bacillus Amylovorus), we will refund to the purchaser or his heirs the purchase price thereof as shown by this invoice.
>
> LOMA RICA NURSERY.

That is the agreement we incorporate in every invoice covering sales of Usuriensis seedlings (the genuine, CULTIVATED type) made on this basis. It shows our confidence in these stocks, but a more convincing proof of that confidence is shown by the fact that we have already planted more than 5,000 in orchard rows

IN OUR OWN ORCHARD,

and that we will next spring plant 10,000 more in Loma Rica orchard, later budding to Bartlett and other commercial varieties. These sturdy seedlings may be planted DIRECTLY IN ORCHARD ROWS, and we advise that practice, or they may be planted two feet apart in nursery until ready to transfer to orchard, budding them before transferring.

DON'T MAKE THE MISTAKE SOME HAVE MADE: don't assume that working a Bartlett top on a seedling which has blight-proof roots, trunk, and main-limb crotches, will—by some magic—make the Bartlett part blight-proof also, because THAT "CAN'T BE DID!"

Susceptible varieties will ALWAYS be subject to blight—and we want every prospective customer of ours to get this fact ABSOLUTELY RIGHT—but our method confines the disease to the UPPER part of the tree—ABOVE THE UNION—where inspection is not difficult nor eradication expensive.

Scientific Experiment Proves

that so long as we grow the Bartlett pear, the best that we can hope for is to provide our trees with crotches, trunk, and roots of a species that is BLIGHT-PROOF.

With such trees, fighting blight three or four feet under ground—always at heavy cost and frequently with loss of the tree—will be ABSOLUTELY ELIMINATED. If blight takes a part of the Bartlett top, grafting will replace it; and a few years' growth will restore the tree to full bearing.

OUR METHOD—budding or grafting the commercial varieties upon the branches of blight-resistant seedlings—OFFERS THE GREATEST PROTECTION from pear blight that Science has been able to devise AFTER ONE HUNDRED AND FORTY YEARS' STUDY of the disease.

SCIENTIFIC EXPERIMENTS have convinced us that Usuriensis seedlings (cultivated type) are the best available for such use. They UNITE WELL with our commercial varieties; are VIGOROUS AND THRIFTY in growth; and are adapted to a WIDE RANGE of soil conditions.

Space will not permit telling the WHOLE story here, but this fall we will publish a bulletin giving further details. Any person interested who will send his address NOW will receive a free copy as soon as printed. In the meantime,

Order Your Seedlings Now.

We can only spare about 50,000—a mere drop in the bucket of Demand—and when these are sold we shall have no more for AT LEAST TWO YEARS, due to the failure of the Oriental collectors to secure seed last fall through crop shortage.

Our trees are thrifty, sturdy, well-rooted; none less than ⅜ of an inch in diameter, and from two to five feet in height. The price is $40.00 per 100; less than 100, 50c per tree. Free packing on all August orders.

CAUTION: Dr. B. T. Galloway, of the U. S. Bureau of Plant Industry, warns against the use of Usuriensis seedlings of the WILD type in an article in Journal of Heredity, while highly recommending seedlings of the vigorous CULTIVATED type. Ours are EXCLUSIVELY of the cultivated type, and we offer them in the belief that nothing ever before available to horticulture will prove so valuable as a factor in blight control.

LOMA RICA NURSERY

PEAR SPECIALISTS

A. L. WISKER, Manager. GRASS VALLEY, CALIFORNIA

NOTE: We shall have a small supply of Bartletts (a few thousand only) branch-budded this fall in nursery to Usuriensis, for delivery fall of 1921 at $1.50 per tree, straight. Orders for this stock will be accepted now for delivery in the order received, so far as our stock will go. We can supply skillful workmen to bud seedlings furnished by us, where customers are unable to secure such help or do their own budding.

GRASSES FOR PASTURE

Now is the time to plant them.
Once established they endure indefinitely.

For Summer Pasture: RHODES, GUINEA, PARA

For Winter Pasture: PHALARIS, STENOPTARA, SMILO, PASPALUM DILATATUM

We offer plants of the following—prices postpaid:

	Per doz.	Per 100	Per 1000
Napier—divided crowns	$1.00	$4.00	$30.00
Guinea " "	1.00	4.00	
Smilo " "	.50	1.00	4.00
Phalaris Stenoptara—Plants	.50	1.00	4.00
Rhodes	.50	1.00	
Para—Stems	.50	1.00	4.00
Japanese Sugar Cane—Stems	1.00	4.00	

We offer seed of the following—which should be planted now:

	Per oz.	Per lb.	10 lbs.
Smilo	.50	$3.00	$25.00
Rhodes	.25	1.00	8.00
Paspalum Dilatatum	.25	1.00	8.00
Alfileria	.25	1.00	8.00
Orchard Grass		.75	6.00
Italian Rye		.50	4.00
Salt Bush		.75	6.00
Burr Clover		.75	6.00
Melilotus Alba		.75	6.00
Peruvian Alfalfa		.60	5.50

For a windbreak around your garden, plant Napier.
For further information on any of the above subjects, write

AGGELER & MUSSER SEED CO.
620 So. Spring Street, Los Angeles, Calif.

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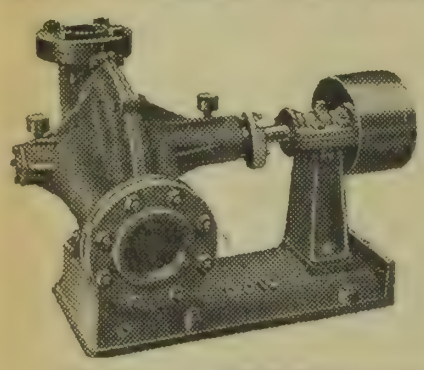
AT A SINGLE SUCTION PRICE

DOW DOUBLE SUCTION VORTREX PUMP



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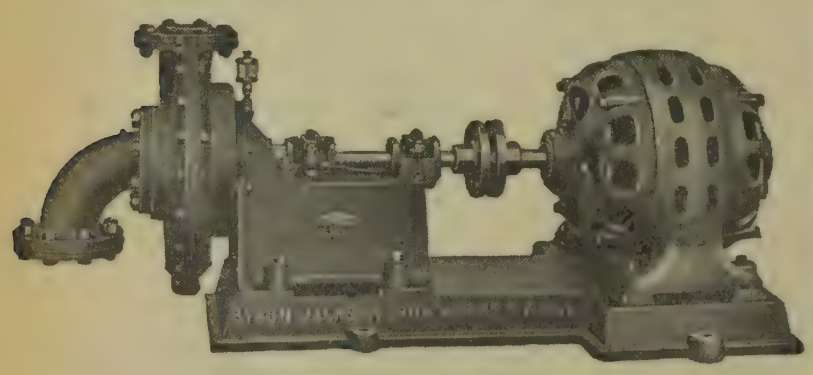
Is your soil producing the maximum?
"BYRON JACKSON" PUMPS are built to meet every condition of "supply and demand" on your ranch.



Write us your conditions.
New Catalog No. 60-A for the asking.

BYRON JACKSON IRON WORKS, Inc.
LOS ANGELES SAN FRANCISCO VISALIA

DIGESTER TANKAGE

Send for Sensible Folder on Feeding Hogs

WESTERN MEAT COMPANY
Animal Food Dept. 704 Townsend St., San Francisco

Agricultural and Mechanical Service

Who Pays for the Sack?

This year a farmer pays 20 cents apiece for barley sacks; and when he sells the barley they deduct ¾ pound for every sack. This is a new rule. Who made it? The farmer is docked for weight of the sack, but doesn't get anything for it.—E. W. C., Stanislaus county

The ruling was made last spring by the State Superintendent of Weights and Measures under authority of the State Weights and Measures Act. Whether you are getting anything for the sack can only be told by comparing prices offered for bulk grain as against sacked grain. We remember that the U. S. Grain Corporation at one time maintained that the second-hand price of the sack was added to the value of grain it contained, but we never felt sure of it.

Piping Water 1500 Feet.

Will a ten-inch cement pipe carry water from a four-inch pump with six-inch discharge to a distance of 1500 feet, including a rise of 3½ feet in that distance? How high will it be necessary to lift water above ground at well to overcome this backfall?—C. D., San Joaquin county.

To overcome backfall, 3½ feet lift would be enough. A four-inch pump under your conditions should easily discharge 400 gallons per minute at the surface. Lifting it three feet higher should overcome all pipe friction and discharge the full amount at the upper end. You could use eight-inch pipe by lifting the water about three feet higher. Seven-inch pipe would carry it by lifting a total of 15 feet above ground at the well.

Graded Sweet Corn Sold Well.

Grading sweet corn into two grades and selling the number two's at 3/5 the price of number one's was found by Wilson Bros. of Los Angeles county to be a profit-making practice. It was also found to be a hot job in the field, so the grading was transferred to the shade of trees by the roadside. No sooner done than travelers began to buy at 60 cents per dozen, or $1.60 per lug box, for number one's. Miss Wilson, who was trimming and grading when the writer called in mid-July, said they had already sold $1,000 worth from ten acres in that way, besides equal sales on the city markets; and still there was a great deal of corn to come.

Watch Beet Toppers This Year.

When sugar is valuable, it pays beet growers to see that the toppers do not waste the crowns of the beets. All leaves must be cut off or the factory will estimate a greater tare than would be lost by cutting close enough before delivery. But careless topping takes off half an inch or more than is necessary of the sweetest part of the beets.

Auto Attachment for Wood Saw.

Could you give me any information on an attachment for a car to saw wood or pump water, etc.?—J. K., Fresno county.

Generally it disfigures and abuses the car. If your time is valuable, you will make more money doing something productive while you would otherwise be wasting time rigging up the car for its unnatural work. Extra cooling devices are required, and some sort of gearing or belt pulleys must be attached. An automobile attachment for such work is generally an expensive substitute for a small gas engine in three ways—maintenance, cost of operation, and waste of time in addition to general inefficiency.

Water-Lift in Box Pump.

I am using a ditch pump in which a vertical centrifugal propeller is located at the bottom of a tall box. When pumping, the water is about six feet above propeller on outside of box. Where may I determine the lift—at the propeller, or six feet above?—M. D., San Joaquin county.

The difference between water level over the intake and water level at the outlet is the lift It makes no difference how deep the propeller is under water so far as the lift is concerned.

Turkey Red Wheat.

Where can I buy Turkey Red wheat?—R. M. L., San Francisco county.

Ask your groceryman or feed dealer to order the wheat for you from a wholesaler. The Globe Grain and Milling Co. of San Francisco has a stock for sale to dealers, but not for retail. This wheat is mostly grown in Kansas and the Mid-West. It will cost you about $5.25 per hundredweight now.

Subsoiling Beet Land at Harvest.

Shall we subsoil our beet land at the same time we dig the beets? A puller does not stir the ground half so deep as a Killefer digger, which goes under the bottom of the roots, as used by Louis Krukenberg of Los Angeles county. It takes four horses on a one-row digger; but it leaves the ground in best shape for another crop without a separate operation. Many people plow out with tractors, which makes the subsoil cultivating system easy.

Limas Irrigated in Bloom.

Lima beans irrigated while blooming in 1919 by Wm. Specht of Los Angeles county yielded over three-fourths of a ton per acre on four acres. Mr. Specht thinks such irrigation helps rather than hinders the setting, though it may be objectionable because it keeps the vines growing too late in the season.

Careful Mariout Barley Tests

The past season has afforded a splendid opportunity to test the merits of the new drouth resistant Mariout barley introduced into California from the Sahara desert region of northern Africa by the California Agricultural Experiment Station. Experimental records from the University Farm, just compiled, show Mariout to have exceeded Tennessee Winter barley in yield by eleven sacks per acre this season.

Two five-acre blocks of summer fallow were accurately laid out in field No. 2 at the University Farm, and one planted to Tennessee Winter barley on January 13th; the other to Mariout on January 14th. Both were drilled at the rate of 80 pounds per acre, with an accurately calibrated grain drill. Both were cut with a grain binder on June 5th and there was very little shattering in either case. Both lots were threshed with a stationary separator on July 15th. —The Tennessee Winter yielded 22.6 sacks per acre, testing 43 pounds per bushel. The Mariout yielded 33.6 sacks per acre, testing 45 pounds per bushel. In this case Mariout added 11 sacks per acre to the yield.

Tests in previous wet years have not always been in favor of Mariout, but in dry years its reputation as a dry land crop has been consistently sustained. It will outyield common barley on light, well-drained soils, whether fall or spring sown, and is generally better than common barley on either light or heavy soils when spring sown. To secure the best results with Mariout, however, it should be sown prior to January 15th.

Corn is not a good egg food. Oats, in any of its various forms, is better.

Madewell Surface Pipe

Lock Seam Pipe With the Lock Seam Sleeve

Strongest, smoothest and most practical construction possible. When it comes to surface pipe, there's nothing better.

—Lock Seamed by powerful machinery—a good wide seam that holds.

—Locked-Seamed Sleeves, countersunk on the inside, leaving a perfectly smooth surface. An exclusive Madewell feature.

—Full Gauge Steel guaranteed in all Madewell Pipe.

Send for Catalog S

It explains Madewell Surface Pipe and other Madewell Sheet Metal Products in detail.

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E. 12th St. and 25th Ave. Oakland, Cal.

MADEWELL

SAVE MONEY—BUY PIPE FROM US

Farmers, Miners, Builders—people in every kind of business are saving money buying used or renewed pipe from us. We sell every kind of pipe. Send in a list of your requirements today and get our prices. We have saved hundreds of people 33 1-3 to 50 per cent on their pipe bills. Here's a partial list of some of the miles of pipe we have in stock for immediate delivery.

8,000 ft.	6 in.	Riveted	16 gauge
700 ft.	8 in.	"	16 "
5,000 ft.	12 in.	"	12 "
1,000 ft.	18 in.	"	12 "
800 ft.	22 in.	"	14 "
300 ft.	24 in.	"	14 "
500 ft.	36 in.	"	12 "

10,000 feet light wrought iron 8-inch pipe with cast-iron collars.

All above pipe thoroughly overhauled and inspected and ready for immediate use.

We also have large quantity standard pipe and screw casing, pressure tested and guaranteed.

Don't delay—write for our prices on your pipe requirements today.

PACIFIC PIPE COMPANY
229 Howard Street, San Francisco, Cal.

The LAUSON 15-25
DUST PROOF-ALL GEARS ENCLOSED

If you expect to buy a tractor this fall, write at once for a copy of our new

Tractor Catalog

This handsome 50-page book fully describes all the features of the LAUSON 15-30 Farm Tractor. It tells why the LAUSON is the most profitable tractor for you to own, and gives many interesting facts on power farming in general.

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Blake, McFall Co., Portland, Ore.

NEW CO-OPERATIVE LOCAL MARKET.

(Written for Pacific Rural Press.)

Three little irrigation districts on a mesa near the beaches in Orange county have grown so rapidly within the past two or three years that their surplus products were hard to market with facilities at hand. One of the settlers last season sold $2,000 worth of apples delivered to cold storage for customers who paid in advance. Vegetables and small fruits, eggs, poultry, goat milk, rabbits, sweet cider, sorghum syrup, etc., are produced in small excesses on many of the ranches. The Newport Mesa, Newport Heights, and Fairview Irrigation districts now have several hundred voters in their population. They are located along a boulevard which carries an increasing number of automobilists to the beaches when gasoline is not too short. The community has raised money to advertise itself, and it had a most creditable exhibit at the county fair last fall.

Now what to do with the products is a pressing question just being solved. W. C. Spencer put up $100 and a nice little market building on some land of his own fronting the boulevard; and offered to rent it to the community for $1 per year if the community would show its interest by raising $300 additional to pay for the building. Thus it came about that The Wayside Market Association was formed two or three weeks ago. W. S. Williamson, on July 14, showed us an agreement signed by 31 of the colonists, whereby each put up $10 for the purposes. Each member has a vote regarding policy of the Association, but it was understood that all of their surplus products might be displayed at the market for sale at any time. Fresh fish also will be for sale. Tables are provided for refreshments, such as locally produced cider, benches for stage patrons, water for automobiles, a billboard for notices concerning "Wants" and "For Sale," and bill boards at the beaches will announce "Specials" for the day at the market. So is one neighborly community solving part of its marketing problem to its own and its patron's advantage.

PRIVATE CAPITAL FOR LAND SETTLEMENT.

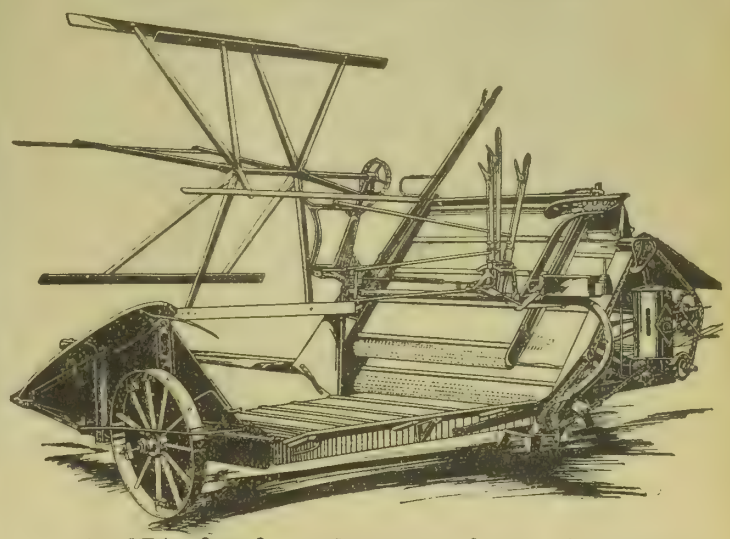
To the Editor: Your editorial in the issue of July 10th should interest the California Development Board, as that body could not profitably function not only in educational work on land settlement, but in interesting the investment of capital in the extension of the work of the Land Settlement Board. This can be accomplished by enlisting the co-operation of business organizations throughout the State in a plan which would contemplate the investment by their members in the proposed Land Settlement Bonds. If properly guaranteed subscriptions could be secured prior to election, the bonds would carry. Business can afford to make the necessary sacrifice in principal and interest to secure for our State the greatest possible development of agriculture and good citizenship.

This would solve most of the doubtful questions mentioned by you and might eventually lead to investment by private capital in colonization enterprises, using the successful methods of our Land Settlement Act.

As to the tax on farmers and the competitive effect of such State-aided colonization, the answer is that the indirect benefits secured to them through the more rapid development of the principles and practice of co-operative agricultural credits and distribution, would far outweight the cost.—W. B. Wellman, San Francisco.

[Since Mr. Wellman wrote the above the report came (as noted in our issue of July 17, that some defect in the enactment by the legislature may prevent the referendum it contemplated. If that should be true the other suggestions by Mr. Wellman as to pushing by private enterprise, become all the more pertinent.—Editor.]

They Harvest the Rice—and Ride the Mud



A SEA of mud; standing acres of uncut rice—tons of life-sustaining food waiting to be harvested. Wanted: a fast-working binder that will ride the mud and harvest the rice. Requirements: mud traction, ability to stay on top of the ground and—harvesting efficiency.

McCORMICK AND DEERING RICE BINDERS meet all these requirements. The main wheel as well as the grain wheel has a galvanized side to keep wheels from becoming filled with mud. Especially designed deep spade lugs are provided for the main wheel to insure good traction in soft ground. A broad face keeps the main wheel from miring—permits the binder successfully to ride the mud. And as for harvesting efficiency—

The names McCORMICK and DEERING are well-known as guarantees of satisfactory performance even where harvesting conditions are the most severe. McCormick and Deering rice binders are twin brothers of the grain binders bearing the same names—made in the same factories and of the same high-grade materials.

Your full-line International dealer sells these efficient, dependable rice-harvesting machines. See him. A post-card to the nearest branch will bring you descriptive catalog.

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(INCORPORATED)
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Los Angeles, Cal. Portland, Ore. Salt Lake City, Utah
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OilPulls are Built to Last

The supreme endeavor of the makers of the Rumely OilPull tractor has always been, and always will be, to build into each machine such perfection that even under the roughest use and abuse of farm work it will establish a record of dependability, economy and long life that can be equalled only by other OilPulls.

That's why there are hundreds of nine, ten and eleven year old OilPulls still on the job.

Send for further information

ADVANCE-RUMELY THRESHER CO., Inc.
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RUMELY OILPULL TRACTOR

"We used to get a man to shock 10 acres of alfalfa per day for $1.25. Now a man shocks five acres per day for $3.50 or $4," says W. F. Duffy of Stanislaus county.

Gophers like Napier grass roots better than carrots.

STUMPS and WILLOWS

Get Rid of Them Now With CRESOLITE

A few ounces applied now in the hot weather to a stump will paralyze and kill it in a week. Sample can of 13 lbs. $2.15. Money back if it fails. Bbl. lots at 12c per lb.

LOUIS BAHRS, LOOMIS, CAL.

Significant Agricultural Pointers

Cuts Two Tons Seed Potatoes Per Day.

Can you cut 40 sacks of seed potatoes into one-ounce pieces in a day of ten hours? If not, you are losing valuable time. Here is the equipment used by E. D. Campbell of San Bernardino county, who cuts two tons in ten hours without working too hard. First is the sloping bin several feet wide, which holds several sacks of potatoes in bulk on its broad bottom. Cleats along the sides guide the potatoes toward center at the lower end so it is convenient for the cutter to reach them with no waste motion. The knife is thin and so sharp that it glides through a firm potato without notable pressure and saves his fingers many an impetuous slash. An additional protection is provided in the form of rubber finger cots for the thumb of the hand, which does the cutting and for the thumb and two fingers of the other hand. These have served their purpose many times in Mr. Campbell's cases though he works like an expert. To save time in sacking the cut seed, a five-gallon oil can has its top and bottom removed. It fits beautifully into the top of the sack, holding it open until it is filled. Then the can is withdrawn.

Study to Sell Locally.

One might assume that such a city as Modesto would already be supplied with all the common crops demanded for local consumption. But W. F. Duffy had only to inquire from a local dealer regarding the market for seven acres of sweet corn which he proposed to plant about the first of July, to find that the dealer jumped at the chance and agreed to buy the entire crop. If you have a small patch of ground unplanted, it might pay to inquire from your local storekeepers what available crop would find readiest demand.

Alfalfa Twenty Feet Tall.

Alfalfa trees 1½ to 2 inches in diameter and 15 to 20 feet tall at three years of age are growing in the back yard of E Spencer in Los Angeles county. Seed from which they grew came from Australia, where the tree is said to furnish a lot of valuable browsing. The leaves look a great deal like alfalfa leaves growing on weeping-willow twigs Leguminous seed pods are forming this year for the first time.

Irrigated Baart Wheat.

One and one-half sacks of winter-sown Early Baart wheat produced 35 sacks for Height & Brothers of Madera county on irrigated ground. It made fine heavy kernels not pinched at all as much of surrounding wheat suffered; and was considered worth at least 50 cents per hundredweight more than common wheat in that territory.

Organize National Grain Growers.

California grain growers are as far behind the modern march of progress as our fruit growers are in the lead. They have permitted farm organizations from other States to take the lead in organizing grain growers on what promises to be a really national and effective basis. Representatives of such organizations met in Chicago July 23 under auspices of the American Farm Bureau Federation. After hearing of local successes in co-operative grain marketing in the Middle West, and listening to a simple but business-like plan for nationally successful marketing as presented by Aaron Sapiro of San Francisco, they authorized President Howard of the Farm Bureau to appoint a committee of seventeen representatives of real farm organizations to work out a plan which will dominate the marketing of American grain as our California fruit organizations dominate the marketing of their lines.

Well Diversified District.

Productiveness of Garden Grove district in Orange county is a source of pride to its citizens who have erected a big sign-board beside the highway. Tonnages shipped from this center in 1919 were: Beans, 1350 tons; beets, 4,662; potatoes, 157; sweet potatoes, 404; cabbage, 439; tomatoes, 328; dry chili peppers, 1,455; green chili peppers, 1,990; pimientos, 825; oranges and lemons, 1,755; walnuts, 483; miscellaneous, 500 tons; and eggs 98490 dozen.

Plants Cut Off at Ground.

Many a garden enthusiast is dismayed at the sight of his promising plants cut off at the ground. If he would dig beside the stalk he would find one or more cutworms. If they seem numerous, distribute a little poisoned bran in the evening at bases of remaining plants. Mix a quart of bran with a tablespoonful of Paris green. Add a cup of molasses Add enough water to moisten the mixture so it can be rolled into little balls.

Lower Lands Made Less Barley.

More than one estimate places the average barley yield for Madera county this year at five sacks per acre. Grain and grass in the foothills are better; for more rain falls here than on the lower levels westward to the boundary line at the San Joaquin river; and the grain this season is progressively poorer the nearer the river it was planted.

Cantaloupes Plentiful.

Now that Sutter Basin, Turlock and Sacramento River cantaloupes are reaching the market in large quantities, prices are easy, but the stock is good, as it is allowed to mature before being pulled for shipment. Pony crates, $2,50@$2.75; Standards, $3.50@$3.70; Flats, $1.50.

PEACHES IN DEMAND.

The local peach market has been in exceptional good condition throughout the season. The demand has been such that several straight cars of Elbertas have been disposed of at prices around $1.50 to $1.65 per box; Alameda special $2@$2.25. Full ripe stock arriving in baskets and small lugs have commanded good prices, but have to be handled in a rush on account of full ripe condition.

BARTLETT PEARS PLENTIFUL.

The local market is well stocked with Bartlett pears, most of the stock coming from the Sacramento River ranches in lug boxes, and being sold by peddlers on the streets at 20 cents per dozen for a very good quality of fruit. Better stock that is wrapped and packed in standard boxes is selling at $2.75 to $3.25.

Live Stock Insurance

The fall fair and exhibition season is at hand.

THE HARTFORD LIVE STOCK INSURANCE COMPANY

will insure your show stock (horses, mules, jacks, cattle, registered milch goats, and registered swine) against death from any cause, while at home or on the road, including the hazards of transportation. Policies broad and liberal; rates reasonable—yet adequate to insure prompt settlement of claims. Before shipping see the Hartford Agent in your town, or address

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PAUL F. HILL, Special Agent, 916 Citizens' Nat'l Bank Bldg., Los Angeles, Calif.

LELAND M. BELL, Special Agent, Hartford Building, San Francisco, Calif.

JOHN A. TODD, Special Agent, 1124 Paulsen Building, Spokane, Wash.

Poultry for Profit

"CHICKENS OR DUCKS?"

(Written for Pacific Rural Press.)

That's the very question the Nut-Brown Maid (See picture on first page) is trying to answer for herself, and also to the satisfaction of "dad," who "pays for the feed." Long before the day of the official Farmerette, the Nut-Brown Maid was conducting various outdoor enterprises on her father's ranch. But during the war, in proportion as the price of poultry-feed soared, her poultry was reduced by a series of Sunday dinners until there remained only Penny, the family pet. One might say she had grown up with them. Each year since hatching, Penny's ankle had been adorned with a birthday ring, until the Nut-Brown Maid declared she resembled "a South Sea Island belle." The sole surviving ancestor of the many generations that had lived, laid and departed this life, usually by the kitchen route, old Penny was now left to scratch for herself.

That was Dad's answer to the chicken enterprise.

So the Nut-Brown Maid, uniformed in Dad's jumpers, gathered in quaint ruffles round slender ankles, like grandmother's pantaloons pictured in family deguerreotypes, a soft shirt topped with kahki hat, relic of Dad's Spanish-American cavalry days, and hiking boots, answered her country's call to plow the garden.

Meanwhile Penny was doing her bit each day in a stolen nest, and on the very morning of the armistice, presented her delightful mistress with a large family of chicks, presumably as a peace-offering. So the Nut-Brown Maid returned to her feathered flock.

Again Dad intervened. The insubordinate Penny was required to occupy her regular quarters over a setting of duck eggs, and with the addition of "Painless," the duck enterprise was finally launched. "Painless" is a large white quackless drake of the Muscovy family, originally from South America. No one knows what became of his quack, unless it were "painlessly" extracted by its donor of the same name, who, in addition to dentistry, operates a neighboring ranch. However that may be, the young ducks, along with the chicks and the rabbits, receive enthusiastic and impartial attention at the hands of the Nut-Brown Maid, for she does not produce eggs primarily for the market; but as a loving contribution to the family larder. And life out in the "great, wide, beautiful, wonderful world" is ample reward.

As with the making of a gentlewoman, three generations have contributed to the perfecting of this outdoor-loving maid. The worship of Demeter is in her very blood. Her eyes, brown fields flecked with gold; the russet of autumn in her hair; and her motions as free as untrammeled winds westward to cool her sun-kissed cheeks—all are earmarks of her untainted heredity.

Just so, a non-commercial spirit came down to her from easy-going Virginia ante-bellum days. She has never calculated that if one hen will produce 215 eggs in one year, what the profit on one thousand hens will be. She is not even quite sure which produce more eggs—ducks or chickens. She keeps no statistics. But from observation, she concludes that ducks lay more regularly during their laying season, which is shorter than that of hens. Also the eggs of a duck are larger. On the other hand, the market for duck eggs is not so good, as customers are prejudiced against the "flavor" for table use, but because of their size, they are "dandy" for cake.

"Do ducks eat less or more than hens?" one is inspired to inquire.

"More," replies the Nut-Brown Maid; "but cheaper food."

It appears that they thrive on the contents of the family garbage can, whereas hens require the choicest grains. Also ducks are more hardy, noiseless, and a palatable substitute for turkey and other expensive meats. Settings of duck eggs bring a fancy price. And last, but not of the least importance, "Dad likes 'em boiled and stowed in his lunch-basket when he goes fishing."

SANTA CRUZ EGG-LAYING CONTEST A FIXTURE.

Poultrymen of California will be pleased to learn that the California Farm Bureau Egg-Laying Contest, conducted at Santa Cruz is to become a permanent institution. For the past two years work has been carried on along this line. In 1918-19 a semi-official contest was held and records kept by flocks. In 1919-20 an official contest, which is still in progress, was conducted under the direction of the Farm Bureau and the poultry division of the University of California. With a pledge of $10,000 by the Santa Cruz Chamber of Commerce, the contest is to be enlarged and will be carried on on a scale equal to other international egg-laying contests. A site has been purchased and an up-to-date house, complete in every detail, will be built at once. It will house 1200 birds, or 100 entries.

The experimental stage of State egg-laying contests is past. They are not only practical, but are also essential to the poultry industry as a whole. What poultryman does not follow the records of contests, such as Storrs', Connecticut, Missouri and Pullman, Washington? And is there any doubt as to the value of the contest to these states?

The California Farm Bureau Egg-Laying Contest is a reality and every progressive poultryman will surely take advantage of this opportunity to bring the industry in his State to the front. The value to the individual poultryman cannot be overestimated. The publicity he receives—or the value that goes with having his pen trapnested, with no question as to the truth of the records—either point alone makes his entry a paying proposition to him.

The contest of 1920-21 will start on October 1, 1920. A number of entries have already been received and more are coming in each week. Each entrant will send twelve birds, ten of which are to compete, and two will be alternates. The entrance fee will be the same as last year, namely, $2.00 per bird. Any breed may be entered.

Complete information, with rules, regulations and entrance blank, can be obtained by writing either the Manager of the Farm Bureau Egg-Laying Contest, Santa Cruz, or the Farm Advisor, Santa Cruz.

YOUNG TURKEY TROUBLES.

To the Editor: Will you kindly let me know what is the trouble with my half-grown turkeys? They are running at the nose and are swelled each side of the bill. They had free range, plenty to eat, roost outside and have the best of care. I have been giving a roop cure for two weeks, but it doesn't seem to do much good. They eat fine. Please let me know what to do.—J. N. T., Modesto.

The description indicates that these turkeys are suffering from a cold or simple catarrh. This is not a contagious disease and is not dangerous when the fowls are otherwise sound and vigorous. When in perfect condition and they are obtaining a proper variety of feed, the complaint is usually so slight that it passes unnoticed by the attendant, therefore, we suggest that they are from weak or inbred stock or are eating too much grain or other fattening feed. Feed them a greater proportion of such things as bran, lean meat, clabber milk and, when possible, all the greens they can eat. Always keep cracked bone where young and growing turkeys can eat it at will. It is important that they are supplied with

crushed charcoal, shell, and proper grit. If these fowls are so badly affected that they cannot see to eat it will be necessary to wash their heads and eyes with tepid water in which a little boracic acid has been dissolved. Aside from this treatment the best medicine is a change to a proper diet.

BACKYARD FLOCKS.

The size of the flock which can be most efficiently kept will depend upon the space available and the amount of table scraps or other waste available for feed. Overstocking is a mistake. Better results will be obtained from a few hens in a small yard than from a larger number, poultry specialists of the United States Department of Agriculture say.

The backyard poultry flock rarely should consist of over 20 or 25 hens, in many cases of not more than 3 or 10, and occasionally of only 3 or 4. For a flock of 20 to 25 hens a space of not less than 25 or 30 feet should be available for a yard. Where less space is available the size of the flock should be reduced, allowing on the average 20 to 30 square feet per bird. A few hens are sometimes kept successfully with a smaller yard allowance, but if the space is available a yard of the size indicated should be used.

CALIFORNIA FARM BUREAU EGG-LAYING CONTEST.

The winning pens for the week ending July 10th are as follows:

Owners	Eggs.
Fred Stalling, Santa Cruz	52
R. C. Gibson, Newhall	52
S. L. Gibson, Santa Cruz	50
Theo. Clark, Santa Cruz	49
Warren Wood, Santa Cruz	47
G. G. Barker, Santa Cruz	46
Bellows Bros., Lakeside	46
E. H. Schlink, Ramona	46
W. J. Neef, Santa Cruz	43
Hollis Peck, Santa Cruz	43
Mrs. M. B. Wilson, East San Diego	43

The total production for the week was 1300 eggs, or an average per cent, for the seven days, of 55.

In experiments at Cornell, hens fed both milk and water drank on an average of 1½ ounces of water and 5½ ounces of buttermilk per day. In other words, 100 hens will require about 12 to 14 quarts of milk per day if given all they want. In experiments at Purdue University, the hens averaged to drink 93 pounds of buttermilk per year or about 12 gallons.

Provide for pigeons a pen which is dry, well ventilated, and can be kept free from rats and mice. Two nests should be allowed for each pair of breeders.

As the warm weather advances be sure there isn't any food left over in the dishes to sour and generate a poison that may cause sickness or death.

Poultry Breeders' Directory

Rate 3½ cents per word each issue.

BARRED PLYMOUTH ROCKS —"Nothing Better in Poultry." Wonderful layers. Choice hens and pullets for sale; also fine cockerels that will improve your flock. Now booking orders for hatching eggs. I have made a specialty of Barred Rocks for over twenty-two years. That's why our birds win at all the leading shows. Catalog free. Chas. H. Vodden, Box 3, Los Gatos, Calif.

SANTA CRUZ CHICKS are in demand. Our hatchery will run full blast this fall, supplying Leghorns, Anconas, Minorcas, Rocks, Reds, and Orpingtons. We also offer W. L. Hyde's cockerels from Pen 1, with trapnest record 236-284 at $5.00. Write for folder with chick price list. B. W. Archibald, Soquel, Santa Cruz Co., Calif.

BABY CHIX—Order now for September delivery from our selected, bred-to-lay Hoganized White Leghorns, Barred Rocks, R. I. Reds. Maxwell Hatchery, Madera, Cal.

GOLDCROFT BUFF ORPINGTONS, Columbian Wyandottes and White Leghorns. Heavy laying strains. Breeders and young stock. Samuel Abrams, Box 13, Los Altos.

CHICKENS, DUCKS, GEESE, GUINEAS, Pea Fowl, Pigeons. Wm. A. French, 545 W. Park St., Stockton, California. Stamps.

PEERLESS WHITE WYANDOTTES — Our 200-egg strain, bred for years for show qualities and high-egg production. Fifty cockerels, 100 pullets for sale. Trios and mated yards. Eggs for hatching. Catalogue free. J. W. Atkinson, Box 8, 130 Willard St., San Jose.

ATKINSON'S PEERLESS ANCONAS lay more and eat less than other breeds. 50 big husky cockerels, $5 and up; 200 pullets, trios, and pens for sale. Hatching eggs. Catalogue free. J. W. Atkinson, Box 8, 130 Willard St., San Jose, Cal.

WHITE LEGHORN BABY CHIX from heavy-laying Hoganized Stock. Safe arrival of full count, live, strong chix guaranteed. Price list and interesting literature on application. The Pioneer Hatchery, 408 Sixth St., Petaluma, Cal.

RAISE FALL CHICKS—We will have them every week. R. I. Reds, Barred Rocks, White Leghorns. Write for special circular. See why they pay. Stubbe Poultry Ranch and Hatchery, P. O. Box 67, Palo Alto.

WHITE ORPINGTON NO. 10 laid 61 eggs in 87 consecutive days. Settings. For sale, White Leghorn cockerels from over 200-egg trapnest stock. Mabel Smith, Route 2, Box 128, Hollister.

BREEDING STOCK FOR SALE—Yearling hens, pullets, R. I. Reds, Barred Rocks, Black Minorcas, Brown Leghorns, $2 to $3 each. Fall chicks also. Mission Hatchery, Campbell.

BARRED ROCK, White Orpington, hatching eggs, now $1.75 and $3.50. Breeding Cocks, Cockerels, Hens, Pens. R. P. Lutzi, 1217 20th Ave., S. F. Yards at Los Altos

JUBILEE INDOOR BROODERS—One four-section, $18.00; 2 two-section, $12.00 each. Perfect condition; used one year. Samuel Abrams, Los Altos.

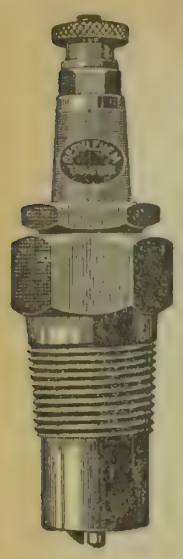
BUFF ORPINGTONS, BUFF DUCKS, BOURBON Red Turkeys, White Guineas. The Ferris Ranch, R. 2, 144 D. Pomona, Calif.

BABY CHICKS from selected S. C. White Leghorn hens. Write for prices. Tupman Poultry Farm, Box 7A, Ceres, Calif.

TRANESTED White Orpingtons, White Leghorns. Mabel Smith, Hollister.

RABBITS AND PIGEONS.

WHITE KINGS — Famous squab raisers. Mated and banded pairs, $5.00. Hicklings, 553 Bancroft Ave., San Leandro.



Spark Plugs and Threshing

YOUR gasoline engine must give uninterrupted service in threshing season. You cannot afford delays caused by spark plugs fouling. Therefore, use sure-fire Bethlehem Spark Plugs.

The mica in the Bethlehem de Luxe Tractor Plug is wound about the center-spindle, *then reinforced* by mica washers, compressed into a granite-like whole.

The great International Harvester Company, after exhaustive tests, has adopted Bethlehem Spark Plugs as standard equipment. Let this be your guide in buying spark plugs.

In Bethlehem Automobile and Truck Plugs, improved engineering ideas reduce liability of fouling. Special-formula porcelain reduces breakage and current-loss to a minimum. Studebaker, Marmon and 48 other manufacturers have adopted Bethlehem Plugs. Write for free copy of "Hit or Miss?".

BETHLEHEM SPARK PLUG CORPORATION
E. H. Schwab, *President*
Bethlehem, Pa.

Bethlehem SPARK PLUGS

"They Pull You Through"

IRRIGATING PUMPS

Single Stage Motor Driven Pump

KROGH PUMPS absolutely hydraulically and automatically water balanced. No end thrust whatsoever.
Also DEEP WELL TURBINE PUMPS for bored wells 10-inch diameter and up.
—Write for Bulletins—

KROGH PUMP & MACHINERY CO. 149 Beale St., San Francisco, Cal.

Level Your Land for Less Money with a Compton scraper

Operated by the tractor driver from the tractor seat—one man does it all. Moves more dirt with less power. The 5-foot size does the work of 3 or 4 four-horse scraper teams. Saves enough time, horse-feed and labor to pay for itself in a few days. A size for every tractor. Prices from $215.00 to $335.00. Send for descriptive circular and price list.

THE WOODWARD COMPANY FRESNO, CALIF. Box 706 A

COMFORTABLE NATIONAL TRACTOR SHOW.

"We eat enough dust at home. We won't go to the tractor plowing demonstration to climb over big clods in the hot sun and wade through dust ankle deep," said many farmers a year ago last spring, when the Sacramento tractor demonstration was staged. The dealers heard and heeded. The day of the collective field demonstration of plowing and stunts is past. Every body knows that a tractor rightly built will plow any considerable area cheaper than horses can do the same work. But not everybody knows what a rightly built tractor looks like. There are so many features of mechanical design, workmanship, and materials for various parts that it takes a specialist in mechanical engineering to recognize the faults and advantages of the various machines now on the market. The writer is convinced that nowhere on earth can a man get so much of that special knowledge of tractor design as at a show where all makes are on exhibit with salesmen at hand to tell why each feature is put into the machine and to call attention to features that would be overlooked by anyone except a specialist. The popularity of such exhibits has been proved by the eastern shows and by our own State Fair exhibit of last year. No noise, no dust, no beating sun, no clods, everything comfortable and handy for the purposes of investigation.

No subject is of more universal interest in California farming today than that of mechanical power on the farm. Everybody is asking about it. There are two places at which Californians will this year have unexcelled opportunities to see all the tractors on the market and to study their inwards. One is at the State Fair, September 4 to 12. The other is the First National Tractor and Implement Show of the West to be held near Los Angeles, September 20 to 26, 1920. The latter will be held in the Verdugo Woodland in the shade of beautiful sycamores and oaks, where a few weeks ago was a mat of underbrush, but now is cleared and clean. A crystal brook sings through the woodland, green mountains form a lovely background, and the hospitable city of Glendale close by is outdoing itself for comfort of all visitors.

The entire country from the Rocky Mountains westward and from Vancouver to Mexicali is uniting to foster this show; and California boost literature is covering the entire East in behalf of Eastern participation. The Tractor and Implement Dealers' Association of Southern California is carrying out the details under leadership of its president, W. W. Rainey, and secretary, A. W. Hudson. Guy Hall, **manager of the preceding** successful tractor shows of the East, has been employed as manager, and he is sure stirring things all over the East as well as the West. So early as July 18, two monts before the show begins, he wired that exhibits for 10,000 square feet were already pledged in the East with 15,000 additional in sight. Western exhibitors had already asked for 35,000 square feet.

ENGINE CHOPS ORCHARD FERTILIZER.

To burn fruit-tree prunings will one day be regarded as foolish as to burn straw or to waste any other possible fertilizer. Certainly it is a dangerous practice as we have noted orchard trees partially and wholly destroyed by fire in various parts of the State. Burning the brush involves a lot of raking and hauling also. Some citrus growers are recognizing the fallacy of such waste and are keeping busy the machine operated by Custer & Waterbury in Riverside county to chop the prunings fine and distribute them in the soil. The machine was operating near Corona recently when the writer observed it. Prunings had been piled between the trees. The machine drove down between rows and left the prunings in scattered piles of fine stuff to be plowed under. Sticks up to 1½ inches in diameter went through without causing the engine to take notice. One man pitched brush onto a platform while another fed it rapidly into the machine, regardless of which end went first; and two horses hauled the outfit down the row with not much time to rest, though the piles showed that heavy pruning had been practiced. A seven-horsepower gas engine was mounted on a low wagon truck and belted with a six-inch belt to the chopper pulley with about six feet between pulley centers. A tightener steadied the belt. A chain drive from the chopper axle operated the feed cylinders, one of which was corrugated lengthwise, while the other was toothed in concentric circles. A lever on the right side was handy to the pitcher to throw the cylinders out of gear quickly if the feeder's hand should get caught.

In light soils the heavy sticks might objectionably dry out the land. We are not sure of this, however; and certainly the short sticks would be better than gravel. They would absorb moisture at irrigation time and give it off gradually to the soil surrounding them as the soil needed it. In any event, a year sees the rotting of practically all of it with considerable advantage to the soil in humus and in the fertilizer elements required to make more wood growth. And the expense and danger of hauling and burning are avoided. On heavy or cementy land the chopped prunings have added value to loosen the soil.

TRACTOR CHISEL REJUVENATES LAND.

A 400-acre ranch in the Santa Susana Valley produced 84 tons of grain hay a few years ago. The place has been grain-farmed for 30 years, and got so it produced not much of anything. This season it produced 23 sacks of barley per acre for Geo. Rodd. Mr. Rodd attributes the difference to a bean crop failure in 1919. But we see another reason. The land had no grain in the winter of 1918-19. The beans in 1919 were well cultivated, but failed for lack of moisture. When Mr. Rodd saw the certainty of failure, he chiseled the ground deep, using a 60-horse-power tractor to tear up the subsoil without bringing much of it to the surface. This we believe, in addition to the rest and the fertilizer added in the shape of abandoned bean vines, is responsible for the good crop. The barley was planted early in December, part being drilled 65 pounds per acre and part broadcasted 90 pounds per acre. The drilled grain was too thick, and Mr. Rodd says the broadcasted crop was better.

BEAN RAKE PAID FOR ITSELF.

A side-delivery bean rake "saved lots of labor forking the beans" for Thomas Bell, a veteran lima grower of Ventura county, who, until last year, had used the regular hand-forking labor. "It saved more than the price of the machine on 115 acres last season," says Mr. Bell. As labor conditions get worse, the side delivery rake will prove greater economy. Mexican hand pilers cost $4 to $4.50 per day and don't hurt themselves. Two horses on the rake with one driver windrow 15 acres a day, driving slowly to avoid shattering the beans; and then the piling is rapid. Four rows are raked up at once. Limas shell out less easily than small whites ; 'd raking progresses throughout the day.

MOTOR TRUCKS HAUL MANURE FOR ORCHARDS.

Insistent demand for manure in the orange orchards of Southern California has justified the establishment of numerous motor truck lines, which pick up manure wherever it can be found, chiefly on dairy ranches, and deliver it to citrus orchards at a certain price per ton. One such truck and trailer is operated by G. O'Connell of Los Angeles county. We found Wm. See, the driver and his "swamper" loading the truck and trailer at a small dairy corral, which Mr. See estimated would yield about fifteen tons of dry manure. This was bought from the dairyman for $35, was hauled twelve miles, and dumped in a young orchard for $6 per ton. The truck with a capacity of 290 cubic feet was estimated to carry about five tons per load. The trailer was estimated to carry 3½ tons. A man and team is kept busy going from one corral to another to scrape the manure into convenient piles. Four men were said to keep busy spreading in the orchards what manure the two men with motor truck and trailer could load and haul 12 to 18 miles. Mr. O'Connell aimed to get the manure generally at about five cents per cubic foot or $3 per ton; while dairymen are said to be satisfied with $12 per year for the manure from each cow.

TOMATOES EAST IN NOVEMBER.

Orange county growers have recently completed the transplanting of 800 acres of Stone tomatoes, as estimated by Manager J W. Wallop of the Orange County Produce Growers' Association. Some of the crop is to be saved for seed, some will go to canneries, and a great proportion will be shipped to eastern markets in October and November, after frost gets the eastern crop. November is the great month in which to sell Orange county tomatoes in the East. Nearly every State except the Southern States take some of them; and some go even to Canada. The Southern States are shipping at the same time. The normal crop here is about ten tons per acre. One grower last year shipped about 170 tons net weight after packing from 30 acres and sold the balance to a cannery. The shipments averaged him 90 cents per packed box for the 10,000 boxes—$300 per acre besides the cannery sales! Good prices are due to the Association's practice of packing in a standardized way at their shipping shed so the quality is known by the label.

PUMP FOR SECOND-CROP CORN.

Rapid work is necessary to grow a crop of Indian corn on land after oat hay is cured and baled from it. If gravity irrigation is depended upon, there is likely to be a delay of a week or two in irrigating the stubble. That week or two may mean loss of the corn crop. C. E. Shattuck's ranch in San Fernando Valley gets water when he wants it and makes the crops afterward.

Will Moore, who runs the place for Mr. Shattuck, was just plowing a twelve-acre piece July 20, where oat hay stubble had been irrigated from the pump. This pump throws 140 to 150 miners' inches of water. It is kept going all the summer time on this intensively farmed 160 acres, being given only a four-hour recess from 10 p. m. to 2 a. m. per day. The corn, of which the 12 acres is only a part, needs water once every two weeks on this sandy land; and with the pump such frequent irrigation is practicable.

SMALL TRACTOR IMPROVES HIGHWAY.

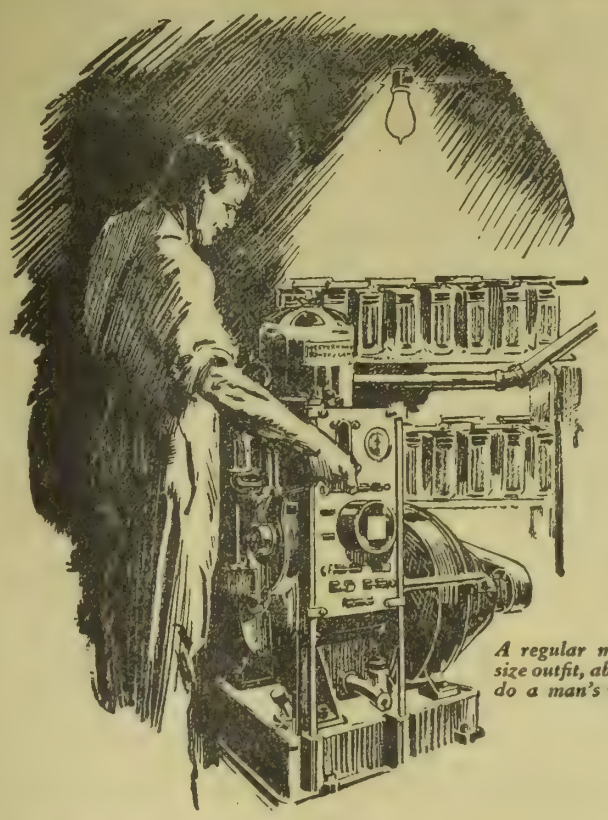
Two men were doing good work on the corrugations of an asphalted highway in Los Angeles county in spite of their lazy dispositions. One was driving a 10-18 tractor, while the other regulated a scarifier and scraper. The scarifier had 17 teeth, making a path 32 inches wide and just deep enough to take off the bumps. The scraper which was part of the same machine, had a seven-foot diagonal blade, which finished the job to a smooth surface. The tractor was doing better work, according to the men, than the eight horses which usually pull the machine. The tractor burned ten or twelve gallons of the cheapest kind of distillate in a short eight-hour day.

TOOLS READY FOR USE.

"Notice: A place for everything. It takes less time to put a tool away when through with it than to hunt or ask others (when you want to use it again). Other people's time may be valuable." This sign hangs in the ranch workshop of L. M. Higgins in Santa Barbara county. It is worth drilling into your cranium.

Often we see unsightly garden fences protecting low-growing crops, while an agonized array of crooked poles decorates rows of pole beans across the middle of the garden. It would save a lot of work and increase production of the garden to plant climbing vegetables along the fences.

"How a new kind of farm hand added acres to my farm"



A regular man's size outfit, able to do a man's work

Editor's Note: *W. E. Shetrone, a farmer near LeRaysville, Pa., shows how you can help to solve your labor problem.*

"Now, I'm not going to tell you that the Western Electric Power and Light Outfit is the best on the market. The chances are you know more about farm plants than I do. All I want is to tell how this outfit has been doing a man's work on my place—when men are hard to get. That is how it saved time enough for me to cultivate seven acres more last spring."

W. E. Shetrone
LeRaysville, Pa.

Mr. Shetrone's house is pleasantly located

"LAST YEAR I was struggling along with my little farm—milking by hand, taking a two-hour trip to the creamery every day, working hard to support my family. Then a salesman showed me how I could do the work in less time and with less effort by installing Western Electric Power and Light equipment. Well, I put the apparatus in, and right from the start it began to save time and labor. In fact, the time it saved me made it possible to plow seven acres more last spring.*

A powerful outfit for heavy work

"Power ought to be the first consideration in buying a farm plant. There are plenty of good electric sets satisfactory for lighting. But not many of them are strong on power. You can't expect them to do the hard work.

"The Western Electric has a three horsepower engine, which as you know is ample to run most all the machinery. Grindstone, feed-mixer, churn, mill—you can operate them all together from a shafting hitched up to this powerful engine, because there's a pulley on it for just such work.

"In generator and battery too, power is the feature that impressed me most. My Western Electric outfit furnishes plenty of electricity to light the house and barn, and at the same time it runs the pump, the milking machine and such household appliances as a vacuum cleaner and a washing machine.

Why the battery lasts longer

"Another big feature is the automatic control of the battery charge. At the start the current flows in at a fairly high rate, but as the batteries fill, the rate of flow becomes less and less—till at last the current is just trickling in. Then it stops by itself. This 'tapering charge' takes the strain off the batteries and *so makes them last longer.*

"Well, the Western Electric outfit certainly has helped me in my work. And talk about time saved! Those extra seven acres I was able to plow will produce some handsome profits this fall, I can tell you."

**What the Western Electric Power and Light Outfit did to make Mr. Shetrone's farm more productive, it can do for your farm too.*

A portable motor drives the grindstone

Western Electric distributors in your neighborhood:

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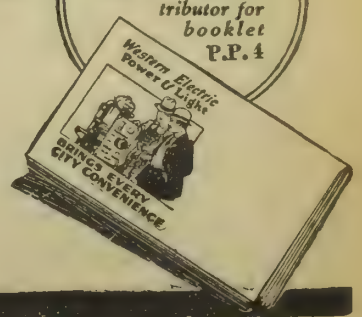
Hoeppner Electric & Machine Co., Phoenix, Ariz.
Vyne Brothers Electric Co., Prescott, Ariz.
C. F. Bush, Blythe, Cal.
Strawn Electric Co., Calexico, Cal.

Some good territory still available for live-wire representatives

For further information write to the nearest Western Electric distributor for booklet P.P. 4



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Big Money Boring Wells

Have water on your own farm. In spare time make wells for your neighbors. It means $1000 extra in ordinary years, double that in dry years. No risk—no experience needed.

Outfits for Getting Water Anywhere

Earth augers, rock drills and combined machines. Engine or horse power. *Write for easy terms and free catalog.*

LISTER MFG. COMPANY
Box 712 Clarinda, Iowa

Buying Milk With Other Men's Money.

Written for Pacific Rural Press by R. E. Hodges.

Much of the difficulty encountered by producers of milk for city consumption in getting a fair price for their product has been due to ignorance on the part of city people regarding actual dairying conditions and costs of production. In some cities, notably San Francisco, the consumers were unwilling to look at the facts squarely, but they are coming to it now. The fairness innate in human nature will make city people willing to pay the price necessary to afford dairymen a fair profit when they are really convinced what that necessary price is. The educational campaign being carried out in California under auspices of the California Dairy Council, is proving to many people the necessity of providing milk for their children, whatever it may cost. Being convinced of these facts, one more startling fact may still need proving in order to convince the most unwilling that they had better be joyful in paying an advanced price for milk.

State Market Director Gilbert B. Daniels has just collected data showing that dairymen all over the State are actually selling out and going into other lines of work, as we have been stating in Pacific Rural Press for many months. The actual gallons of milk being produced are considerably less than a year ago and the famine bogey is becoming real. Only after city people become willing to pay a fair price for milk will the existing shortage of milk be remedied. It can not be remedied promptly, either, for it takes some time to produce a producing cow.

Cows Already Actually Decreased.

The producers supplying San Francisco and certain other bay cities have recently announced a raise in their price to distributors, and Mr. Daniels has accomplished a magnificent stroke of diplomacy in securing space in the city papers to present facts regarding decreased production due to low prices and high costs.

On June 28, Mr. Daniels sent a letter to seven dairymen's associations in California asking: (1) How many members have actually gone out of the dairy business. (2) How many producing cows have actually been taken out of the supply. (3) What decrease does this represent in gallons of milk.

We have taken notes from the answers of several of the Associations. The Associated Milk Producers who handle about 25,000 gallons daily, of which about 18,000 are sold in San Francisco, answers through Secretary A. J. Homen that during the 18 months ending June 30, 1920, sixteen of their members went out of the dairy business, selling 1920 cows to dairymen in the interior and to the butchers, reducing their milk supply 3,840 gallons per day. Mr. Homen states that the association now supplies about 65 per cent of the milk sold in San Francisco.

The Northern California Milk Producers' Association, which operates in the terrtiory northward from San Joaquin county to Oregon, has, according to Secretary H. M. Ellis, in the past two years lost 300 members who have entirely quit the dairy business and probably will not re-enter. Every day other dairymen talk about getting out. Many are fattening cows for beef, and more would do so if beef prices were better. They are convinced that it would pay better to sell their cows and hay rather than to feed the hay and milk the cows. Mr. Ellis estimates that the 300 members averaged fifteen cows each, reducing the producing cows by 4,500 in this territory and reducing the milk by nine or ten thousand gallons per day. There are others of whom he has less accurate knowledge. In the Orland district of Glenn county, dairy production has decreased 40 per cent in the past two years; and former dairymen are producing fruit, rice, and other crops.

Southern Dairymen Constantly Changing.

In Southern California there has been a more optimistic feeling, as shown by Manager E. H. Biles of the Milk Producers' Association of San Diego county. In January, 1919, they had 57 shippers. Eighteen months later they had sixty-two. During the past year twenty members quit dairying and eighteen entered. During the first six months of 1920 their milk receipts increased 11,000 pounds or 0.2 per cent over the same kind in 1919, probably due to the new members added.

The California Milk Producers' Association of Los Angeles, with 700 members now, have lost ten or fifteen members every month for the past six month, according to Secretary T. H. Brice. There seems to be no actual decrease in gallons of milk supplied to Los Angeles, the decreases in membership and production being counterbalanced by new people going into the business. Says Mr. Brice: "Our membership is changing all the time. People think there is money in dairying until they have been in the business a few months, when they in turn sell out. This is what has kept up the milk supply." It will continue to do so at the expense of suckers, who continually appear and throw their savings into the big white slough of black despond.

Feed and Labor Costs per Hundredweight.

The causes of this universal fact that dairymen are quitting milk production after they learn what there isn't in it are elaborated by Mr. Daniels about as follows: Alfalfa hay, which forms the basic feed for 80 per cent of the milk produced here, ranges from $28 to $32 per ton baled, while in 1914 it sold for less than $9 a ton. If the average cow eats 16,000 pounds of hay in a year and produces 6,000 pounds of milk, it would require 267 pounds of hay to produce 100 pounds of milk. If we reduce that to 250 pounds for easy figuring, and assume $30 per ton for hay, the feed cost alone to produce 100 pounds of milk is $3.75. At $9 per ton, as in 1914, the feed cost of 100 pounds of milk was $1.125.

The labor cost of milk is heavily increased. Dairymen are quite generally paying their milkers $110 per month and found, the equivalent of $140 per month on the average. As a milker now cares for only 25 cows, a 100-cow dairy requires four milkers and one man to wash cans, care for the milk, etc. On this basis the labor cost per 100 pounds of milk is $1.40. In 1914 milkers pere paid $45 per month and it cost $20 on the average to board them, making the labor cost per 100 pounds of milk, then 65 cents. on the basis above.

The feed and labor cost in 1914, as above figured, amounted to $1.775 per hundred, as against $5.15 in 1920. This does not include depreciation in stock and equipment, insurance, veterinary bills, interest on investment, etc. The actual total cost, as figured on ten dairies in 1917, average $2.604 per 100 pounds, or 21.7 cents per gallon. In 1920 the corresponding figures are $6.29 per 100 pounds, or 52 cents per gallon.

Prices Not Proportional to Cost.

It is notorious that milk and butter prices have not increased in any such proportion in the same time. Therefore, it is no wonder that dairymen are quitting all over the State and the cities are kept from milk famine only by the sacrifices of dupes predestined to a weary disheartened end. It is not too great a price to pay? And is it not right that city folks should pay for their daily milk in their own coin rather than in the sacrifices and lives of dairymen?

The Conejo Sells Good Ones

(Written for Pacific Rural Press by Thos. F. McConnell.)

Summer sales of purebred swine do not as a rule have the vim and snap of those conducted during the winter months, but when the reaction following the greatest of all world wars is also in existence we cannot wonder that even the good hogs of both Duroc-Jerseys and Hampshire breeds should go slow.

The writer is a firm believer where it is possible of holding auctions of purebred livestock at the ranch or farm where they are bred, raised and owned. The atmosphere, if the establishment is the proper kind of one, is right. Breeders and farmers, especially progressive ones, are always looking for new ideas and are anxious to attend sales held at noted breeding and feeding farms in charge of men who know their business like George Waltemeyer.

An Educative Experience.

A well-known breeder was heard to say at this sale, as he was going around the Conejo Ranch feeding-warehouse, that he always liked to attend sales at such places as there were always opportunities to pick up hints and suggestions well worth the trip. This man is manager of the livestock department of one of the large ranches of southern California, long in the business, an expert himself, and if he could learn, then how much more could the mere tyro absorb if he has an open mind observant of detail.

There are very few ranches in California, or out of it, where the natural environment is superior to that of the Conejo Ranch. Level and gently rolling land, set with giant-spreading oaks, within easy driving distance of the City of the Angels, close enough to the sea so that the heat is never oppressive in the summer—what more could be asked? Coupled with these we find an up-to-date ranch, so far as buildings and equipment are concerned. A great farrowing house, feed warehouse fully equipped, a fine watering system, and last, a sales-ring with a firm plank floor covered with sand.

Convenient Arrangements.

Special mention should be made of the arrangement for bringing the hogs from the exhibition pens in the farrowing house, where they could easily be seen and studied by prospective customers, to the sales-ring. A narrow alley or lane had been constructed—so narrow that a hog could comfortably walk along but find it difficult to turn around, connecting pens and ring. This passageway in the end next to the sales-ring was divided into compartments by sliding drop doors, so that several hogs could be brought up and held ready to shoot into the ring at a moment's notice.

The sales-ring was large enough to hold from one to more hogs with ring man and attendant. Surrounding the ring on three sides were plank seats built in rising tiers so that all could have an unobstructed view of the animals being sold.

These seats, ring floor and fence, auctioneer's block and alley fence are all made so they can be taken down and stored for future use as Conejo Ranch expects to hold sales at frequent intervals and opportune times.

Thinking, able minds, working for the convenience and comfort of guests and animals had evidently planned everything, not forgetting lunch, lodging and gasoline. Well was the old saying, "Welcome the coming, speed the parting guest," exemplified.

The Offerings.

Did some one say that nothing was being said about the offerings? Words and pen fail to do them justice. Probably never in sales-ring history in California was a better lot of hogs offered, everything considered. Individuality and breeding both were there, including service of males typical in the highest sense of the breeds.

The first day, devoted to the sale of the Duroc-Jerseys, commenced by Col. Bell, the auctioneer, introducing that veteran swine breeder, Sam McKelvey of Nebraska, who, while not a real red hog man, made a most excellent opening address.

The sires in service to the females offered were exhibited: Giant Wonder, an 800-pound hog in breeding condi-

Holsteins of Show Quality

Great Individuality and Big Production

25-Cows and Heifers-25

bred to the best bulls in the country, many of which will calve soon after the sale

12 OPEN HEIFERS AND 8 BULLS

45 HEAD SELECTED FOR SHOWING

At Patterson Fairs, to be sold at PUBLIC AUCTION on the last day of the Fair, August 21st, under auspices of

STANISLAUS COUNTY HOLSTEIN BREEDERS' ASSOCIATION

CONSIGNORS:

A. M. Bibens	Modesto	Bridgford Holstein Co.,	Patterson
R. L. Holmes	"	E. Peterpostin,	Hughson
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Freeman & Edwards	"	J. A. Pelanda	"

John Saxer, Modesto.

All tuberculin tested and sold under strongest guarantee possible.

For Catalogs and other information, write

E. M. MORROW

Secretary, MODESTO, CAL.

STANISLAUS COUNTY HOLSTEIN BREEDERS' ASS'N
A. M. BIBENS, President
E. M. MORROW, Secretary
Modesto, Calif.
Auction Sale, Patterson, August 21.

"ORMSBY"
Means Quality and Production.
Get a young bull sired by King Korndyke Hengerveld Ormsby 7th.
KOUNIAS REG. STOCK FARM
Waterford Road,
P. O. Box 296, Modesto

HOLMES STOCK FARM
Waterford Road, Modesto
REGISTERED HOLSTEIN-FRIESIANS
Prize-winners at all Shows.
Inspection invited and satisfaction guaranteed. Write for prices.
R. L. HOLMES, Prop.
See Our Consignment at Patterson Sale.

BRIDGFORD HOLSTEIN CO.
Patterson
THE CHAMPION SHOW HERD
The herd of high records.
STOCK FOR SALE.
Visitors Welcome.
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WALTER K. ADAMS,
Rte. 1, Box 245, Modesto
BREEDER OF REGISTERED HOLSTEINS AND POLAND-CHINAS
See Our Consignment at Patterson Sale.

A. M. BIBENS
Modesto,
BREEDER OF REGISTERED HOLSTEINS
Some fine young bulls for sale.
See Our Consignment at Patterson Sale.

BULLS AND BULL CALVES
Sired by SEGIS DUTCH ORMSBY
My 32-lb. Herd Sire
Out of A. R. O. dams.
JOHN SAXER, Modesto, Cal.
See Our Consignment at Patterson Sale.

H. E. CORNWELL
MODESTO, CALIFORNIA
Prescott Road, 1 mile from Highway
If you want to see some of the best Holsteins in the State, visit my herd.
YOUNG STOCK FOR SALE
See Our Consignment at Patterson Sale.

YOUNG REGISTERED BULLS
From High-Testing Dams
E. PETERPOSTIN
Route 1, Box 235, Hughson, Cal.
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BULLS FOR SALE
FROM 1000-LB. SIRE
Some with three nearest dams averaging 1000 lbs.; two of serviceable age; one with dam's record 30,000 lbs. milk, 1000 lbs. butter
FREEMAN (E. E.) and EDWARDS
Route B, Box 385, Modesto
See Our Consignment at Patterson Sale.

REGISTERED HOLSTEINS
Creamcup Herd offers service bulls and bull calves of 34-lb. breeding. Females offered for foundation stock.
Tuberculin tested.
M. M. Holdridge, San Jose, Cal.
R. D. "A," Box 437,
Two miles out North First Street.

LEONARD FARM JERSEYS
Bulls for sale from Register of Merit Cows.
Write for information.
W. J. HACKETT,
CERES, CALIFORNIA

T. B. PURVINE & SONS
PETALUMA, CALIFORNIA
Breeders of
REGISTERED JERSEYS
Young bull calves for sale. Fine individuals with Register of Merit backing.

Breeder of
Reg. Holstein Friesians and Big-Type Polands
Best Blood Lines
H. G. BALL, Prop
Tulare, California

tion; Big Model, "with," as Geo. Waltemeyer expressed it, "a $5,000 set of feet and legs."

A Wonderful Sow.

The top of the sale and the most sensational exhibition of not only this sale, but of the United States, perhaps, was the driving into the ring of Great Wonder's Lady 5th with six of her litter of eight farrowed last October—a chance of a lifetime, to see what may be called perfection in breeding. All were good, but one outstanding animal was the young boar, 39 inches high and weighing 450 pounds, probably the best animal of his kind today. Walter Galton is authority for the statement that this young fellow's pedigree contains 27 different grand champions and traces back to old Hero on both sides. The dam is as good as she can be, both as an individual and a breeder. She went to R. F. Talbot of Nogales, Arizona, for $1,350. She is an excellent foundation, all by herself, for a great herd of Durocs.

Some of the Buyers.

Among other buyers were W. H. Dupee of Santee, Winsor Ranch of Bonita, Montana Land Company of Whittier, Col. Cy N. Clark of Modesto, Diamond Bar Ranch of Spadra, E. C. Witt of Lankershim and Russell Bros. of Triumpho.

It was truly a great offering of the popular red hog—just the kind that in a few months people will be almost fighting one another at the ring-side to see who shall be the lucky ones to obtain not the choice but any at all.

The second day was devoted to the "belted beauties"—the Hampshires. Many think they are the coming hog and judging by those going through the ring at this sale, they are surely qualified for the sober consideration of those wishing to grow a hog making a very strong bid for the packer's favor. Hogs with plenty of stretch, very deep, strong backs and dressing a very high percentage of marketable meat and excellent grazers, those who have had experience with them are certain they are very economical producers of high grade pork.

Hampshire Breeders Meet.

After an ample lunch the first few minutes was devoted to a business meeting of Hampshire breeders. Several points in their by-laws were settled, and the time of holding the annual meeting was fixed for the week of the Los Angeles Livestock Show. E. M. Harsch, the eastern representative of the Hampshire Association, was present and gave some very interesting facts and lgures about the breed.

As on the previous day, the sale was opened by the exhibition of the sires in service—Conejo Prince and Liberty. They are an impressive pair and the first mentioned animal is easily better than the picture of him in the sales catalogue—a condition that does not usually obtain.

A Snappy Sale.

The sale, while not the equal of some previous sales of history, was characterized by more life and snap than any late ones. No spectacular top was made, but the average for the thirty-odd sold was not bad. A. V. Buell of Santa Barbara paid $200 for Floreine 4th and close to that figure for several more. C. J. Gilbert for Tarzana Farms was the heaviest buyer. Two good ones were purchased by E. M. Harsch for eastern breeders. The spring gilt Marguerita goes back to Dreamwold Farm at Peorio, Ill., and Bessie's Best to Russell P. Hale of Nyantic, Ill.

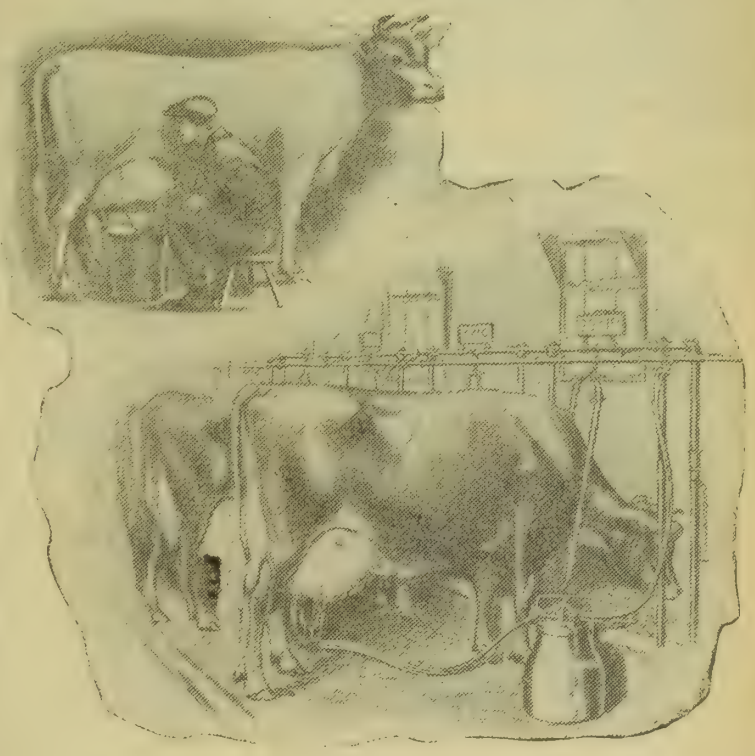
Among the prominent supporters of the breed present were Francis T. Underhill and Jas. T. Marwick of Santa Barbara, Dr. E. Avery Newton of Los Angeles, A. E. Harvey, manager of the Fairbanks Ranch at Redlands, Mr. Shattuck of Hollywood and others.

Col. Geo. W. Bell of Tulare cried the sales, assisted by Col. Fred Gatewood of Fresno in the ring.

Sale Made Good Impression.

It is certainly safe to say that never has a sale been conducted in California where every one was so pleasantly impressed in every way, from start to finish as they were during these two days.

Hand Milking
versus
The De Laval Milker



Hand milking is not a natural process. Neither is it uniform nor regular.

Even the best hand milker does not milk the same every day—nor at every milking. It is a well-known fact that even the best hand milkers milk more rapidly and energetically at some times than at others, as the time of year and a man's physical condition vary his methods of milking. Matters of temperament and disposition quickly affect the cow and interfere with the secretion of milk.

The De Laval Milker, on the other hand, is regular, uniform, and positive in action at every milking. It milks the same at any hour of the day and every day in the year. This regularity and the alternating action at fixed speed, are agreeable to the cow and promote secretion and regular flow of milk.

The De Laval Milker also saves time and labor. In fact, one man with a De Laval Milker can milk three times as many cows in a given time as he can milk by hand.

The perfect sanitary features of the De Laval Milker are important. All parts that come in contact with the milk can be quickly and easily cleaned and sterilized. This is especially necessary in marketing certified milk.

Write to nearest De Laval office for Milker Catalog, mentioning number of cows milked

DE LAVAL DAIRY SUPPLY CO.
THE LARGEST DAIRY SUPPLY HOUSE ON THE PACIFIC COAST
61 BEALE STREET SAN FRANCISCO, CAL

DIAMOND BAR DUROCS Double Your Dollars

Ace of Pathfinders

This great boar headed the World's Grand Champion Duroc herd at the 1919 National Swine Show; also the first prize get of sire herd. All animals in both herds are owned by us.

He was Grand Champion at the Los Angeles Livestock Show and stood second to the world's grand champion at the National.

He is by Pathfinder, out of Hiawatha, by Crimson Prince, and, besides his show ring record, he is considered one of the greatest sires of the breed.

No matter whether you want a foundation herd, new blood for an established herd, or simply a boar to breed up a grade herd, we can satisfy you from the world's largest Duroc herd. While quality is high, our prices are reasonable, and every animal is sold under a guarantee of complete satisfaction.

CALL OR WRITE

DIAMOND BAR RANCH

FRED LEWIS, OWNER AND MANAGER — R. K. WALKER, Hog. Dept.

SPADRA — Los Angeles County, Calif.

Duroc-Jersey Hogs for Sale

BOARS AND GILTS
BRED SOWS
SOWS WITH LITTERS

DIABLO STOCK FARM,
E. F. PETERSEN, Supt., Danville, Cal.
G. W. EMMONS, Owner, Oakland.

They are the large type and the best blood strains to be had anywhere.

HERD BOARS AND SOME OF THE SOWS

Lucy Orion's Model
California's Defender
Diablo Orion Model
Defender Colonel 70th
Lucy Orion's Mayflower
Great Wonder I Am Gano
Pathfinder's Queen
Prize of Tulare Belle
Twin Oaks Attraction
Lady Defendress 70th
and 50 others

WEANLINGS, $15.00 EACH AT RANCH.—A large number always on hand to choose from. Crates, $2.50 each, refunded when returned prepaid in good condition.

MAIL ORDERS SOLICITED. SATISFACTION OR MONEY BACK.

THE MOST PROFITABLE BROOD ANIMAL
ON THE FARM

THE OLD RED SOW

She Is No Slacker, but Does Her Bit and Guarantees Returns on the Investment.

SHE IS ALL THIS BECAUSE

The Duroc sow reproduces more rapidly.
The Duroc sow is a good mother
The Duroc sow is a wonder grazer.
The Duroc sow is a prepotent breeder.
The Duroc sow is an easy feeder.
The Duroc sow is the most popular.

SHE FEEDS THE WORLD, PAYS DEBTS AND MAKES PROSPERITY.

For information relative to DUROC-JERSEY HOGS, write to
S. E. WHITING, Secretary-Treasurer
California Duroc-Jersey Breeders' Ass'n
R. R. 4, Box 810, SACRAMENTO, CALIF.

The Los Angeles Livestock Show

A call on Secretary-Manager Thomas brought out the facts that preparations for a bigger and better livestock show than has ever been held on the Pacific Coast are well under way.

Generous Subscriptions.

The subscription solicitors have met with great response from those visited. In the main the subscriptions run from $500 up, only two falling below that figure, with several of $5,000 each. A total of over $100,000 has has been reached and the good work is still progressing.

The exhibition barns and tents, with a special horse show amphitheatre, will all be located on the inner field of the mile race-track with an arrangement that will facilitate the handling of the crowds of visitors and withal permit everything to be seen to the best advantage. Seventeen of the barns are already in process of construction.

Premium List Ready This Week.

Various things have delayed the issuance of the premium list, but it will now surely be ready for distribution this week. Inquiries for copies are already coming in from eastern exhibitors. Entries close September 5th. Breeders, please note.

Field Representative Doherty of the Aberdeen-Angus Association of America has assured Secretary Thomas there will be several herds of the beefy black beauties competing for prizes, which will be a much larger exhibit of this breed than usual for the Pacific Coast.

The names of the judges are not ready for publication as the list is not complete, but several leading authorities have signified their willingness to act and their names will be published in the near future.

Several sales of purebred stock will be held, among them being the promotion sale of the Polled Hereford Breeders and that of the Southern Berkshire Congress.

Amusements Galore.

Not only will there be a great livestock, horse, goat and pet stock show, but plenty of other amusement features will be in evidence. Secretary Thomas, with other members of the amusement committee, attended the Salinas Rodeo for both promotion purposes and to select some excellent amusement features.

Excellent financial condition, coming at a convenient time of the year and early enough so that good weather is assured, the Los Angeles Livestock Show is assured of success.

SEX IN CALVES AGAIN UNDER CONTROL.

(Written for Pacific Rural Press.)

The question of controlling sex in prospective calves bobs up about as often as perpetual motion, and so far one has been about as satisfactorily disposed of as the other. A friend was boasting last fall that he could get heifer calves when he wanted them by timing the breeding just right. The last eight calves had been heifers. The other day I saw him and forced the confession that five unwelcome bull calves had been dropped one after the other, for all of his theory. The subject, however, is so fascinating and really of such great importance that the studiously inclined will keep at it until somebody actually solves the problem.

The "Shorthorn World" says the problem has been solved. It says that scientists at Chicago University and elsewhere states that a Japanese has turned the trick. If the use of big words will do it, he certainly has. "Femaleness in the egg state is accompanied by low metabolism, lower percentage of water, and a higher total of phosphatides." The reverse of this means "maleness"—all of which, being interpreted, means that the mother must store more fat to produce a female than to bring forth a male.

DAIRYMEN MUST WATCH LEGISLATION.

The chances are good for some interesting developments along dairy lines at the next session of the legislature.

At the Dairy Council convention, E. F. Moran, attorney for the San Francisco Milk Dealers, said that an effort would be made to organize a statewide co-operative milk dealers' association and that the next legislature would be asked for action in furtherance of the plan.

At the same convention, Dr. J. P. Iverson, Chief of the State Division of Animal Industry, stated that more legislation would be asked that would enable the state "to eradicate tuberculosis without eradicating any dairymen."

Word is out that Senator Brown (of market-making fame) is again on the war-path in full fighting paraphernalia.

And J. S. Abbott, formerly with the Department of Agriculture, but now secretary of the New American Institute of Independent Margarine Manufacturers, in a recent address before the Cotton-seed Crushers' convention, made an appeal for vigorous and concerted action against the butter industry. Watch out for oily legislation.

LARK MEADOW BERKSHIRES.

Geo. E. Stingle of El Monte is among those who believe the purebred hog is something worth while. He breeds Berkshires, and although he would like to see more demand for registered animals just now, he is sure the business is a good one, even at its low point.

Mr. Stingle does not want and will not have hogs with weak pasterns and poor feet. He thinks exercise helps to keep them straight and strong therefore he places several feed throughs in the brood sow lot. When feed is put in all these troughs at the same time it causes the hungry hogs to hurry around from one trough to the other anxious, each and every one, to get more than their share. Exercise is surely beneficial for all breeding animals, promoting health and vigor both locally and generally. This is one method to make the sows take it.

Two litters of pigs, one from a Robin Hood sow sired by Ideal Royal Lee, the other out of a Star Leader sow and sired by a Mills Ames Rival boar, that are stretchy, well-built, good-boned and footed pigs—the kind that attracts attention as soon as seen.

A boar pig, sired by Champion's Masterpiece 8th, that weighed 135 lbs. at 17 weeks of age with ordinary feeding and no milk—a growthy pig.

WINSOR RANCH DUROC SALE.

Breeders from far and near in California assembled at Exposition Park in Los Angeles on July 28th, but did not seem to be in a mood to buy hogs at present.

The top of the sale was the first prize senior yearling sow, Miss Pathfinder, at the California State Fair in 1919. She went to Walter H. Dupee of Edgemoor Farm, Santee, for $2,375, a very encouraging figure, to say the least. Among others purchased by the same gentleman was the junior yearling sow, Princess Pat, at $550. Mr. Dupee bought eight, making him the heaviest purchaser of the day.

J. P. Walker of Visalia took advantage of the opportunity and bought four, the top of his bunch being the junior yearling sow, Model Rose, at $350.

E. C. Ellis, another Visalia breeder, acquired two. Tulare county continues to increase her holdings in the red hog line.

The results of this sale were a distinct disappointment to many, not only among Duroc breeders, but of other breeds as well.

How Benjamin Franklin Decided

When Benjamin Franklin had to make an important decision, he divided a sheet of paper into two columns by drawing a line down the center.

In one column he set down the points in favor of the measure; in the other, points against it. Then, he says:

"I endeavor to estimate their respective weights; and when I find two (one on each side) that seem equal, I strike them both out . . . and thus proceeding, I find where the balance lies."

When you are ready for an ensilage cutter, make your decision the same way. In one column set down the advantages of the Papec; in the other column try to balance them with similar advantages in any other make of cutter.

You can make this test at the California State Fair, Sacramento, September 4th to 12th. There you can compare the Papec, point for point, with other ensilage cutters. This is the fairest test that can be made. We will leave the decision to your good judgment.

Set down these points under PAPEC:

One piece solid semi-steel frame.
Elevates to the height of any silo at 600 R. P. M.
Operates on as low as 4 H. P.
Cuts 3 to 30 tons per hour.
Perfect knife clearance.
Six fans on the cutting wheel instead of three or four
Easy to set up and take down.
Prevents ensilage clogging in the pipe.

Lack of space prevents giving all the advantages of the Papec. Complete information will be furnished upon receipt of the coupon. Mail it now.

SANTA FE LUMBER CO., Department A.
16 California Street
San Francisco.

Please send me complete information regarding the Simplex Silo and Papec Ensilage Cutter.

(Name) .....

(Address) .....

Simplex Silos

Scientifically Correct

Santa Fe Lumber Company

16 California Street San Francisco

Third Annual Public Sale

BUTTE CITY RANCH
Butte City, Calif.

WEDNESDAY
AUGUST 11, 1920

60 Registered Shorthorns
20 Registered Berkshires
105 Registered Shropshires
10 Shetland Ponies

Butte City Ranch has become noted as a source of supply of dependable registered livestock at moderate prices, and this is their most attractive offering to date. Catalog free on request.

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CALIFORNIA BREEDERS' SALES AND PEDIGREE CO.

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HEALTH FOR CATTLE

Remedies for
COW CLEANING,
BREEDING and ABORTION
Scours, Dog Calves, Hog Cholera
An Insect Destroyer
A Poultry Food

LAMBERT STOCK REMEDIES COMPANY

A. M. Bibens, President — H. V. Bridgford, Vice-President
FACTORY: MODESTO, CAL.

Mail Orders Promptly Filled

STOP FEEDING MILK

To calves. Feed them AN-FO Calf Meal in water or skim milk, after a start on whole milk. NO SCOURS. Ask for feeding instructions at your feed dealers or

ANIMAL FOOD CO., Oakland.

AN-FO BRAND CALF MEAL

Livestock and Dairy Notes

The Dairy.

Barns and feed to the value of $30,000 was destroyed by fire at the Yuba-Sutter dairy last week.

Kansas City has been threatened with a milk famine, owing to distributors refusing to deliver milk under new regulations.

Earl Sturgis, manager of the livestock on the Anita Baldwin Ranch, is recovering from an operation for appendicitis and will soon be in charge again.

Jacob Gaub of Elk Grove has purchased a young registered Holstein bull from the Pine Gadd Stock farm to head his herd. One more dairy on the right line.

J. W. Shillcock, the well-known and deservedly popular Holstein Friesian authority, is with the Globe Milling Company at present, with southern California as his territory.

According to the new ruling made by the Interstate Commerce Commission, permission is granted railway companies to raise rates on milk and cream 20 per cent if they so desire.

At the Stanislaus County Holstein Breeders' Association Sale, to be held at Patterson, August 21st, no by-bidding of any kind will be allowed. Any owner or consignor found guilty, directly, or indirectly, of doing so will be refused further privilege of the Association.

Fourteen head of the famous Guernseys from Grapewild Farm at Escalon have been entered at the State Fair. Former patrons will remember the fine specimens of this breed shown in former years by A. B. Humphrey, who states that this year's entries will be better than those of other years.

Toyon Farm Association reports that sixty-nine head of cows, on semi-official test at an average of 152 days each after freshening, produced in one month 4,175.5 lbs. of butter, an average of 60.51 lbs. per head. Of these thirteen were under three, fourteen under four, and sixteen under five years of age. Fully one-third were never milked more than three times per day.

The meeting of the members of the Milk Producers' Association of Central California scheduled for July 24th has been postponed until August 14th. There are 2,029 members and a majority constitutes a quorum. Only 384 members were present in the 24th ult., and a much larger attendance is desired at the coming meeting. If you can't come send your proxy to some one who will be there.

It is reported that the Carpenter Milk Products Co.'s plant at Tulare, which has been turning out powdered milk and casein, is now concentrating on the production of Alpine evaporated milk under ownership of the Nestle people.

Denver is threatened with a milk bottle famine, due, it is said, to glass factories turning all their production toward windshields for automobiles.

Swine and Swinemen.

More rolled barley for hog feed is sold now than in recent years by the Merced Elevator Co., as noted by Manager H. K. Huls.

No Farm Bureau hog auctions will be held in Porterville during the month of August, owing to lack of fat hogs at present.

Col. Cy. N. Clark of Modesto, in speaking of the hog shortage in California, says he has orders for 450 head of feeder hogs which he has been unable to fill.

Francis T. Underhill, the noted breeder of Hampshire swine at Santa Barbara, will hold a public sale this coming winter. A very choice offering of this coming breed will be made.

Alfalfa pasture with barley stubble range and the lower price of barley has caused such swine breeders as J. F. McSwain of Merced and P. E. Mitchell of Atwater to increase rather than curtail Poland-China breeding.

W. D. Trewhitt, Poland-China breeder of Hanford, expects to carry his usual number of brood sows the coming year. Mr. Trewhitt is an optimist and thinks the depression in the purebred hog business will be of very short duration.

Fred Sennes, formerly with Bunn and Clark of Prosser, Washington, will soon arrive in California and have charge of the show herd of the Italian Vineyard Company at Guasti this season, according to Alex Wilson, the manager of the swine department.

Giant Invincible, as a sire bred to a Great Wonder sow, has produced a Duroc boar that stood 39 inches high and weighed 480 pounds when he was 8 months and 26 days old. He is owned at Conejo Ranch, Newbury Park. He is just as good as he is big, too.

Viola T. Renwick is offering a proven Poland-China sow, Defender's Long Maid, as a prize to the winner in the Santa Barbara County Farm Bureau boy's pig feeding contest. This contest is to determine the superiority of purebreds or scrub hogs for feeding purposes.

J. L. Thatcher of Riverside says the market hog business has decreased greatly in the Palo Verde and Salt River valleys, and also about Yuma and in the Imperial country. In the first mentioned locality not more than 35 per cent of what existed in pre-war days, and in the remainder the business is almost entirely gone.

Beef Cattle.

This is a banner year on the stock range of Santa Barbara county, as feed never has been better.

Frosted sudan grass knee-high on the ranch of Herman Schmidt in Antelope Valley, of Los Angeles county, was pastured off by cattle with no ill effects.

Thirteen carloads of Shorthorn steers were shipped by the San Julian Rancho to Tacoma this season. The Federal test showed them free from tuberculosis.

Grain stubble for pasturage has been selling at $5 per acre in the country around King City, Monterey county, according to A. G. Baker of the Salinas Land Co.

Twenty to twenty-five dollars an acre for sweet corn stalks after the marketable ears are taken off is the price said to be received by Wilson Bros. of Los Angeles county from stockmen who want the corn for silage.

The market for range bulls has been very good the past season, according to herdsman Ernest Reynolds at Rancho San Julian, owned by the Dibblee Estate at Santa Barbara. They breed the very desirable Scotch Shorthorn, which has become so popular.

Braemar Ranch at Santa Barbara, owned by J. T. Marvick, is the home of many fine animals of noted lineage. He has a foundation herd of Aberdeen-Angus cattle direct from Scotland, Percheron horses, Hampshire hogs, Buff Orpington chickens and Scotch Collie dogs.

Aberdeen-Angus breeders expect to make the largest and best showing of the breed at the State and county fairs this fall ever made in California. The interest in the "doddies" is on the increase, and in a few years we will probably see a line-up at the principal fairs and shows on the Pacific Coast equal to or approaching that of the Shorthorns and Herefords.

While in many sections of North Central California the feed situation for cattle is fair, there is an acute shortage of water for stock and many cattlemen are anxiously seeking moister pastures. The California Cattlemen's Association has sent out a call for information of any available pasture which has ample water facilities. The San Francisco headquarters of the association at 222 Sharon Building is gathering this information and requets the assistance of all farmers and stock growers in reporting immediately the location and the availability of such pasture.

Captain George Hearsey of Oudh, India, owns an Indian ranch comprising fifty square miles of good farm land. He has been visiting our Department of Agriculture, getting pointers on dairying and beef cattle. Hindoos will not eat foreign cheese because the rennet comes from calves slaughtered in an unorthodox manner, and the same is true of meat. Hearsey will establish on his ranch a dairy and packing plant where the raw material, produced in the best American manner, will be made up after the orthodox Hindoo teaching. He expects thus a market free from foreign competition.

Sheep and Horses.

The Lichtenberger-Ferguson Company of Los Angeles report a largely increased trade in horse equipment than for some years past. This is an indication that interest in the horse business is greater than for some time past.

A visit to the ranch of G. N. and J. B. Merritt at Woodland will repay any lover of good sheep, and the herdsman, Jesse Bartlett, seems to delight in showing the beautiful Rambouillets. Fifty head of yearling rams are going to the Salt Lake sale. They are said to be the heaviest 50 Rambouillet yearlings ever to leave California, their average weight now being

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Sows and Gilts

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BASTANCHURY RANCH, La Habra, Cal.
BIG FREE DINNER AT NOON
SALE AT 1:30 P. M.

The animals in this sale come from some of the State's best herds. Every animal guaranteed breed and to be a breeder. All from proven strains and best blood lines.

This event is of this sale is to interest farmers in America's greatest breed of hog—BERKSHIRES.

SALE IS BEING HELD BY THE SOUTHWESTERN BERKSHIRE CONGRESS.

Management of
BRUCE S. BENNETT, Field Secretary
Western Berkshire Congress.

BEN S. RHOADES, Los Angeles — Auctioneer
ALEX. M. WILSON, Pres., Guasti
C. J. ZINN, Sec'y, Inglewood.

215 pounds. The Merritts have paid high prices for their stud rams, and for the last three years have been introducing registered ewes from the best flocks regardless of cost. Their State Fair flock, therefore, will not be at all hard to look at, especially when decorated with the ribbons "Jesse" is sure they will win.

Reports from every one interested in the draft horse business indicate a renewed interest in the business. More mares are being bred this season and the stallion trade is improving. Mr. Dunn of Braemer Ranch and Mr. Troup of the San Julian Rancho are the lastest to add their testimony in this respect.

F. L. Hall, proprietor of Rose Crest Rancho at Perris and breeder of Percheron horses, Shorthorn cattle and Berkshire swine, says the horse business is increasing again. He has sold some grade horses and inquiries for stallions are more numerous. No less than nine purebred Percheron colts were foaled at Rose Crest this spring.

Livestock Miscellaneous.

The Italian Vineyard Company of Guasti are binging in a few Cotswold sheep as an experimental flock. Only a very small number will be purchased.

Fairs seem to be springing up all over southern California. The latest is one at San Fernando on September 15-18, ending up with a consignment sale of purebred and other livestock of all kinds.

Butte City Ranch sale occurs on August 11th. This is their third annual public sale and they will offer registered Shorthorns, Berkshires, Shropshires and Shetland ponies of the highest Butte City Ranch quality.

The desirability of green corn as a part ration for beef cattle is well known, but Ernest Reynolds of the San Julian Rancho thinks it pays to run it through a feed cutter. This cut corn wtih the best of red oat hay and mill feed make a ration unexcelled.

The first crop of alfalfa was put into the silo this season at the Rancho San Julian, Santa Barbara. It did not make a very desirable silage except that the beards on the foxtail in it were made harmless by the fermentation. Stock did not eat it readily.

An aggressive rodent control campaign is being waged in Los Angeles county. The authorities find farmers and stockmen especially very willing to co-operate if a general clean-up is in progress. Squirrels eat great quantities of the seed of annual forage plants and in this way are very detrimental to range interests.

In Boston they are paying one dollar per pound for the best cuts of beef, while in Los Angeles 75 cents is the top price for the same cuts. The producer does not seem to be getting his share of these prices. Americans formerly pitied the European who could afford meat but once a week, but now finds himself in the same class.

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SWINE.

Duroc-Jerseys.

DUROC-JERSEY SWINE

JUMBO SENSATION
Our new Herd Boar is one of the largest boars in the world for his age. We have some real buys in purebreds.
WHITLEY
TU-TOCK-A-NU-LA- RANCH
Ventura Boulevard and Hazeltine Ave.
Mrs. R. E. Whitley, Mgr.
Phone 160-J Van Nuys, Calif.

FIFTY DUROC-JERSEYS — Mostly bred sows and gilts. Some small pigs. Three service boars and five March boar pigs, grandsons of Mary Jane Pathfinder, the five pigs sired by Lord's Orion Cherry King. One son of Orion Cherry Pathfinder, out of Lamb's Model Lady. Elmer Lamb, Ceres, Calif.

BIG-TYPE DUROCS—Herd headed by California Orion King. Am offering excellent young boars at right prices. Inquiries invited. Harvey M. Berglund, Dixon, Calif.

WINSOR RANCH DUROC BOARS—Big-type utility boars for farmer trade; priced to move. R. K. Walker, Swine Dept., Morris C. Allen, Ranch Manager, Bonita, San Diego, Co.

FOR SALE—About 150 Duroc-Jersey Hogs—from weanlings to full grown—sows, boars and barrows—part grade, part subject to registration. A fine bunch of pigs, some with unusually good pedigrees. Address R. B. Swayne, 805 Royal Insurance Building, San Francisco.

DUROCS—BIG-TYPE—HIGHEST QUALITY—popular blood lines. Herd headed by Johnson's Defender, Jr, and Western Pathfinder. Bred sows and gilts and young boars for sale at moderate prices. Greenwood Farm, Witherow & Stafford, Live Oak, Cal.

REGISTERED DUROCS — April farrow—one boar, Orion's Monarch, by Borge's Monarch and Orion's Lady; also gilts. Lowell Beaver, R. "C," Box 397, Fresno, Cal.

JACK LONDON RANCH, Glen Ellen.—Exceptionally good weanlings. Bred sows and gilts. One good yearling boar and one fall boar. Prices reasonable.

ROCSTEIN RANCH DUROCS headed by Lord's Orion Cherry King. Breeding stock for sale at all times. W. M. Way & Son, Rt. 1, Box 320, Modesto.

BARGAINS in bred sows and gilts. Pathfinder and Great Wonder I Am blood. Derryfield Farm, Capital National Bank Building, Sacramento, Cal.

DUROC-JERSEYS — Fine big-type gilts, tried sows and boars, Eastern and California bred. H. P. Slocum & Son, Willows, Calif.

REGISTERED DUROCS—Choice gilts and weanlings, either sex. Breeding and satisfaction guaranteed. H. E. Boudier, Napa.

BIG-TYPE DUROCS — Gilts and boars of Winsor's Giant Orion breeding. Falfadale Farms, Perris, Calif.

DECEMBER AND MARCH DUROC BOARS—Pathfinder breeding. Sterling Smith, Route 1, San Diego.

FOR THE BEST in Durocs, write June June Acres Stock Farm, Davis, Cal.

Poland-Chinas.

FOR SALE—Owing to disposal of my entire ranching interests, I am offering for immediate sale the following registered Poland-Chinas: Fresno Bob, fall boar, sired by Giant Bob, State Champion boar 1919, and out of Forest View Anna; Lady Korver, fall gilt, sired by Smooth Big Korver, and out of Lady Price 12th. Marin Mann, Ukiah, Cal.

SPECIAL OFFER FOR WEEK
2 Yearling Boars, $75.00 each; 1 eight-month boar, $4,000; 10 seven month boar, $30.00 each; 9 seven-month gilts, $30.00 each; 5 weanling boars, $15.00 each! 3 bred gilts, $65.00 each; 2 bred sows, $80.00 each. Registered and crated. Pedigrees on application. Edward A. Hall, Watsonville, Cal.

TOHOQUA POLAND-CHINAS — Big type. A good big tried sow to sell. Has farrowed two litters of ten pigs each. Bred for August farrow. Also a dandy young boar pig from the Grand Champion sow of Glenn Co. Fair. This stuff is good, fully guaranteed and priced to sell. Ferguson and McKaig, Orland, Cal.

ELDERSLEY AND SHADY BROOK Farms big-type Poland-Chinas that make money for the Feeder, the Farmer and the Breeder. Prices reasonable. J. H. Ware, Brown's Valley, Calif.

BRED GILTS for sale. A few choice ones bred for fall farrow, to a good son of F'Big Jones, the Iowa 1920 Grand Champion. N. Hauck, Alton, Humboldt Co., Cal.

J. F. McSWAIN, Breeder of Poland-China hogs. Herd headed by Big Model Fellow, Reserve grand champion 1919 State Fair. Young stock for sale. R. 3, Merced, Cal.

WAUKEEN HERD POLAND-CHINAS — Home of King's Big Bone Leader. A few service boars for sale. Les McCracken, Ripon.

REGISTERED POLAND-CHINAS — Large type, 3 to 4 months gilts cheap. Satisfaction guaranteed. J. E. Thomas, Gilroy, Cal.

LAKESIDE STOCK FARM—Large, smooth and big-boned Poland-Chinas. Geo. V. Beckman & Sons, Lodi, California.

REGISTERED POLAND-CHINA SWINE—Prize-winners. Finest stock in the State. Bassett Bros., Hanford, California.

BIG-TYPE POLAND-CHINAS—Good as the best. Always glad to show you. Houck & Lewis, Winton.

REG. BIG TYPE POLAND-CHINAS—Service boars and weanling pigs, J. H. Cook, R. 4, Chico.

LARGE TYPE POLAND-CHINAS — Winton Poland-China Farm, Winton, Cal.

POLAND-CHINAS—Strictly large type. J. F. Lehman, Lodi, Cal.

Berkshires.

BRED GILTS.

Sired by Mayfield Rookwood 2d, a Grand Champion Boar, out of 600-700 lb. sows, and actually bred to "ACHIEVER," our English Blood Boar, the Sire that puts more bone and pork-making qualities into his pigs.

Priced reasonably and absolutely guaranteed.
Castleview Ranch, Santa Rosa, Calif.

The only herd of English Berkshires in the West. Bigger, better, stronger litters. More pounds of meat for less feed. Weanling pig, $35. Satisfaction guaranteed or money refunded at once. Sandercock Land Co., 703 Market St., S. F. In charge Natomas Land Sales.

ANCHORAGE FARM BERKSHIRES
Orland, Calif.
HERD BOARS—STAR LEADER, Junior and Reserve Grand Champion of the World. The Grand Champion carload of barrows, over all breeds, at the San Francisco Live Stock Show, was sired by a son of Star Leader, NATOMAS BARON DUKE, grand champion of California. For sale, bred gilts, open gilts, young boars and weanling pigs. Write for booklet, prices and list of sows.

SOW PIGS and Boar Pigs sired by Ames Rival 118th, Ames Rival 70th, Ideal Royal Lee, Champion Masterpiece 8th, Escalon Majestic and Achiever, and out of prize-winning sows. A postal will bring prices. Geo. A. Stingle, Lark Meadow Ranch, El Monte, Cal.

GRAPE WILD FARMS—Berkshires—Guernseys. Big-type Berkshire Boars of serviceable age, sired by Big Leader—greatest son of Grand Leader 2nd. Panama-Pacific Grand Champion. A. B. Humphrey, Prop., Escalon.

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QUALITY BERKSHIRES — Young stock, both sexes. Calac Orchards, Geo. P. Upham, Martinez.

REAL GOOD BERKSHIRES — Cholera immune. Frank B. Anderson, Sacramento, Cal.

CARRUTHERS FARMS' BERKSHIRES — Cholera immune. Live Oak, California.

Chester Whites.

CHESTER WHITES — E. E. Fulton, Fair Oaks, Cal.

Hampshires.

PUREBRED HAMPSHIRES—3 of those, now 5 months old, sows and 1 boar—not related—yet for sale. Weanling pigs to be farrowed August 8, sired by HARVESTER, 57237, 3rd descendant from World's Champion boar, 1915. Rio Hondo Rancho, Compton, California.

DAIRY CATTLE.

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TOYON FARM ASSOCIATION
UNDER STATE AND FEDERAL
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SMALL FOUNDATION HERDS.
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PERFECT IN HEALTH, RIGHT IN
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350 HEALTHY HOLSTEINS

THE LEWIS COMPANY BAYWOOD HERD
Bulls from yearly record stock.
Health under State supervision.
Terms on purchases if desired.
Herd Sire: Ormsby Segis Marie Lad.
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EIGHT EXCELLENTLY BRED Registered Holstein cows for sale. Tuberculin tested. Just what you want. Terms liberal. Fine bull out of 24-lb. dam and sired by Segis Pontiac De Kol Burke is bred to these females. This bull also for sale. S. J. Strauss, P. O. Box 62. Phone 217, or call at 1016 Eye St., Modesto, Cal.

YOUNG BULL by grandson of Tilly Alcartra, out of dam with good record. His half sister milking 68 lbs. per day as senior yearling. Also bull calves. H. M. Cross, Merced.

OAKDALE HOLSTEIN FARM, Pacheco, Contra Costa Co., J. M. Christen, Prop., Breeder of registered and high-grade Holstein cattle and purebred Hampshire swine.

REGISTERED HOLSTEIN-FRIESIANS — Both sexes choice stock; tuberculin tested. Sunnybrook Ranch, H. H. Sisson, Mgr., Willits, Cal.

THE VICTORY HERD—Registered Holstein cattle and Duroc Jersey swine. H. E. Spires, Hillcrest Farms, Caruthers, California.

PALO ALTO STOCK FARM, Palo Alto, breeders of registered Holsteins. Heifers and service bulls. Reasonable prices.

CREAMCUP HERD — Registered Holsteins. Pontiac bull calves. M. Holdridge, Rt. A, Box 437, San Jose.

REG. HOLSTEINS, both sexes, World's record backing. Kounias Reg. Stock Farms, Modesto, Cal.

REG. HOLSTEINS—A. W. Morris & Sons Corp., Importers and Breeders, Woodland, Cal.

F. H. STENZEL, SAN LORENZO—Breeder of Registered Holsteins. High test producers.

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CHOICE HOLSTEIN bulls for sale. No females. Millbrae Dairy, Millbrae, California.

GOTSHALL & MAGRUDER — Breeders of registered Holstein-Friesians. Ripon, Calif.

EL DORADO HERD OF HOLSTEINS — Alex. Whaley, Tulare, California.

Jerseys.

SERVICE JERSEY BULL, bull calves. Financial King blood, Chester White boars, prize winners. Best blood, type, production. N. H. Locke Co., Lockeford, Cal.

SUNSHINE FARM JERSEYS—No females for sale. Bulls from high-testing cows for sale. E. E. Greenough, Merced.

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Milking Shorthorns.

REGISTERED MILK AND BEEF SHORThorns, bulls and heifers for sale; catalogue free. Thomas, Harrison, Santa Rosa Stock Farm, Santa Rosa, California.

INNISFAIL HERD MILKING SHORThorns—Young stock for sale; both sexes. Owned by Alexander & Kellogg. Leased by J. D. Rowe & Son, Davis, Cal.

BREEDERS OF REGISTERED SHORThorns—Milk strain; choice young stock for sale. John Lynch Ranch, Box 321, Petaluma.

Ayrshires.

ELKHORN FARM AYRSHIRES — Choice young bulls at reasonable prices. J. H. Meyer, 440 Montgomery St., San Francisco, Calif.

STEYBRAE AYRSHIRES — Registered; all ages. E. B. McFarland, 41½ Claus Spreckels Building, San Francisco, Calif.

NORABEL FARM AYRSHIRES—Le Baron Estate Co., Valley Ford, Cal.

BEEF CATTLE.

SHORTHORNS—The foremost beef breed—Have a limited number of stock for sale, both sexes. If you wish to start a small herd I can probably supply your needs. T. T. Miller, Hollister, Cal.

ALAMO HERD REGISTERED HEREFORDS (founded by Governor Sparks). Herd and range bulls. Reasonable prices. W. D. Duke, Gazelle, Siskiyou county, California.

RANCHO SAN JULIAN SHORTHORNS—Purebred range bulls, unregistered, for sale. Estate Thos. B. Dibblee, Santa Barbara, or Lompoc, Calif., John Troup, Supt.

REG. SHORTHORNS — Good dual-purpose animals raised without pampering. Young stock for sale. Prices reasonable. W. E. Rucker, Willitts, Cal.

HEREFORDS—Sierra Vista Herd, Minturn, California. Over 100 registered animals. Fairfax and Repeater bulls head the herd. On highway.

THE NEVADA HEREFORD RANCH—Jno. H. Cazier & Son Co., Prop., Wells, Nevada. Reg. Hereford cattle. Breeding stock for sale.

JACK LONDON RANCH, Glen Ellen—Shorthorn bull ready for service, and some good bull calves.

ABERDEEN-ANGUS cattle of quality and breeding. Lilac Ranch, Escondido, Cal.

SIMON NEWMAN CO., breeders of Registered Herefords, Newman, California.

HEREFORDS — Mission Hereford Farm, J. A. Bunting, Prop., Mission, San Jose, Cal.

REGISTERED HEREFORDS—H. H. Gable, Diamond G Ranch, Esparto, California.

GEORGE CALLAHAN—Breeders of registered Herefords. Milton, California.

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REGISTERED SHORTHORNS — Fair Oaks Ranch, Willits, Calif.

SHORTHORNS — Carruthers Farm. Live Oak, California.

SHEEP AND GOATS.

FOR SALE—Rambouillet rams and ewes—purebred; the very highest grade of large smooth body; heavy shearers; the wool and mutton type. Immediate delivery of individual or carload lots. You can find none better or of higher grade. Address Glenn, Cal. Location, 8 miles south Hamilton City, 1 mile west Ordbend. Windell Orchards Co.

TOGGENBURG DAIRY GOATS — Some beautiful, well-marked yearlings bred to registered buck, $25 and upward, according to quality. If you have babies you can't afford not to feed them goat's milk. Glendale Goatery, 7256 Chabot Road, Oakland, Cal.

F. A. MECHAM ESTATE, Petaluma, Cal.—Breeders and importers of Shropshire, Rambouillets and American Merinos, both sexes. Also Red Polled cattle. Take electric car at Petaluma or Santa Rosa for Live Oak Ranch.

FOR SALE—155 head of sheep, nearly all white faces. About 70 spring lambs, rest ewes nearly all young. All in good shape and will sell cheap. Box 24, McFarland, Cal.

WRITE ME for early Rambouillet ram lambs, ready for light use, by September 1. Also a few yearlings. Carl Lindheimer, Woodland, Cal.

HARRY L. HUSTON, Winters, Calif.—breeder and importer of Shropshire sheep. Stud and range rams. Prices on application.

J. R. BLOOM, Dixon, Calif.—Twenty-five years breeder of purebred Shropshire sheep. Rams for sale. Single or carload lots.

FOR SALE—Purebred Shropshire buck lambs and long yearlings. Address C. D. Dean, R. F. D., No. 1, Yuba City.

DORSETS AND ROMNEYS — Dorset ram lambs for sale. John E. Marble, South Pasadena, California.

H. G. BROWN, Dixon.—120 Choice Rambouillet yearling rams for sale. Price reasonable.

HARVEY S. VAN VLEAR, Lodi, Cal.—Breeder and importer of Registered Hampshire sheep.

CALLA GROVE FARM, MANTECA, CAL.—Breeders and importers of Hampshire sheep.

KAUPKE BROS., WOODLAND, CALIF.—Breeders and importers of Hampshire sheep.

FOR SALE—600 two-year-old Merino ewes. Swall & Wilson, Box 742, Bishop, Cal.

CHAS. KIMBLE—Breeder and importer of Rambouillets. Hanford, California.

BULLARD BROS., Woodland, Calif.—Breeders and importers of Rambouillet sheep.

MILK GOATS — Selling out cheap. Cash Nursery, Sebastopol.

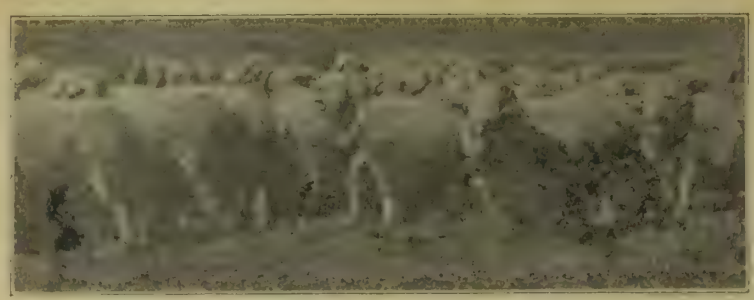
MISCELLANEOUS.

BUTTE CITY RANCH
SHORTHORN CATTLE, SHROPSHIRE Sheep, Berkshire Hogs, Shetland Ponies, Bronze Turkeys, White Plymouth Rocks. Stock for sale at all times. Next sale all breeds, Wednesday, August 11, 1920, at ranch. W. P. Dwyer and W. S. Guilford, Box P, Butte City, Glenn county, California.

FOR SALE—Few graded Guernsey and Jerseys, fresh and coming registered Guernsey bull, 3 years. Address W. J. Rhoads, 15 N. Cal. St., Stockton, Calif.

WANTED IMMEDIATELY—15 or 20 fresh cows, T. B. tested, or subject to test. Address, Meadowlark Dairy, Inc., Pleasanton, Cal.

CHOICE STOCK EWES AND BUCKS. Also herding Collie dogs. John G. Mee, St. Helena, Calif.



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We have a considerable number of rams, one and two years old, raised by us in excess of our own requirements, which we offer at prices guaranteed lower than rams of same quality, of either breed, may be bought for anywhere in the West. Price for either breed, $30.00 per head, f. o. b. cars Los Banos. These rams are from stock equal to the best obtainable and we guarantee them equal to any rams on the Pacific Slope.

MILLER & LUX, Incorporated

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LIVE OAK STOCK FARM

SHROPSHIRES
RAMBOUILLETS
and
AMERICAN MERINO
SHEEP

We have for sale this season 400 head rams, yearlings and 2-year-olds. All purebred. Will sell singly or in carload lots.

Also 15 Head Purebred Red Polled Yearling Bulls

For further particulars apply

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PETALUMA, CAL.

BULLARD BROS., Woodland, Cal.

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RAMBOUILLET SHEEP

Have for immediate sale

50 Registered Yearling Ewes
15 Non-Registered Yearling Ewes

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ROSEDALE FARMS
EUGENE, CALIF.
Offers for sale
20 Registered Yearling Hampshire Rams, all sired by imported rams.
Also
10 Purebred Rambouillet Yearling Rams.
D. E. KELLIHER, Owner

Biggest Co-operative Plan Yet Conceived

(Written for Pacific Rural Press by RalphNewman.)

What do you California co-operators know about this! We are more advanced along co-operative lines than any other State in the Union, are we not? Well, hold on a minute. Have you read about the Grange League Federation Exchange launched in New York last month? Press dispatches say "it is the greatest farmers' co-operative movement that has ever been conceived, barring none."

In the backs of our heads—maybe in what the "highbrows" call the subconscious mind—there has been a vision of the time when all the co-operative organizations of our State should be amalagamated into one vast, central state organization. Well, New York State Grange, the Dairymen's League, and the members of the county farm bureaus have gotten together in a federation called the Grange League Federation Exchange, Inc., authorized to capitalize for a million dollars with a stock issue of 200,000 shares. That makes it cost just $5 to become a member of it.

The purpose of this new organization is implied in its name. Through it farms will pull together as one man "for the practical improvement of agricultural conditions in a way that will antagonize no interests except those that have wrongfully been fattening off the farming industry." Also, through it there is to be established "a big and powerful buying organization that shall be able to overcome the leeches."

Without elaboration you can see its possibilities. Verily, it is carrying to its logical conclusion the principle, "All for each and each for all." When, a while ago, the foundations of the dairymen's organization in this State were assaulted, the other co-operative associations gave their moral support, but concluded that the dairymen were able to take care of themselves. All right, but this is not co-operation carried to its conclusion. Had there been an amalgamation of all the associations in the State, so that the dairymen could not have been attacked without attacking every line of agriculture, the chances are that no assault would have been attempted. Some of our co-operative associations have buying departments to care for their own members. Fine, as far as they go, but suppose the whole tremendous buying power of California farmers was centralized!

These are the things the farmers of New York are tackling in this new organization. It will be watched with great interest by all farmers, and perhaps with some anxiety by the farmers of farmers.

BREED PROMOTION SALES.

At a time when no one knows just where we are at and what is going to happen in the purebred livestock business, it is the proper thing to hold auctions for the purpose of stimulating an interest in producing registered cattle, hogs and sheep. It takes some nerve on the part of the breeders and a willingness on their part to accept prices for their animals so close to cost as to leave nothing for profit except the knowledge that some converts have been made to the doctrine of "better livestock."

Breeders of purebred Berkshires in California are a progressive bunch and in the fact of adverse conditions are continuing auction of bred sows and gilts for the purpose of distributing among farmers such animals at reasonable prices. They have faith in their breed as economical producers of pork, both fresh and cured, and therefore are still as enthusiastic as ever.

The plan they have been following is to advertise and hold sales in localities where the field seems to need hogs of an improved type and they urge farmers to attend these sales and see the offerings, whether they expect to purchase or not.

The latest sale of this kind that has been announced is one to be held at the Bastanchury Ranch at La Habra on August 14th, under the auspices of the Southern Berkshire Congress. This organization at a banquet at the Gates Hotel in Los Angeles on July 25th, completed the plans for this sale. Boom prices are not expected, but reasonable ones all the way through are desired.

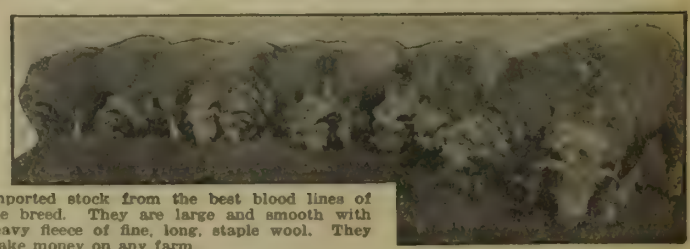
The men who buy Berkshires at this sale, or at any time, may become members of the Berkshire Congress and have the privilege of consigning hogs to the future sales and thereby obtain prices several times pork prices for their surplus.

This is just the time to become a breeder and grower of purebred hogs when the price of grain is going down and a scarcity of both market and registered swine is here—not coming but is in existence now. Those who stay in and those who get in now will reap the reward.

THERE IS A DIFFERENCE.

We did not realize the actual need for Hebe advertising but it seems there are those who do not know the difference betwixt whiskey and a legitimate food product. We are not now surprised that the manufacturers of the latter are willing to pay for space in farm papers in order to educate the people in regard to the merits of what they make.

KIMBLE RAMBOUILLETS



Imported stock from the best blood lines of the breed. They are large and smooth with heavy fleece of fine, long, staple wool. They make money on any farm.

Rams, Yearlings, and Older Breeding Ewes. Call or write for further particulars.
CHAS. A. KIMBLE, HANFORD, CAL., IMPORTER AND BREEDER

HILLCREST STOCK FARM

Shorthorn Cattle

Shropshire and Merino Sheep

RAMS AND BULLS FOR SALE

Single or in Carload Lots

T. S. GLIDE, Prop. Davis, California

ROPY OR SLIMY MILK.

The above seems just at present to be receiving more than the ordinary amount of attention from the agricultural press of the country and the various state departments of agriculture, our own included. It has been pretty definitely settled by dairy bacteriologists that this condition is due to an infection of the milk after it is drawn from the cow, and therefore the abnormal condition does not come from a gargety or other diseased condition of the udder. This being true, then, the method by which the trouble is to be eliminated is that of greater cleanliness and more thorough sterilization of the milk utensils; probably the drying of cans and other vessels by hot sterile air, as advocated by the State Department of Agriculture, after the steam has done its lethal work on the bacteria will be effective.

If cooling tanks are used they should be emptied and thoroughly scrubbed, in fact, anything with which the milk comes in contact and which contains water at any time must be looked after and these bacteria destroyed. Not only destroyed once, but that same eternal vigilance that is the price of human liberty is also the price of clean milk.

It has been said that it is not known just where the germ comes from that causes the slimy condition.

A recent bulletin published by the Illinois Experiment Station takes the ground that its natural home is in fresh water, or at least that the germ lives in such water. Just how and in what manner it gains access to contaminated samples is not clear. It is possible that such infection might come from the hair of cows that had been wading in ponds or streams, but in a general way it is thought to come from water direct.

The germ or germs of ropy milk will thrive and grow at a lower temperature than those that cause milk to turn sour. Therefore, we do not generally find this trouble in existence in warm weather. Only in the winter would we expect trouble from this cause unless it occur in the northern coast region during a cool period.

The trouble can be controlled by a cleaning up of everything with which milk comes in contact between the udder of the cow and the consumer. It would do no good for one farmer to clean up if the central bottling plant was allowed to remain infected. Absolute cleanliness all the way through is surely a necessity if ropy milk is to be kept out. Remember, though, that one unclean dipper, brush, can, cow or bottle may reinfect the whole world.

WATCH OUT FOR FOREIGN BUTTER.

Reports from the East say that New York is a bit nervous over butter imports from Holland and Denmark. Some five million pounds of Danish butter and about one million pounds from Holland are reported so far for this month. If this continues it will make an awful dent, but there are indications that the importations may be checked for a time at least. Unconfirmed reports are to the effect that Holland has placed an embargo on butter exports because of home demand, and England has contracted for 9,000 tons of Danish butter, to be delivered during the next few months.

Argentine butter is also beginning to be mentioned in the market reports. So far it cuts no figure in the upper grades, for it is all of poor quality; but it may, in time, improve and increase enough in quantity to give our poor stuff a run for its money. The third week in July 3,654 boxes of Argentine butter arrived in New York.

But perhaps the most significant butter item in the market news is this from the Government report: It speaks of "the depressing influence of unusually large Canadian imports, which are said to be of good quality, and sought for storage in preference to domestic make." Read this last clause again! Why? Because of "good quality."

A few weeks ago these columns contained an article on the standardization of Canadian butter. If you mislaid it, better go back and look it up. They are doing things up there that are beginning right now to do things to us.

The moral to be drawn from all these market reports is that if we are to hold our own in the best grades, to say nothing of branching out, we must not only produce butter, but we must produce the highest-quality, standardized product. As the Canadians discovered, and as we are beginning to find out, quality begins on the farms, so it is up to the individual dairyman fully as much as to the butter-maker.

SAWDUST AS STOCK FEED.

Sawdust as stock food would not sound especially inviting to animals, but the report comes of the use of some of this material experimentally at the Wisconsin Station as feed for cows after it had been given a chemical treatment which made it more digestible. No definite results can be announced, however, until much more experimental work has been done.

The health of the cow and the health of her attendant have much to do with the production of pure milk.

Be gentle with your cow and she in turn will be generous with her milk flow.

CREATING NEW MARKETS

The Dairyman's Problem

THE successful business takes advantage of every market presented for its products. Utilizing the formerly wasted by-products of manufacturing processes has invariably benefited both the producer and the consumer.

Three fundamental principles of business practice which have stood the test of long experience are—

Eliminate waste by utilizing the entire product.

Always seek new outlets for the product.

Create for every by-product a legitimate market.

Now how can these business principles be applied to dairying?

Government reports show that about 41 per cent. of the total production of milk in this country—or about thirty-four and one-half billion pounds—is devoted to butter-making. Of this amount only about four per cent., or three and one-third billion pounds, actually becomes butter. The balance—about thirty-one and one-third billion pounds—goes back to the dairyman as skimmed milk for which some other use must be found. There are no statistics to indicate what becomes of all the skimmed milk, but government figures show that only about two per cent. of this valuable food finds its way into the human dietary.

The Dairy Division of the Department of Agriculture, in a recent bulletin, says about skimmed milk:

"In the past, much skimmed milk has been wasted, both by throwing it away and by feeding it to live-stock, when it could have been used to better advantage as human food. This does not mean that ro skimmed milk should be fed to calves, hogs and chickens. Such a conclusion would be ridiculous, because our markets are not ready to absorb all of the skimmed milk produced, but human needs should be cared for first, and only the surplus skimmed milk should be fed to live-stock. Such a procedure is logical and is based upon economic grounds."

It is apparent that the dairyman is not putting all of his product to its most profitable use.

And this is due largely to the fact that because lacking a fat content skimmed milk does not appeal to the taste.

It is necessary, therefore, to find for skimmed milk a human use, and so improve the product that it will be best suited for that use.

By the addition of a fat, wholesome and nutritious, skimmed milk can be made very desirable for use in cooking and baking.

This fact is what first suggested HEBE, a product consisting of pure skimmed milk enriched with cocoanut fat. HEBE is the first real effort to develop a broad commercial outlet for skimmed milk as human food. It sells to a multitude of housewives who would not otherwise use milk for cooking at all, and thus it increases the general consumption of dairy products.

HEBE BENEFITS ENTIRE DAIRY INDUSTRY

Then the question arises—How will HEBE benefit the dairyman who is not near enough to a HEBE condensery to send his milk there? The answer is that while the HEBE industry is young and HEBE plants few in number, yet every can of HEBE sold is helping to develop this new market, and every bit of advertising put out by The Hebe Company is helping to educate the public to a greater use of dairy products. The ice-cream industry is a parallel case. Although many dairymen are not within shipping distance of an ice-cream factory, yet every milk producer is benefited by the increased demand caused by the use of nearly four billion pounds of milk yearly by the ice-cream manufacturers.

HEBE is not intended to replace milk for direct feeding purposes. It is offered as an auxiliary to the family milk supply, *for use in cooking and baking.* It is honestly labeled as to contents and uses, and is advertised extensively.

Thus HEBE becomes an important factor in the solution of the dairyman's problem—"creating new markets." As an ally to the dairying industry it seeks to make for itself a new market, without interfering with other established markets, and in doing so it increases the general use of dairy products to the profit of the entire dairying industry.

You will be interested in reading our booklet, "The Missing Third." Ask us to send you a copy. There is no charge for this. Address 2875 Consumers Bldg., Chicago.

THE HEBE COMPANY

CHICAGO SEATTLE

The 1600-Pound Horse Has a Future

(Written for Pacific Rural Press.)

Anyone who labors under the impression that the draft horse is a thing of the past wants to put his ear to the ground and listen to the big call from the corn belt states of the middle west for California range bred mares and mares bred to draft stallions. Just one sentence in a letter from the president of a Chicago bank to a rancher in California is sufficient to state the case. It reads, "Farmers cannot go wrong when they breed good type mares to high class draft stallions,—that's one thing sure."

The shortage of good draft horses is now being felt in the middle west and in the east. Demands are being made on the farmers and breeders of California that will result in a revival of the good old days when the sight of a fine draft animal was inspiring to both old and young. As an evidence that the tractor and auto truck people are not going to have a walk away without a struggle the entries of fine horses at this years State Fair bears witness.

Santa Anita Rancho will enter a great lot of Percherons, Arabians, Thoroughbreds and Standard breds, Jacks and Crossbreds. M. Bassett, of Hanford, and James Marwick, of Santa Barbara, Percherons. S. H. Cowell, of Santa Cruz, standard and stock horses; San Vicente Rancho, saddle horses; L. H.Hall, of San Jose, Percherons; Butte City Ranch, Shetlands; C. W. Bowers, of Tulare, will be there with a string of all breeds, while Easton & Ward, of Diablo, will show Shires. N. W. Thompson, of Patterson, will bring some of his well known drafters as will Rame Jacks. of San Francisco. Thos. B. Dibblee, Est., of Lompoc, will show percherons, and G. H. Edwards, of Stanford University, will bring along a great lot of Percherons.

These are only a few of the entries already in and promised. The horse department of this year's fair will be a living denial of the rumor that "Dobbins" is doomed. On the contrary, the horse is making a "come back," such as been predicted by his staunch admirers throughout the nation.

ADVANCING ALFALFA MARKET HALTS.

(Written for Pacific Rural Press.)

The upward tendency of the market for alfalfa hay, prevailing since the beginning of the season, has come to a halt, temporarily, at least. The volume of sales for the week was well maintained, in most sections at previous prices; in others, they were shaded out to two dollars from the outside prices of the last advance.

Just now the car situation is more favorable and is taken advantage of by hay shippers, as the general crop movement throughout the country is now beginning and will undoubtedly have the effect of soon making the car shortage more pronounced again; the predictions are for a more acute shortage than last year.

As far as can be judged by the Alfalfa Growers of California, the amounts of hay bought by dealers for winter shortage and by dairymen for their season's requirements, average on the whole lighter than usual at this time of the year. This situation is probably most pronounced in the Bay District, where most of the dealers and consumers are still only buying for current consumption but otherwise are as yet holding off.

Some sales by outside growers in the district mentioned, where our membership is still comparatively small, were made this week at several dollars below the prices obtained by the Association up to that time for all the hay our member growers had listed.—Alfalfa Growers of California.

IS IT POISON OR ANTHRAX?

The first of August, near Sutter City, 12 head of young stock were found dead in a rice field. The county veterinarian pronounced it anthrax, and has sent a warning over the county.

Some nearby farmers think, however, it may be a case of poisoning, as the Northern Electric Co has signs posted warning that poison has been used on their right of way to kill weeds. About this time a number of calves were seen grazing along the company's right of way.

It will be, however, much safer to heed the veterinarian's warning as to the death cause being anthrax, at the same time keeping cattle off the Northern Electric right of way.

NURSES WANTED
—FOR—
My
Polled Hereford Babies

WANTED
Two carloads of Holstein Cows. These need not be registered, but they must be Tuberculin State Tested. Please quote price, point of shipment and where stock can be seen.
DIABLO STOCK FARM,
Danville, California.

Our Polled Herefords are strong in Anxiety and Disturber blood. We just sold R. Cliff Durant 23 head for $25,000.00. They will be shown at Sacramento, and the Anxiety Disturber Bull with two Cows will go to the International for the First Honors.

G. W. EMMONS, Proprietor. E. F. PETERSEN, Superintendent.

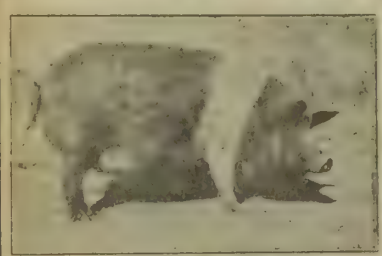
HOME OF $1500 SOW
ORION'S CRIMSON LADY
A-1 Durocs
Best Breeding Big Type
J. P. WALKER, VISALIA, CALIF.

GUASTI BERKSHIRES
Weaned pigs, both sexes, from sows that farrow large litters and raise them. Priced reasonable—they are money-makers.
BIG PUBLIC SALE OF BERKSHIRE SOWS, AUGUST 14th
ITALIAN VINEYARD COMPANY
ALEX M WILSON, Supt. Guasti, Calif.

CLARK, HUNTER & CLARK
Livestock Auctioneers
915 I STREET, MODESTO, CALIF.
Registered Hog Sales a Specialty

ORMONDALE RANCH
SHORTHORNS
REDWOOD CITY, CAL.
HERD SIRES
BOQUHAN GUINEA STAMP, the great imported Young Broadhooks bull.
GOLDEN GOODS JR., sire of LITTLE SWEETHEART, Grand Champion International Show, Chicago, 1919.
Bulls and Heifers for sale.
Duroc-Jersey Hogs for sale.
JAMES McDONNELL, - Supt.

Llano Vista Ranch Grand Champion Hampshires



JUDITH—No. 126148
Sire: Calif Lad, 15021. Dam: Mabel, 113078.

This pioneer herd has brought to light the winning blood lines in our big shows and is responsible for the growing interest in the breed. We have furnished foundation stock for many new herds throughout the State. Bred sows, service boars and pigs for sale.
F. A. LANGDON, Mgr.
Perris, Calif.

YOU WANT BOTH SIZE AND QUALITY
An extra cent or two per pound on account of quality and an extra 50, 100 or 200 lbs. weight on your steers makes your profit. The shorthorn steer that shows both weight and quality and makes the profits for the owner.
Use a Shorthorn Bull
AMERICAN SHORTHORN BREEDERS' ASSOCIATION,
13 Dexter Park Ave. Chicago, Ill.

OVER TWO MILLION CALVES
protected against Blackleg for LIFE with ONE treatment vouch for Purity Blackleg Aggressin (Germ-Free Vaccine made by the Kansas Process). Absolutely safe to use. Cannot [illegible] brand, castrate etc. when you vaccinate. OTHER PURITY Biologics: Anti-Abortious Vaccine for Cattle; Hemorrhagic Septicemia Vaccine for Cattle and Sheep; Anti-Hog Cholera Serum, and High Count Mixed Infection Vaccine for Swine. For service that counts, write, phone, or wire.
PURITY SERUM CO., J. L. Thatcher, Mgr., Riverside, California

MILKLESS DIETARY IN DAIRYLAND.

(Written for Pacific Rural Press.)

I wonder if country mothers need education in the supreme importance of milk as a food for children, even as city mothers do. A while ago, when studying what the Chamber of Commerce in a near-by town called one of the most prosperous dairy sections in the State, I noticed on a number of ranches, down in a fence corner or behind a barn, good-sized pile of old and small tin cans. Curiosity aroused, inquiry was made, and the fact came out that here, where dairymen talk about milk by the ton, it is quite a common practice to sell every drop of fresh milk from the ranch and to buy condensed milk for family use. Those tin cans were monuments to ignorance if nothing worse. They spoke of crimes unwittingly but really perpetrated against the childhood of that community. And this writer is perfectly satisfied, after seeing many of the children, that a survey would reveal just as deplorable an amount of malnutrition as could be found in any city slum. Here in a land flowing with milk, children are deprived of it. Why? Because we have been so busy exploiting these "foreign" dairymen that nobody has taken time to teach the mothers that fresh, rich milk in large quantities is absolutely essential to any physical development that is worth while. Either that, or we have never seen those tin cans, and haven't known that such a condition exists. The slums are not all in the cities, my friends.

Rural Ethics.

It may be poor taste to mention it in this company, but it has been intimated by a number of dealers that not all the butter substitutes are bought by city people. Farmers, some of whom cry aloud against the manufacture of the mongrel, greasy brood of substitutes that work against the dairy industry, have been accused, on occasion, of selling all their cream to be made into butter and then of buying, for family use, some of these same substitutes. Aside from the "professional ethics" involved, why will they do it, especially where there are children in the family? It must be because they do not know that there is no substitute for real butter and that the fat of real butter is a vital element in the diet of any child who is to attain the best development.

Coffee-pot vs. Milk Can.

One who goes much among farmer folk is impressed by the fact that the children consume comparatively small amounts of milk, even where plenty of good milk is available. Even here the coffee-pot is often more in evidence than the milk pitcher. How many country school children carry milk for the noon lunch in those benighted districts where the "school lunch" has not made its appearance? Very few. Partly because milk is not conveniently carried, but partly also because "the children do not care for milk." We all know homes where gallons of good milk are available, but where mothers let little children go with practically no milk because they yield to the childish whim which "doesn't like milk." Little or no effort is made to train the appetite. Little or no effort is made to work milk into the diet in a form acceptable to the child. It is simply eliminated.

No Milk for Country Children.

And right here, at the point where, for one reason or another, country children are left without milk and perhaps without butter, may be found the main reason for the undernourishment of country children—a condition that certainly does exist. Country children get enough to eat, often too much, but lots of them do not get the right things to eat, else so many of them would not bear in their little bodies the unmistakable evidences of malnutrition, and this matter of milk for them is worth looking into at least.

City mothers are rapidly being educated to the supreme importance of milk in the child's diet. Surveys are being conducted all over the country. Parent-Teachers' Associations, Women's Clubs, and all sorts of bodies are busy telling city folks about the food value of milk and demonstrating its wonderful work in building stalwart children. I just wonder if some of this propaganda isn't needed by people who produce milk as well as by those who buy it.

Home Circle Department

A COMMUNITY CHURCH IN PROSPECT.

(Written for Pacific Rural Press.)

At Davis, the home of the State University Farm, a movement is on that everybody interested in moral, not to say spiritual, progress will rejoice in. It is nothing less than a proposal for a real community church. This seems the psychological moment for it and Davis is an ideal place to try it out.

In the first place, the field is not cluttered up with a lot of little struggling and more or less jealous denominations. There is but one church in Davis which happens to be Presbyterian.

In the second place, the town itself is a wideawake, progressive little community surrounded by mighty fine farm lands and farm folks.

In the third place, for much of the year, Davis is full of young people, many of them adolescents, and mostly all of them away from the home influences.

I don't know who is to have credit for proposing the plan, but I do know that the Davis church has been big enough to take it up. The organization is now looking for a man to lead, through this church, a community enterprise that shall be church, community center, farmers' club and Y. M. C. A. rolled into one. What an opportunity for a great man to do a great work! And what an opportunity for the good people of Davis to demonstrate that the church with breadth and vision and gumption still has a mission among men!

HOW TO HANDLE A BABY.

A baby must always be handled carefully. His bones are still part cartilage and they bend and break easily. Other bad effects of too much or careless handling are sore and painful muscles, which make a baby cross. Handling after eating upsets the digestion. Jolting, bouncing and rocking make a child excitable and nervous.

A young baby cannot turn himself over. His muscles get very tired, if they remain too long in one position. When he is taken up for feeding or cleansing, his position should be changed from side to side or from lying on his back to lying on his stomach. But always the head and back must be kept straight and the arms and legs free. The ears should be kept straight and flat on the head. The eyes should be protected from direct light.

To hold a young baby on one arm, lay him flat on his back on your left arm, supporting the neck and hand with the palm of the hand and fingers, and pressing his body close to your body with the left elbow. Never throw a baby over the shoulder.

A baby should not be encouraged to try to hold up his own head until he is four months old or to sit up until he is six months old. The spine, neck and head always should be supported. Never pick a child up by the arms. Grasp him firmly by the shoulders or body.

In walking with an older child, do not walk too fast nor compel him to reach up to take your hand. It is very tiring to walk in that position.

"Isn't the horse a peculiar animal?"
"In what way?"
"Why, he can always eat best when he hasn't a bit in his mouth."—Albany Argus.

CANDYING LIMES AND LEMONS.

To the Editor: Please give the recipe the Chinese use in making candied limes.—C. E. C., Orland.

(Answered by Prof. W. V. Cruess.)

We have found the following recipe to be satisfactory for the candying of small lemons I imagine that it would also answer the purpose of candying limes. We first take the fruit and puncture it through and through with a large toothpick or piece of hardwood slightly larger than the toothpick. We then place the fruit in water and boil it until it is tender, but not broken down. We then discard the water in which the fruit has been boiled and make up a light syrup, consisting of one cup of Karo syrup, one cup of cane sugar and four cups of water. We boil the fruit and juice for a few minutes and allow it to stand until the next day, when to each six cups of syrup we add one cupful of sugar. This is heated to boiling and poured back on the fruit. The next day this process is repeated with the addition of another cupful of sugar to each six cups of syrup, and this is repeated daily until the syrup reaches the consistency of honey or near the crystallizing point. The fruit is left in this very heavy syrup for several days. It is then taken out and placed on screens and allowed to dry until coated with a layer of sugar. It may then be packed. I have been unable to find the exact recipe used by the Chinese.

REGISTER BABY'S BIRTH.

Perhaps a little arrival is expected in your home in the near future; perhaps he came a few weeks ago. In either case, just a reminder of an important duty you owe the little one—make sure that his birth is properly recorded with the authorities. Here are some of the reasons why births should be recorded:

1. To establish identity.
2. To prove nationality.
3. To prove legitimacy
4. To show when the child has the right to enter school.
5. To show when the child has the right to seek employment under the child labor law.
6. To establish the right of inheritance to property.
7. To establish liability to military duty as well as exemption therefrom.
8. To establish the right to vote.
9. To qualify to hold title to and to buy or sell real estate
10. To establish the right to hold public office.
11. To prove the age at which the marriage contract may be entered into.
12. To make possible statistical studies of health conditions.

COLD WATER CANNING.

Rhubarb and gooseberries may be canned with cold water. Wash the fruit, washing the rhubarb before cutting. Pack in freshly washed jars, put in a pail and fill with clean, cold water until the water is five or six inches above the top of the jar. Seal under water. If you have running water, as good results are obtained by putting the filled jar under the tap, letting the water run five minutes and then sealing.

When these fruits are opened, pour the water from the jar into a kettle, cook down one-half, add the fruit, cook till soft and sweeten to taste.

SAVE PARAFFIN.

As fast as a tumbler of jelly is opened, wash off the paraffin covering and drop into an old tin coffee pot or tin can bent to form a spout. When there is any need to use paraffin, set the can on the stove for a few moments and it will be ready for use without soiling extra dishes.

CURING SWEET CORN.

Dried sweet corn is a delicious food fully equal, if not superior, to canned corn, and capable of use for practically as wide a variety of purposes. Any of the varieties of sweet corn having qualities desirable for table use will make a good dried product. Corn intended for drying should be gathered when in the milk stage, before glazing and hardening have begun and when the corn is in an ideal condition for immediate table use. It should be gathered only as rapidly as it can be prepared for drying, as corn deteriorates rapidly.

Preparing the Corn.

Husk the ears and trim with a knife to remove any injuries. The silk need not be removed, as it can be readily separated from the corn after drying. Place the ears in wire baskets or wire-bottom boxes and plunge into boiling water for 8 to 12 minutes, or until the milk it set. A little salt may be added to the blanching water if desired. Divide the corn into older and younger lots before blanching, as the younger ears require somewhat longer cooking than the older ones.

After cooking, remove corn from the water, allow it to drain and cool sufficiently to be handled and cut from the cobs with a strong sharp knife, taking care that none of the cob is removed with the kernels. The glumes or the hull attachments at the tip of the grains are easily screened out after the corn becomes dry. Spread the kernels upon trays to a depth of one inch if drying is done in a drier, or one-eighth to five-eighths inch if the corn is to be dried in the sun. Stir the grains thoroughly several times during the drying to break up any compact masses.

When Sufficiently Dry.

It is practically impossible to bring corn to a sufficient degree of dryness by the unaided heat of the sun. If corn is dried in the sun, it should be finished by pouring into bread pans, placing in the oven of the stove, and warming to 160 degrees to 165 degrees F. for two hours. Whether the drying is done in the sun, in a cook-stove drier, or in a commercial drier, it should be continued until the grains are hard, semi-transparent and will break with clean glass-like fractures, if crushed.

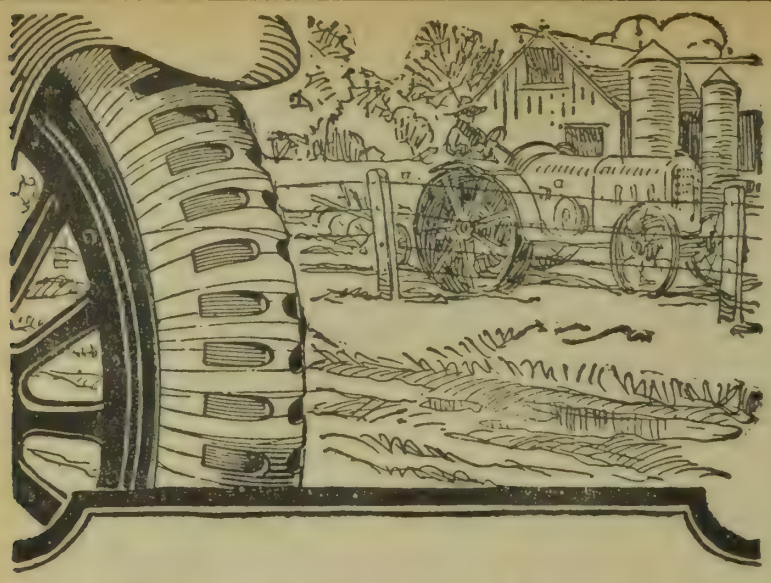
Before storing, free the corn of silks, glumes and bits of cob. This may be done by pouring the corn from one vessel to another in a strong draft. When the corn is dry, store in closely woven muslin bags or heavy paper bags. Tie tightly at the neck and place within a larger muslin bag, which also should be tightly tied.

Do not allow the drying process to stop from the time it is started until the corn is fairly dry. Corn is a product which contains considerable sugar and protein, and if the drying process is allowed to stop, bacteria are apt to develop. Protect it from insects. If sun drying is interrupted by cloudy weather or showers, remove corn to the stove and continue drying or the product may spoil.—U S. Department of Agriculture.

BREAKFAST MENU.

Orange, that's the big, round world;
Porridge, that's the land;
Milk and sugar are the sea,
With salt, that is the sand;
Bacon is the work to do;
Marmalade is play;
Bread is all the other things,
And thus I start the day!
—Abbie Farwell Brown, in Youth's Companion.

Little Tommy: "Father, did you ever seen a cyclone that blowed everything up in the air,—cows and horses and houses and things, upside down?" Father: "Well, no, Tommy, although I've heard of it often." "Did you ever see a great whale swallow a ship?" "No, indeed, Tommy." "Did you ever see our house from way up in a balloon?" "No, I never did." "Well," said Tommy, in despair, "I think it'd be rather tiresome to live so long and never see anything."



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AN OLD SONG.

The day is a tangle of questions;
The age is a strain and a stress;
It vibrates and beckons and urges,
It pulsates and pushes and surges
With questions that restlesly press.
And deep through its many-toned voices
There murmurs a world-old song.
We only can guess the beginning,
But give it its way and its winning—

Aye, hear it forever and ever
Unhesitant harmony keep:
"Life's beauty and great-hearted glory,
The satisfied part of the story,
Rolls on unbewildered and deep.
"Be still," croons the song, "O ye children!
Come, try what the quiet hours win.
Life-zest is not feverish flurry;
Life-growth is not soul-wearing worry;
Come, listen awhile, within."

—Grace Cook Allen.

OLD SAM PEABODY.

When I was a little girl, I was told that Old Sam Peabody was an old, old man who lives in the deep, green woods; not on the edge of the woods, where he can watch people passing on the road, but deep, deep in the cool green woods, where there are no other people at all, but just little furry, sharp-eyed squirrels and gentle brown deer and all kinds of birds. I said there were no people at all, but I forgot little Phoebe and little Bob White; but then they came later.

Old Sam Peabody had never liked grown-ups half so well as he liked children and animals and birds; and after he had lived all alone in the woods a long, long time, though he didn't miss grown-ups at all, he began to wish very much that he knew some children. He had plenty of tree friends and flower friends and animal friends and bug friends and bird friends, but he longed and longed for some children friends.

So one day, when he felt he really couldn't live happily without them a single day longer, he shut his cabin door behind him, and walked and walked through the woods till he came to a railroad track, and then he walked down the track till he came to a tiny station. There he waited till he heard the engine whistle in the distance and saw the long train curve into sight.

Old Sam Peabody hated the noise and dirt of trains, but you see he loved children more than he hated trains, so when the noisy train had ground its wheels to a stop he climbed on board, and sat patiently in the car till he came to a big city. There he got out, and though his ears ached with the city noises and his eyes ached with the city's unshaded glare, and though his feet ached and because he had to walk on hard pavements, still he walked on and on till at last he came to the big building he had been looking for, and the name of that building was an orphan asylum. An orphan asylum is the big building where orphans live; and orphans are dear little boys and girls who have no mothers and fathers.

Old Sam Peabody walked right into that orphan asylum building, and the minute he was inside the door he began to feel happy again because he could hear children's voices.

In the hall he met a kind lady and told her who he was, and that he lived in the lovely, clean green forest, and that he wanted a little girl and a little boy to take home with him, so that they needn't live in a dirty, noisy city any more, but could have a forest home where everything was sweet to smell.

At first the kind lady seemed surprised, but after she had looked into Old Sam Peabody's kind gray eyes she suddenly sighed and said she wished she were a little girl and could go with him herself, so that she need never see another big noisy, dirty city again. So she smiled at him and led Old Sam Peabody into the room, where the children were all just sitting down to dinner; and when she told them that this kind old man wanted one little girl and one little boy to take into the woods with him to live, they all wanted to go!

Poor Old Sam Peabody felt sorry he couldn't take every one, but his cabin was pretty small, and he had room for only two. He went among the children, and soon chose a dear little girl with brown eyes and curly golden hair, and a straight, strong, freckle-nosed little boy with blue eyes that twinkled all the time with mischief. The little girl's name was Phoebe, and the little boy's name was Robert White, but everybody called him Bob.

So Old Sam Peabody and Phoebe and Bob White left the orphan asylum and went back, just as fast as they could, to Old Sam Peabody's cabin in the woods; and after that Old Sam Peabody was never lonely a single minute, nor were Phoebe or Bob.

Every morning they were up very early, just as it was beginning to be day, and went out under the trees and watched the birds and listened to their sweet, early songs. Old Sam Peabody knew every single bird by name, and just when they came in the spring, and just where they built their nests, and all about them. Of course the birds could find plenty of food for themselves, but Old Sam Peabody and the children carried crumbs and grain to them every morning, just because they liked to show the birds that they loved them.

After their own breakfast every morning Old Sam Peabody taught Phoebe and Bob real school lessons a little while, and after that the children scampered through the woods, watching for their animal friends, or lay on their stomachs, looking down into the dark holes of the brook to watch the big trout lazily waving their tails in the cool deep shadows. Each day, too, they put on their little bathing-suits and jumped into the brook and splashed about in the clear, cold water, and slid pollywogs down each other's necks, and were happy. Yes, they were all happy, all the time, but they were always happiest when they were feeding and watching and playing with the birds; and the birds were very tame and friendly.

When the birds found that Old Sam Peabody and Phoebe and Bob were always good to them, they learned to love them more and more, until—what do you think happened? Well, one little bird loved them so much that, after he had tried by himself for a long, long time, he really learned to say, "Old Sam Peabody, Peabody, Peabody!" Wasn't he proud of him-

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self, and wasn't Old Sam Peabody astonished and pleased! Then that dear little bird taught all his children to say it, and they have always gone on teaching their children!

Pretty soon after that, another little bird called very shyly, "Phoebe! Phoebe!" one morning when the children were scattering crumbs and calling the birds to come to breakfast; and wasn't Phoebe surprised! Her little face was all smiles and her little feet were all dances.

Little Bob couldn't help feeling rather sad because now one little bird could call, "Old Sam Peabody!" and another could call "Phoebe!"; but not long after that, one morning, when they all came out as usual on the cool, dewy lawn, he heard a dear little quail call, oh! so softly, "Bob White! Bob White!" Bob and Phoebe danced all over the soft, dewy meadow for joy, and Old Sam Peabody looked on and smiled and smiled, and felt very thankful inside that his little children friends and his little bird friends loved each other.

I wonder if any of you can ever find out where Old Sam Peabody and little Phoebe and little Bob White live, in their quiet, woodsy home? The birds must know, for they love them year after year, and talk about them every day, the summer through. Haven't you spent some of your summers in the country, near lovely, cool, green woods and sweet, sunny meadows, and haven't you ever wakened early, when the air smells coolest and sweetest, and when spider webs sparkle with dew on the grass? Haven't you heard one sleepy bird after another wake up and sing first a dear little sleepy song, and then a gay, joyous song when he really gets his eyes open and knows another happy summer day has come?

If you have, I know you've heard them call and sing about their dear, dear friends, "Old Sam Peabody" and "Phoebe", and "Bob White." Maybe Old Sam Peabody and Phoebe and Bob White live not very far away! Maybe, when you hear the birds wake up and sing about them, they are going to fly straight off to see them and have breakfast with them, at the little log cabin in the deep, green woods. Wouldn't you be surprised if you should find that little cabin some day! Wouldn't you think it fun to see the dear, kind old man whom one little family of birds call "Old Sam Peabody! Peabody! Peabody!" and the merry, freckle-nosed "Bob White! Bob White!" and the dear little girl whose name is "Phoebe! Phoebe!"

But even if you never find that little cabin hidden in the woods, nor see the old man and the two children, you can love the birds your ownself, and even if you don't succeed in teaching them to call you by name, you can teach them very easily to trust and be friends. If you have never tried to have real bird friends, you just try, next summer, and you'll truly find they will make your summer even happier than other happy summers.—Christian Register.

FAST COLOR.

There was a rumbling roar like an express train with several flat wheels and a half-dozen hotboxes as the big shell flew overhead and exploded a hundred yards behind the negro company. When it was over and the troops had begun to reappear from their fox holes, the sergeant gazed in wonderment at the sentry on duty.

"How come?" he demanded in surprise. "Ah done lef' a colored feller on dis post!"

"S-s-sergeant, sah," replied the sentry, "Ah-Ah-Ah was a colored feller befo' dat happen'."

THE ETERNAL ELEMENTS.

In the showing of a pictorial news weekly in a movie house in San Diego, the operator flashed on the screen a picture of two distinguished French generals riding in an automobile. Crowds lined the pavements, their umbrellas up and water dripping from their hats. Suddenly from the audience came the awed cry:

"My Gawd, it's still rainin' over there!"

THE QUEST.

The stranger stood on the station platform waiting for the 6:29. The voice of a native reached him from the haven of a baggage truck.

"Yes," the native was saying to the baggage agent. "Old Man Marsh certainly makes good stuff—makes it right on the place, too."

The stranger pricked up his ears.

"That's what I think," replied the baggage agent. "Coins a mint of money at it, too. All on account of prohibition, of course."

"And only fifty cents a quart," continued the baggage agent. "I don't see how he does it."

The 6:29 rolled in—and rolled out again without the stranger.

"—safest thing to play in these wood-alcohol days," came the voice of the baggage-master as the roar of the train died in the distance.

The stranger was rounding the corner of the station in search of the town hack.

"I want to go to Old Man Marsh's place," he directed the driver.

"Cost ye five dollars. It's 'way out in the country."

"Five it is. Go ahead."

It was dark when the equipage reached the lonely little farm three miles beyond the village.

The stranger knocked tremulously at the door, smacking his lips in spite of himself. The door opened.

"I'll take ten quarts," said the stranger.

"What'll ye have?" asked Old Man Marsh, brushing the rock salt off his arms. "Vanilla or chocolate?"

THE SOLE DRAWBACK.

The village politicians were gathered in the postoffice discussing the possibilities for the coming local campaign. There was a lamentable lack of Congressional timber. None of the candidates could meet the demands of the town Solons.

Finally Lew Parker had a brilliant idea. Spitting authoritatively in the general direction of the cuspidor he remarked:

"Boys, I'll tell you the name of a good man, a mighty good man, a man we would win with. It's old Cap Ingersoll."

And then he added regretfully, "But, darn him, he's dead."

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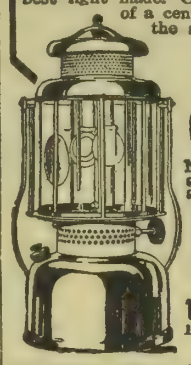

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THE MARKET REPORTS

Compiled from Independent Sources.

SAN FRANCISCO

San Francisco, August 4, 1920.

WHEAT

With very little trading in wheat, the market continues sluggish. No prospects of early activity are expeeted until new crops are havested.

Wheat .....$3.50@3.65

OATS

Offering slight raises, buyers are strengthening the market slowly, although not much activity has been noticed during the past week.

Red Feed, cti .....$2.85@3.15

BARLEY.

Brisk call board trading in barley is having a harmful effect on an already unsettled market. Spot trade is quiet for August barley, with further declines expected.

Feed Barley .....$2.25@2.40

CORN

Corn is inactive with no demand. Buyers are looking forward to the new crop. Prices remain unchanged. Because of hot weather there is but light demand for cracked corn.

Egyptian, white .....Nominal
do, brown .....$3.65@3.75
California .....$3.80@$3.85

FEEDSTUFFS

With no more call for seed grain an unsettled and feverish market has ruled. Buyers expect a dull market to continue indefinitely.

Rolled Barley .....$56.00@57.00
Rolled Oats .....$62.00@63.00
Alfalfa Products .....$42.00@45.00
Cracked Corn .....$81.00@82.00

HAY.

Because of willingness of farmers to sell at lower prices heavy arrivals of hay during last week amounted to 3568 tons as compared with 2838 tons for the week before. Hay conditions in San Francisco are, however, but little better than formerly. Most of the week's receipts are stored in dealer's barns. Buyers seem to be waiting for lower prices and consequently are now buying in only small amounts. A general feeling that the near future will bring reduced prices is evident. With general trade light, interior trading continues dull and few sales of alfalfa are reported. A sluggish export business is also evidenced. There has been very little shipping during the past week.

Old Hay .....Nominal
Wheat Hay, new .....$28.00@30.00
Tame Oat Hay, new .....$26.00@28.00
Wild Oat Hay, new .....$20.00@22.00
Barley Hay, new .....$20.00@23.00
Alfalfa, new .....$20.00@25.00
do, 2nd cutting .....$24.00@28.00
Stock Hay .....Nominal
Barley Straw, bale .....Nominal

FRESH FRUIT

(Wholesale prices made by commission houses.)

Lower prices are ruling for strawberries, which are expected to be more plentiful soon. Blackberries will drop in price as they become more plentiful. The market for red loganberries is finished, say buyers.

Honeydews are scarce, with a good demand for small amounts which are wanted now. The melons must be ripe to bring a good price. Cantaloupe receipts have been heavy during the past week. Shipments east have been made from a 200-acre crop in Sutter basin above Sacramento.

Apples, Gravenstein .....$2.25@3.00
do, Alexanders .....$1.75@2.00
do, Red Astrakhan .....$1.75@2.00
Plums .....$1.25@2.00
Cherries, loose, lb. .....5@12½c
do, box .....$1.50@1.75
Apricots, lb. .....5@7c
do, box .....$1.25@1.50
Peaches, 4 baskets $1.25
Pears .....$2.00@4.00
Figs, box, 1 layer .....$1.00@1.25
Strawberries, 6 12-oz. boxes ....75c@$1.00
do, 6 8-oz. boxes, drawer .....50@75c
Blackberries, drawer, 12-oz. drawers..40@50c
Raspberries, drawer .....70@90c
Loganberries, drawer, 12-oz. boxes..75@85c
do, 8-oz. boxes .....50@60c
Cantaloupes, Standard .....$3.25@3.50
do, Ponies .....$2.50@2.75
do, Honeydew, crate .....Nominal
Watermelon, lb. .....2@2½c

CITRUS FRUITS

Citrus fruits continue to show very little activity, the lemon market remaining sluggish.

HONEY

Although there is a strong market, honey shipments are coming in very slowly. No new comb honey has arrived yet, and the old stock is all gone. Large quantities of Australian extract honey are arriving here.

Extracted White, lb. .....18@20c
Light Amber .....16@18c
Amber .....15@16c

DRIED FRUITS.

Buyers are waiting for the raisin and prune associations to name prices before placing orders. After the Prune Association makes prices on August 11, active buying is expected. Prices for raisins are expected to be named a little later.

Raisins, 1920 .....18½@20c..
Prunes—40-50s, 1920 crop basis 17c
do, 50-60s 15c
do, 60-70s 13½c
do, 70-80s 12c
do, 80-90s 11c
Apricots, choice, lb. .....24½@25c
do, fancy, lb. .....28½@29½c
Peaches, blue ribbon, 60 11-oz. case $9.00

POTATOES, ONIONS, ETC.

(Wholesale prices paid by Commission houses.)

With medium receipts and a light demand potatoes continue weak. Although the market may hit bottom at $2.50 per hundred weight, it is not thought that the price will go any lower than at present. With prices about 75 cents to $1 lower than last week, receipts are falling off. About 2000 cars of Australian Browns were shipped this week to the East from Sacramento Valley. Carrots are in good demand, prices ruling higher. Higher prices for onions are expected soon.

Peas, Bay, lb. .....6@7c
Beans, wax, lb. .....5@6c
do, green, lb. .....5@6c
Carrots, per sack .....$2.00@2.25
Green Corn, each .....$2.50@3.50
Lettuce, local, dozen .....30@35c
Cucumbers, Alameda, lug box .....50@75c
Tomatoes, River, large box ....$1.00@1.50
do, Merced ..... 50@75c
Rhubarb, Strawberry, box 40 lbs..... $1.50
Summer Squash, box, 35-40 lbs. ...50@75c
Egg Plant, box $1.00
Potatoes, New River, cwt. .....$2.50@3.00
Onions, Bermuda, wax, 50 lbs. ....40@50c
do, Yellow, sack .....$1.00@1.75
do, Red ..... 85c@1.00
do, Australian Brown $1.90
Green Onions, box, 25 lbs.....$1.25@1.50

BEANS

(Wholesale prices. Buying prices are made on sample.)

The bean market is very quiet, with few inquiries. Bayos are practically out of the market. There is, however, a little trading in pinks. Shipments of Garbanzoes are in Nogales and early shipments of California Garbanzoes are expected in September. Prices of Limas are slightly lower.

Bayos .....$12.50@14.00
Blackeyes .....$ 7.50@ 8.00
Cranberry .....$ 6.75@ 7.00
Pinks .....$6.40@ 6.60
Red Mexican .....$ 8.50
Garbanzos .....$ 7.75@ 9.00
Large Whites ..... $ 6.00@ 6.15
Small Whites ..... $ 5.90@ 6.10
Limas, Ass'n prices, South $11.42
do, Baby, Ass'n prices, South $11.42
Limas, S. F. prices .....$11.00@11.25
do, Baby, S. F. prices ....$11.00@11.25

POULTRY

(Wholesale prices made by Commission houses.)

The market is firm with light receipts. Broilers are scarce, with a slight increase in price. The market price is expected to advance still further. Hens are firmer with a little advance. Belgian Hares remain the same.

(Wholesale prices made by commission houses.)

Broilers .....38@40c
Hens, mixed color .....34@38c
do, Leghorns .....22@28c
Roosters, young .....42@45c
do, old .....17@20c
Friers .....35@36c
Squabs .....55@60c
Geese .....22@26c
Ducks .....22@25c
do, old 18c
Belgian Hare, live .....18@20c
do, dressed ..... .22@25c
Jack Rabbits .....Nominal

BUTTER.

The local demand for light grade stock was fairly active which together with caring for some exportations to the Hawaiian Islands held the market steady to firm, the surplus going into storage. Some weakness through lack of shipping orders developed an easier turn at the close of the week's quotations.

	Thu.	Fri.	Sat	Mon.	Tu.	Wed.
Extra	55½	55½	..	57	57	55½
Prime 1sts	54½	..	..	..	..	..

EGGS

Eggs continue in demand for Eastern shipping, and coupled with a good local trade and under light receipt has had a tendency to firm up the market and advance quotations sharply at the close of this week's transactions.

	Thu.	Fri.	Sat.	Mon.	Tu.	Wed.
Extra	53½	54½	..	54	54	56½
Ex. Pullets	46	45	..	46	45½	46
Dirties	50	50	..	50	50	50
Undersized	36½	34½	..	35	35½	35

CHEESE

Receipts of California flats fancy cheese have not been more than sufficient in volume to supply the usual demand for this class of goods. An increased supply of fancy Oregon served to cause a recession of a half cent from the quotations for the week, the market closing steady on all grades.

California Flats, fancy 28c
do, Flats, 1sts 24c
Y. A., Fancy 32½c
Oregon Triplets 27½c
do, Y. A. 31½c

Special Livestock Market Report

San Francisco, August 4, 1920.

CATTLE—The price situation in the local cattle market shows a stronger tone this week, though in the East there has been continued depreciation due to the decline in feeding grains. Quotations are unchanged, except that heavy calves have advanced slightly, owing toowing to limited supplies and good demand.

Steers, No. 1, 1000-1200 lbs..... 9½@10c
do, 1200-1400 ..... 9 @ 9½c
do, 2nd quality ..... 7 @ 8c
do, thin ..... 6 @ 7c
Cows and Heifers, No. 1 ..... 8 @ 8½c
do, 2nd quality ..... 6 @ 7c
do, thin ..... 2 @ 4c
Bulls and Stags, good ..... 4 @ 5c
do, fair ..... [illegible] @ 3½c
Calves, lightweight .....10½@11c
do, medium ..... 9 @10c
do, heavy .....10@10½c

HOGS—Continued scarcity of prime quotations of all grades ½c. Even at this advance the market is strong. The Eastern hog market is slumpy.

Hard, fat, grain-fed, 100-150 lbs....16 c
do 150-225 lbs.....16½c
do 225-300 lbs. 16c
do 300-400 lbs. 15c

SHEEP—Mutton sheep are coming forward pretty freely and prices have sagged slightly. Heavy receipts of lambs have forced the market down several notches. The droopy situation in Eastern market centers tends to converge an oversupply at western points.

Lambs, milk .....8½@9c
do yearling .....8@9c
Sheep, wethers .....7@7½c
do ewes .....5½@6c

Los Angeles, Aug. 3, 1920.

CATTLE—The beef cattle market continues steady with good cows scarce and in splendid demand. There are plenty of steers being offered the packers at this time but a very quiet market exists. Prices unchanged.

Per cwt. f. o. b. Los Angeles:

Beef steers, 1000@1100 lbs. ....$8.50@10.50
Prime cows and heifers .....$8.00@ 8.50
Good cows and heifers .....$7.00@ 7.50
Canners .....$4.50@ 5.00

HOGS—Hogs continue scarce and only about enough are coming in to supply the fresh meat trade; consequently, there is a good demand for everything that is being offered. Prices continue firm and unchanged from a week ago.

Heavy, averag'g 275@350 lbs. $12.00@12.50
do, 225@275 lbs. .....$14.00@14.50
Light .....$15.50@16.50

Rough docked 20 lbs. piggy sows 40 lbs. and stags, 40 per cent.

SHEEP—Lambs are in good demand with a steady market. Offerings have been somewhat lighter than usual all during the past week. What are coming in sell without effort. Ewes also are selling fairly well, but there has been little demand for wethers. Still prices are holding up firm and unchanged from those quoted last week.

Prime wethers .....$7.00@10.00
Yearlings .....$ 6.00@10.00
Prime ewes .....$ 8.00@ 9.00
Lambs .....$10.00@12.00
Spring lambs .....$10.00@12.00

Portland, Ore., August 3, 1920.

CATTLE—lower; receipts, 83; choice steers, $10.50@11; good to choice, $9.50@10; medium to good, $8.50@9.50; fair to good, $7.75@8.50; common to fair $6.50@7.75; choice cows and heifers, $7.75@8.25; good to choice $6.50@$7.75; medium to good, $5.75@6.75; fair to medium, $4.75@5.75; canners, $2.75@$4.75; bulls, $5.50@6.50; choice dairy calves, $13@$15.50; prime light, $11.50@13; medium $9@11; heavy, $7@9; best feeders, 7.50@8; fair to good, $6@7.50.

HOGS—Steady; receipts 84, mixed, $18@18:50; medium, $17.50@18; smooth heavy, $14@16.50; rough, $12@14; pigs, $13.50@16.50.

SHEEP—Lower, receipts, 217; east of mountain lambs, $11@11.50; valley, $10@11; culls, $6@8; ewes, $2.25@6; yearlings, $6@7.25; wethers, $6@6.50.

SPECIAL DECIDUOUS MARKET REPORT

San Francisco, August 3, 1920.

During the declining days of July, when, if there is to be a break in the deciduous fruit market, it generally happens at that time, we are able to report that the markets held that firmness exhibited from the beginning of the season.

Bartlett pears showed some weakness, but it was not the fault of the markets but of the unsatisfactory condition of the fruit on arrival, many cars reaching destination in overripe condition, which is at all times a detriment, as fruit in such condition must be disposed of immediately. Furthermore, out-of-town shipments are reduced, as overripe fruit will not hold up for reshipment when exposed to a hot climate subsequent to days of refrigeration. However, there can be no complaint of prices realized for Bartletts when the season's average is considered.

We herewith submit a summary of prices, the average gross sales of a number of cars in the different markets. Also ruling prices for individual varieties. Newcastle, average on two cars, $2,278—Plums: Burbank, $3.50; Burbank, $2.55; Grand Duke, $3.00; Sugar, $3.15; Diamond, $3.25; Giant, $2.40. Peaches: Crawford, $1.80; Elberta, $2.20; St. John, $1.90; Tuscan Cling, $3.40. Loomis, average on four cars, $2,448—Plums: Wickson, $3.10; Grand Duke, $2.05; Diamond, $2.75; Kelsey, $3.25; Satsuma, $2.87; Bartlett, $4.13; Elberta, $2.10. Penryn, average on two cars, $2,278—Plums; Burbank, $3.50; Diamond, $3.10; Satsuma, $2.25. Bartlett, $3.90. Elberta, $2.50; Crawford, $1.75; Tuscan $2.55. Vacaville average on five cars, $2,331—Plums: Wickson, $2.80; Burbank, $2.60; Grand Duke, $2.55; Sugar, $2.80; Yellow Egg, $2.25.

LOS ANGELES

Los Angeles, August 3, 1920.

BUTTER.

Butter receipts are holding up well and so is demand, the exchange reporting a strong, healthy demand for what is coming in. There is little difference in this week's receipts compared to those of the previous one. The market continues steady with very satisfactory buying from the consuming trade. Receipts for the week ending today were 335,295 pounds. We quote prices paid the producer.

California, Extra Creamery 58c
do, Prime first 56c
do, first 55c

EGGS.

Receipts in the egg market are gradually decreasing as warmer weather advances. Prices continue firm, case counts making an advance of 1c on the dozen over last week's prices. There is a good demand from the consuming trade. Receipts, while light, were only slightly under last week, the total arrivals being 788 cases. These prices are paid producer.

Fresh ranch, extra 52c
do, case count 50c
do, pullets 46c

POULTRY.

Heavy hens coming in freely just at the present time and market is hardly so firm as last week. Light hens selling better and prices holding steady. Not so many broilers coming in during the last few days and a good demand for them. Receipts of friers good and exchange reports them to be slow of sale and weak. Ducks dull but price unchanged. Very few turkeys arriving and market steady with fair demand reported.

Broilers, 1 to 1½ lbs. 24c
do, 1½ to 1¾ lbs. 28c
Friers, 2 to 3 lbs. 32c
Hens .....20@32c
Roosters (soft bone), 3 lbs. and up..... 38c
Ducks .....17@20c
Turkeys ..... 40@44c
Geese 25c

VEGETABLES.

String beans selling little higher and in good demand. Green peppers very slow sale at this time; also a little lower today. Corn shows a decline but in very fair demand. Lettuce higher and much lighter receipts. All fresh stuff generally steady in prices and almost everything being offered is finding a ready sale today.

We quote from growers.

Potatoes, local, cwt. .....$2.75@3.00
do, Northern, cwt. .....$3.00@3.25
Onions, Stockton, yellow, cwt. ..$1.25@1.35
do, local, crate .....40@50c
Cabbage, per 100 lbs. .....$2.50@2.75
Lettuce, crate .....90@$1.00
Rhubarb, per 30-lb. box .....50c@$1.00
Peas, lb. .....9@11c
Carrots, doz. bunches .....30@35c
Summer Squash, local lug .....25@40c
String beans, green, lb. .....3@4c
do, wax, lb. .....3@4c
do, Kentucky, lb. .....4@6c
Cucumbers, lug. .....40@50c
Tomatoes, home-grown, No. 1 lug 50@60c
do, No. 2 .....25@35c
Bell peppers, lb. .....6@7c
do, Chile, lb. .....4@5c

FRUITS.

All choice and fancy fruit in excellent demand today. Prices in everything being offered are holding up and show no changes from a week ago. Receipts are very good today in most everything quoted.

We quote from growers.

Plums, Beauty, lb. .....6@8c
do, Santa Rosa, lb. .....8@9c
do, Satsuma .....7@8c
do, Kelsey, lb. .....8@10c
do, Burbank, lb. .....5@6c
Peaches, Freestones ,lb. .....7@8c
do, Clings, lb. .....7@8c
do, extra, fancy clings, lb. .....9@10c
Figs, black, lb. .....10@12c
Crabapples, lb. .....4@5c
Grapes, lb. .....7@12c
do, Thompson Seedless, lb. .....6@7c
Apples, Red & Wh Astrakhan, bx $2.50@2.75

MELONS.

All varieties of home-grown melons now coming in freely in this market. The offerings are of good quality and the demand is very good for them. Prices are generally lower this week than was the case a week ago.

We quote from the grower.

Home-grown, Tip-top, standard $1.50@2.00
do, Pineapple, standard.....$1.25@1.75
do, Rocky Ford, standard ....$1.25@1.50
do, Paul Rose, standard ....$1.75@2.25
Honey Dew Melons, standard ...$1.50@2.00
Casabas, lb. .....½@1c
Watermelons, lb. .....1@1½

BERRIES.

On the exchange, this market is reported to be very quiet. Sales have been slow but prices remain unchanged from those quoted last week. Receipts also light.

Blackberries, 30-basket crate.... $4.75@5.00
Raspberries, 30-basket crate ....$5.00@5.50
Strawberries, 30-basket crate... $5.00@5.25
do, poor to choice, crate ....$4.50@5.00

BEANS.

There has been absolutely nothing doing in this market the past few days. As a matter of fact this condition has existed for several weeks, though prices have held firm throughout, due no doubt to the fact that stocks are pretty light.

Limas, per cwt $10.00
Large white, per cwt .....$5.25@5.50
Small white, per cwt .....$5.25@5.50
Blackeyes, per cwt. ....$6.50@7.00
Tepary, per cwt. .....$3.00@3.25
Pink, cwt. $6.75

HAY.

Receipts in this market the past few days have been quite heavy, while demand has slowed up considerably. The buyers are only taking such lots as they are needing from day to day. All prices the same as quoted last week.

Barley hay, ton .....$23.00@25.00
Oat hay, ton .....$25.00@28.00
Alfalfa Northern, ton .....$30.00@32.00
do, local, per ton .....$28.00@33.00
Straw .....$14.00@16.00

MARKET COMMENT.

Prune Market Inactive.

There is very little activity in prune circles. Brokers tell us that there is absolutely no export demand, that some foreign countries are stocked with sufficient tonnage to meet their requirements for twelve months, and that eastern inquiries are slow. Possibly this may be due to a waiting disposition on the part of the eastern buyers to know the price that will be set by the Prune and Apricot Association, Inc., before they take an active hand in future purchases. We learn from local dried fruit men who make it a point to keep posted on crop condition that the 1920 crop will not fall far short of that of 1919. As a conservative estimate they place the coming crops at 200,000,000 pounds. This favorable tonnage is due to increased production from young orchards. The state-wide June drop proved disastrous in many sections, but where old orchards were irrigated, as in Santa Clara county, the June drop is not noticeable, while in Napa and Solano counties there has been a very perceptible loss. Sonoma county reports a very fair crop. Where irrigation was not used in the San Joaquin counties, the fruit is small, which wil naturally reduce the tonnage.

Raisin Auction in New York.

The much talked of plan of selling California raisins at auction materialized on Monday, August 2, when 150 cars of loose Muscatel raisins were sold at auction in New York to the highest bidder. This sale was the offering of the California Associated Raisin Company as an experiment in the way of fixing prices for the 1920 crops. E. Y. Foley, a Fresno green and dried fruit shiper purchased 149 cars. The first car sold went to a Chicago jobbing house. The prices paid by Foley ranged from 22 to 24 cents, averaging little over 23 cents, or 8 cents per pound higher than the opening price of 1919. Many opinions are expressed as to the validity of the transaction, however. President Wylie M. Griffin, of the California Associated Raisin Company, expressed gratification at the result of the sale, and maintained that it confirmed the position of the company as being conservative last year, when it fixed the price to the jobber at 15 cents.

Peach and Fig Merger a Fixture.

The joint workings of the California Peach and Fig Association has become a fixture. This was made possible when a fe members of the joint growers' committee from the Peach and Fig industries underwrote a deficit of $36,000 which remained unsubscribed of the $500,000 which was necessary to increase the capital stock from $1,000,000 to complete the merger of the two industries. The new association will handle the 1921 crop, as the contracts signed make that the first crop to be sold under the new merger. J. F. Niswander, general manager of the Peach Growers' Association, outlined the steps to be taken to convert the California Peach Growers' Association into the California Peach and Fig Growers' Association. The stock will be increased to a total of $3,000,000.

Big Drop in Wool Consumption.

According to a report from the Bureau of Markets, United States Department of Agriculture, a drop in wool consumption of nearly 17,000,000 pounds from the average for the six months of 1920 is seen in figures for June, 1920. The sharp decrease in wool consumption is a result of the curtailment of operations which began in the textile manufacturing industry in May and became more extensive in June. Many mills have been running on a short week schedule, while some have suspended operations entirely, the suspension in many cases being for an indefinite period. Lack of orders, cancellations and deferred shipments are given as primary causes for the unstable situation.

Will Wine Grapes Ever Reach Peak?

The wineries of Sonoma county are offering vineyardists $90 per ton for black wine grapes and $80 per ton for black and white mixed. The grapes are to be used in making grape juice, grape syrup, and wine for sacramental purposes.

FAIR DATES.

Napa County Fair, Napa, August 19-20.
Sonoma County Fair, Santa Rosa, August 25-29.
Patterson Fair, Patterson, August 19-20-21.
California State Fair, Sacramento, September 4-12.
San Joaquin County Fair, Stockton, September 13-18.
Humboldt County Fair, Ferndale, September 14-18.
Tulare County Livestock Show, Tulare, September 14-18.
San Fernando Valley Fair and Market, Owensmouth, September 15-18.
Kings County Fair, Hanford, September 21-25.
Ventura County Fair, Ventura, September 22-25.
Glenn County Fair, Orland, September 27-October 2.
Fresno District Fair, Fresno, September 28-October 2.
Shasta County Farm Bureau Fair, Anderson, October 1-2.
Los Angeles Livestock Show, Los Angeles, October 2-10.
Siskiyou County Fair, Yreka, October 5-9.
Tulare County Fair, Visalia, October 9-16.
Southern California Fair, Riverside, October 13-19.
Western Royal Livestock Show, Spokane, Washington, November 1-5.
Pacific International Livestock Show, Portland, Oregon, November 15-19.

Classified Advertisements.

Rate, 3½c per word. Cash must accompany all orders.

COUNTRY LANDS.

ORANGE AND GRAPEFRUIT GROVE 18 Acres $3350 Easy Terms
Settlement of estate is your opportunity; become owner of big productive grove and fine farm house at remarkably low price, near city, all conveniences, dark loam soil adapted all crop lines profitable this section; 250 heavily bearing orange trees, 150 grapefruit, also tangerines, etc.; 4-room bungalow, veranda, bath, other buildings; quick action necessary, about 1-3 cash, balance easy terms. Details page 45 Strout's New Catalog Orange Groves and Other Tropical Farms. Copy free. STROUT FARM AGENCY, 503FA, Los Angeles, Cal.

IDEAL DAIRY RANCH on State Highway for sale in Humboldt's finest dairy district. 54 acres of land, 40 of which may be cultivated, two wells and tanks, good fences, dwelling house of 12 rooms with running water, etc. Barns, garage, also large store building and dance hall. Sandy loam soil suitable for all dairy crops and particularly adapted for potatoes. Orchard of 75 apple trees in bearing. Chickens and brooder house for approximately 5,000 chickens. Price $22,000. Box 2130, Pacific Rural Press.

MUST SEEK lower altitude on account of sickness. Will sell 80 acres, mostly alfalfa; balance grain. Good 5-room house good barn, milk house, smoke house, etc. Five brood mares, 1 mule colt, seven A-1 milk cows, seven yearling calves, mostly heifers, two brood sows with pigs; size 15 De Laval Separator. Price, $8,000; mortgage, $3,000 at 7 per cent can stand; balance cash. Second crop alfalfa included if sold in 30 days. Ben Wurtzinger, Buntingville, Cal.

FOR SALE OR TRADE for mountain ranch, fully equipped income twenty-acre on highway near market. No commission. What have you? Box 35, Livingston, Cal.

FOR SALE—14 4-5 acres irrigated farm with farm implements, team, heifer, 300 chickens and hay. Jacob Wilbois, Route A, Oakdale, Cal.

ALFALFA SEED—We want to get in touch with a few more growers of alfalfa seed to buy their annual crops. Sevin-Vincent Co., 512 Washington St., San Francisco, Calif.

WANTED DAIRY RANCH on shares—from 40 to 50 cows. Box 4, Volta, Cal.

MISCELLANEOUS.

WANTED—A number of experienced men to cut grain with old-fashioned cradles. Will pay 75c per hour. Six weeks or 2 months' steady work. Apply C. S. Jurges, Willows.

REMANUFACTURED PIPE.
All sizes standard pipe and wrought iron screw casing. All kinds of fittings. Guaranteed good as new. Write for prices. **Weissbaum Pipe Works**, 160 Eleventh street, San Francisco.

BIG MONEY AND FAST SALES—Every owner buys Gold Initials for his auto. You charge $1.50; make $1.35. Ten orders a day easy. Write for particulars and free samples. American Monogram Co., Dept. 11, Glen Ridge, N. J.

WANTED — Position, college man, young, married. Familiar with general farming stock and power machinery. Open after September 1st. Box 2140, Pacific Rural Press.

RELIABBLE CABBAGE SEEDS—I grow them. You want them. Let's get together. Write for special offer on what you need. Isaac F. Tillinghast, 32 Podel St., Santa Rosa, Calif.

ALL SIZES OF PIPE and screw casing, both new and second-hand, dipped and undipped. Guaranteed. Prices right. Shecter Pipe Works, 304 Howard St., San Francisco.

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Prune Dipper

$85.00

A Reliable Outfit for the Small Grower

The large costly outfit for the big grower—the reliable Madewell at $85 for the small grower. Only difference between this dipper and the more expensive ones is the size—and the Madewell will take care of a surprising lot of prunes in a day, too. Sturdy, well built, easily operated. Furnished complete as shown with the exception of brick work. The Madewell has made a real hit and if you delay your order you may not get one this season. If your dealer does not show the Madewell Dipper,

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WANTED — Capable, energetic, practical farmer, single, 38, wishes to get in touch with live, progressive party with a view of securing position as manager of ranch, stock ranch preferred, or may develop tract of land for stock ranch. Wide experience in stock, fruit and general farming. Best of references. Box 2110, Pacific Rural Press.

FOR SALE—Two Monitor Bean Separators, size 5-E; condition as good as new. Call or write, California Almond Growers' Exchange, 18th C Street, Sacramento, Calif.

AGENTS — Mason sold 18 Sprayers and Autowashers one Saturday; profits, $2.50 each. Square deal. Particulars free. Rusler Company, Johnstown, Ohio.

FOR SALE — One sure-pop Reed Almond Huller. The smallest size, practically new. Cheap for cash. Address C. E. Deming, Box 12, Vallejo, Cal.

CROLEY'S BALANCED HOG FEED—The cheapest feed to fatten hogs. Write Geo. H. Croley, Townsend St., San Francisco, Calif.

FOR SALE—Mariout Barley Seed—clean and good quality, weighing over 100 lbs. per sack. J. D. Rowe & Sons, Davis.

WANTED IMMEDIATELY — Experienced budders and tiers. Address or phone, Kirkman Nurseries, Fresno.

PUMPKIN SEED — Mixed pumpkin seed. Good germination, 25c per lb. Aurora Seed Mill Stockton.

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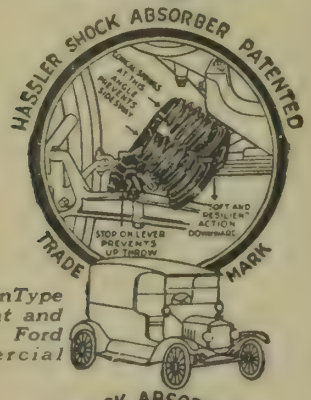
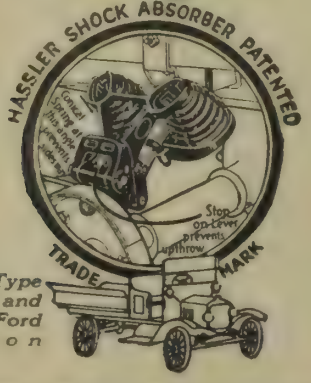
This Twin Type for Front and Rear of Ford Sedans



This Twin Type for Front and Rear of Ford Commercial Cars



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The conical springs set at the angle shown prevent sidesway and allow for the most resilient downward action. The springs compress on either upward or downward movements—do not stretch out of shape—do not allow up-throw. Hasslers last as long as the Ford and make it last.

VOL. C—No. 7 Fiftieth Year

THE PACIFIC RURAL PRESS

SAN FRANCISCO AUGUST 14, 1920 LOS ANGELES

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"To him who, in the love of Nature, holds
Communion with her visible forms, she speaks
A various language. For his gayer hours
She has a voice of gladness and a smile,
And eloquence of beauty; and she glides
Into his darker musings with a mild
And healing sympathy, that steals away
Their sharpness ere he is aware." * * *

AWAY from the heat of sun and dust of field; away from the big and little irritations of daily life; away from our musings against the profiteers and the high cost of living; away from the problems of getting for farm products a profit above cost of production: Suppose we take a restful, cooling vacation by the singing brook in the shadows of Verdugo Woodland; then we can return to the problems with clearer thinking and with ideas that will get more work done with less labor and make our homes more homelike. President W. W. Rainey, of the Tractor and Implement Dealers' Association of Southern California, who is pictured drinking from the brook, and Secretary A. W. Hudson, who is preparing to shove him in, are executives in the First National Tractor and Implement Show of the West, to be held in Verdugo Woodland, not far from Los Angeles, September 20 to 26. Here will be exhibited the latest ideas in farm and home machinery 'mid festive surroundings designed to make investigation a pastime and the next year's work easier. Dirigible balloon, aeroplanes for passengers, brass bands, ice cream, free children's playgrounds under competent supervision, all eats and amusements under Association control, unlimited hospitality. Come, let's go!

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Fortunate are the children in homes made musical by the Columbia Grafonola. An honest liking for good music comes to them naturally, and quite without conscious effort or teaching.

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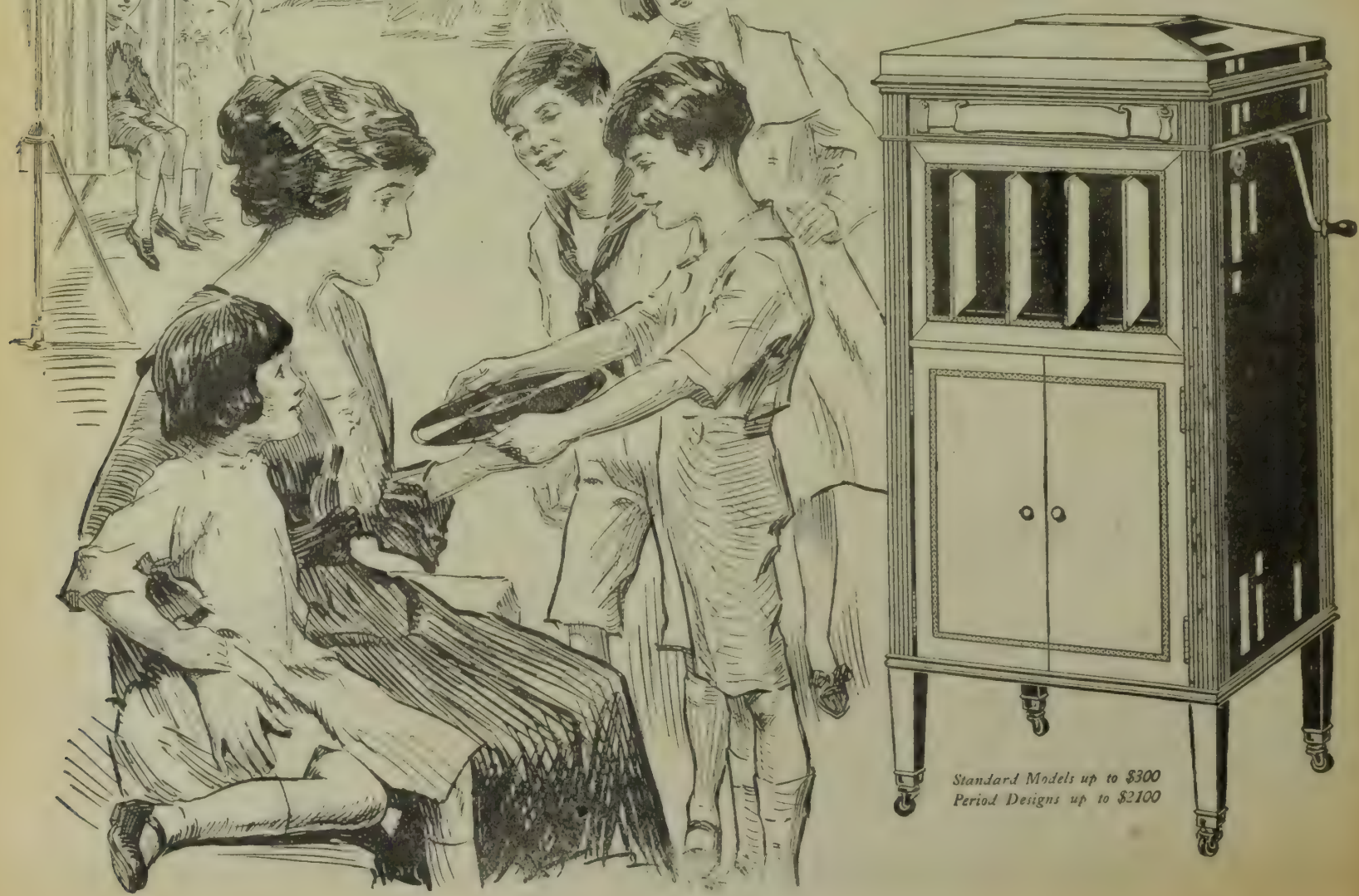

Standard Models up to $300
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Agricultural and Horticultural Review

AGRICULTURAL NOTES.

Throughout the United States the 1920 forecast is 1,003,500 tons of beet sugar against 726,500 tons last year.

A good cotton crop is looked for in Glenn county this year. Picking will commence the latter part of August.

California, Arizona and Oklahoma lead the United States today as far as the condition of the cotton crop is concerned.

The tense money situation and prospects of good crops were ascribed as reasons for the recent declines in wheat values.

Many Imperial Valley cotton growers are joining the American Egyptian Cotton Growers' Association, whose headquarters are at Phoenix, Ariz.

Federal food and drug inspectors who visit tomato canneries to inspect the packing process and ascertain if methods are cleanly and if unspoiled fruit is being packed, report sanitary conditions much improved.

Grain hay has been selling at Arroyo Grande for $20 per ton f. o. b. cars, after costing $5 per ton for baling. Less grain than usual was cut for hay this year, but it is of fine quality—mostly oats, which did not rust.

An overwhelming majority in favor of enacting drastic laws to curb Japanese activities is indicated in the results of the recent referendum vote taken among farmers throughout the State by the California Farm Bureau Federation.

The Department of Agriculture reports that the sugar production from beets for 1920 is forecasted at 2,007,000,000 pounds, basing its estimate on the crop conditions July 1. Records show that the 1919 crop amounted to 1,453,000,000 pounds.

The Alameda County Bee-Keepers' Association, according to County Bee Inspector C. W. Hartman, expects the honey supply of Alameda county to amount to $250,000 this season. In the output of honey Alameda county ranks second in the State, Orange county being first.

The Australasian Shipping Bulletin for June indicates that the stocks of wheat in Australia amounts to about 52,000,000 bushels, and that 20,000,000 bushels are to be delivered to the United Kingdom, leaving a balance of not more than 32,000,000 bushels, an amount insufficient for a year's consumption.

Estimates of potato acreage, published by the U. S. Bureau of Markets, indicate 253,037 acres of early potatoes planted in the United States this year, as against 201,100 last year, and 255,000 in 1919. Production of earlies last year fell 15,072 carloads short of the preceding year.

According to the San Francisco Chamber of Commerce Grain Trade Association, on August 1, there were 6,234 tons of wheat at Port Costa and 11,126 tons at Stockton. Barley at Port Costa amounted to 23,842 tons and 13,357 tons at Stockton. For the month of July there were received at San Francisco 1,292 tons of wheat, 5,542 tons of barley, 1,475 tons of oats, 86,851 sacks of beans, and 12,054 tons of hay.

Considerable acreage of alfalfa has been produced in the Sacramento Valley without irrigation. On such fields, as reported by R. Crowther of the Alfalfa Growers' Association, the water table had dropped so much that production of hay was shorter last year on such areas than before, and this year it is worse. The real shortage of alfalfa has not yet appeared, but henceforward is a dry time in California.

The Arroyo Grande Valley in San Luis Obispo county produced about 15,000 sacks of barley this season, as estimated by L. A. Loomis of that territory. The Huasna country, back of Arroyo Grande, produced about the same amount. The average yield in these districts is estimated around 20 sacks per acre.

HORTICULTURAL JOTTINGS.

The weather around Watsonville has been ideal for drying apricots.

Oakdale shipped its first carload of Bartlett pears to New York this year.

A forecast of the Shasta county prune crop places its value at $280,000.

The bulk of the pears grown on Paradise Ridge district were sold at $115.

A Japanese of Newcastle was fined $25 recently for selling berries short weight.

The Oregon peach crop has probably never before been so near a failure as this year.

A citrus dehydrating plant at Buena Park, 12 miles north of Santa Ana, was burned recently.

The California Peach Growers expect to sell fully one-half of their crop this year in package form.

A large proportion of the Sacramento Valley pears have been shipped as green fruit to the Eastern markets this season.

From the best reports we are able to obtain the August movement of grapes will be at least 10 per cent heavier than last season.

Consult Frank T. Swett, president of the California Pear Growers' Association on the matter of conservation of wind-fall Bartlett pears.

The first shipment of Thompson Seedless this season was expressed to Chicago and brought $4.40 a crate. The car contained 960 boxes.

The 174-acre orchard of A. J. Bruce of Concord, Contra Costa county, has been sold to C. P. Stone of Riverside, the consideration being $40,000.

Oroville this year shipped the first Tokays to leave the State. The grapes were grown upon rock piles in the vicinity of Oroville, left by dredging operations.

A few contracts have been made for Oregon prunes at 16@16½ cents for 30-35s. Last year the market opened at 12 cents and advanced to 20 cents and better.

A vineyardist at St. Helena with fifty acres of choice grapes received an offer of $67.50 a ton on the vines, with 25 per cent cash upon signing of the contract.

F. L. Kent, field agent of the Bureau of Crop Estimates of Oregon, states that the peach crop of the State has probably never before been so near a complete failure as this year.

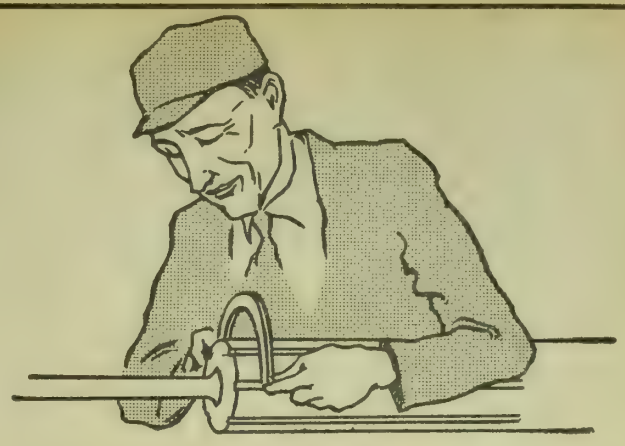
S. V. Christierson, Standardization Inspector, has been assigned to Sebastopol to look after the standardization work and take charge of the inspection of apples now moving from that section.

Zante currants on 30 acres near Madera are about ripe and they have a good crop. The heat wave in mid-June did not injure them as it did Muscats pruned close to the ground in the "old-fashioned" way, according to Farm Adviser E. F. Smyth.

Director Hecke announces that the Fifty-third Convention of Fruit Growers and Farmers will be held during the period, November 9-11 inclusive. The convention city will be determined upon at a later date.

The San Francisco market is now being supplied with grapes in carload lots from the San Joaquin Valley, with such varieties as Muscat and Thompson Seedless. The first Muscats sold at $3@3.25 per crate; Thompsons, $2.75 per crate. A few crates of the Fontainbleu grapes have made their appearance and selling at $2.50 per crate.

The scale of wages agreed upon by experienced cantaloupe pickers at Turlock for the present season are as follows: With board, $6 per day of nine hours; without board, $8. Six hours constitute a day's work when working part time. Transportation to and from work is to be furnished by employer. Housing conditions are to comply with the State law.



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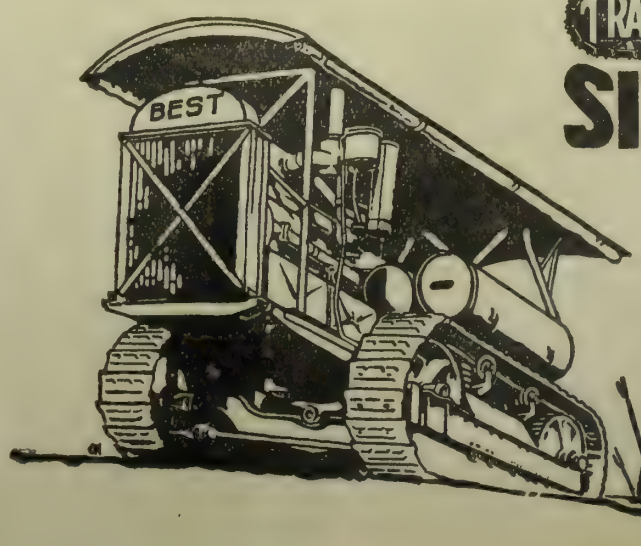

60 H. P. at Pulley

35 H. P. at Drawbar

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EDITORIAL

OSCILLATIONS PRODUCE PROGRESS.

WE ALMOST WROTE "osculations," but that would be a little premature—although we believe it will really come to that. It is probably not well for permanent peace that opposing views should "kiss and makeup" too quickly. It is probably better to have a good fight to bring out all there is, both good and bad, on both sides, and then settle down on the honest conviction that both sides will find something to admire and something to forgive. They say that it is that way in domestic tempests and in other personal encounters between those who are high enough in heart to be just and generous. We have seen boys who became inseparable in thought and association, after they had fiercely fought to a draw, and grow into resolute champions of each other. It may be that way with girls also; or at least ought to be, since they are no longer a subject-people. It is traditionally that way between the sexes, and history is full of instances of conjugal strife, which wrecked dishes and stopped the clock until neighbors intervened, and then the fighters joined their battle fronts, drove the intruders to their trenches and loved each other more than ever. It is evident, then, that osculation should not set in too soon, and that it is better that there should first be a good oscillatory give and take—in other words, mollycoddling is really not a substitute for valiantness, but rather a sequence to it. In this way we find consolation for the sharp conflicts which are arising in the public mind in this country—and assurance also that the outcome from them will be for the general good. We believe it will be that way with the great strife between two gentlemen of Ohio for the presidency, but we need not speak of convictions in that line because we can trust our political contemporaries to say all that should be said and much that should not be said, in print on that subject. There are other things, largely localized in California, which are nearer to the point of our pen.

BE CONSIDERATE OF THE JAPANESE.

The agitation of the Japanese question is proceeding toward a conclusion which will be of great satisfaction, both to their nation and our own, because it will demonstrate the need and reasonableness of both countries freeing themselves from entangling alliances and avoiding bones of contention in the form of social and geographical intermixtures. We believe that the issue which has arisen between our two people, and which has disclosed the patriotic resources and resoluteness of both, will be followed by a sincere and enthusiastic internationality between the two countries which will be powerful in the promotion of great things on both sides of the Pacific. To this end it is desirable that the position of California and her sister states should be made most clear, and it is surely clearing up to unequivocalness in the line of agricultural utterance, as we claimed it to be in our issue of July 31. The new facts which we would present to our readers are these:

W. H. Heilman, secretary of the California Farm Bureau Federation, reports the results of a referendum vote taken among the members of that organization, which represents thirty-three county farm bureaus, covering about 85 per cent of the agricultural area of the State, with a membership of approximately 20,000 farmers. The referendum shows a similar attitude toward the Chinese, Hindoos and Mexicans, in so far as immigration and land owning, renting and leasing are concerned. On the Japanese question discontinuance of immigration is approved by a vote at the rate of twelve to one. A similar ratio is noted on the ballots against leasing land to the Nipponese, and by a vote of forty to one they demand that Japanese be not permitted to own land. The vote was twenty-seven to one against the picture bride practice.

This vote, taken in connection with action taken by other representative organizations, leaves no doubt about the collective agricultural mind on this subject. It has been reached by a calm and dignified proceeding. It does not impeach the service which the Japanese have rendered. It does not call for persecution nor expulsion. It simply and clearly says that California does not propose to entrust her future to preponderance of people of alien origin, points of view and purposes, nor to absorb such characters by process of miscegenation. It does not excuse any personal injustice or inhumanity towards those who entered California during the period of tacit welcome, though it does aim to discourage permanence by withdrawal of property rights. To the aliens now present it says: "Don't hurry; here's your hat"; to others, not now present, it says: "Don't bring your hat!"

AMERICA IS WITHIN HER RIGHTS.

It is interesting to know that the position of California in declaring her desire to dictate the character of her citizenship is being recognized as exercising a proper American right of the present time. Vice-President Thomas Marshall has been passing the summer as a very welcome visitor in California and has been looking into California attitudes. Mr. Marshall is a recognized exponent of old-fashioned constitutional ideas—in fact, his voice has swung to the limit of current democratic dissonance and indicates that he prefers the living constitution of the United States to the late lamented "league of nations." The Vice-President has expressed his belief that "it should be the inalienable right of all countries, and especially a republic, to decide who its citizens shall be." He is credited with saying:

"I don't think our forefathers in framing the constitutional provision providing that birth in the United States automatically carried with it the rights of citizenship, had any other races in mind than the white race. They were dealing in those days with Europe and they were looking to England, France and Germany for future Americans."

And we have no doubt that Vice-President Marshall is right, both in fact and in law. But it should be noted that California does not go so far as Mr. Marshall does. California has not yet proposed to extract the core of the universal birthright to citizenship from the Constitution. She simply announces that "there won't be no core"—and in this way will reach her "inalienable right to decide who shall be citizens," by the ancient horticultural process of "nipping in the bud." Thus progress will follow full and mutual understanding between America and Japan.

THE PLUMS IN A RICE PUDDING.

There is currently going on a very thorough oscillation of the higher-up and lower-down interests of the Sacramento river and regions contiguous to the mouth of it. Roughly speaking, the issue seems to be whether the water shall be taken out of the river to grow rice in the upper parts of the Sacramento Valley, or whether it shall be allowed to run down and make a level in the delta which will prevent salt water from flowing in from the bay, thus causing the dwellers in those parts to observe the 18th amendment with salt water, or kill their plants by irrigating with it—neither of which things was contemplated when the people on the lowlands acquired their riparian rights. From this apparently simple question there has arisen a warmth and width of discussion the outcome of which may be the settlement of some of the broadest and most momentous questions connected with the development of the State, and it is therefore very desirable that our readers should pay attention to it. For really it is not alone a question of whether the up-stream rice grower should be able to keep his crop growing and save his money, or whether the resident of Antioch should have something fit to sooth his yearnings after his accustomed breakfast of salt mackerel. If that were all there is in it we might settle it ourselves, and save the Superior Court of Contra Costa county the severe strain from expansion of its usual procedure, which it is now suffering. It surely is a wrench on a court, which has only had to keep the peace between quarrelsome neighbors from Pinole to Oakley, to find its jurisdiction extended from San Francisco to Mt. Shasta—that is, from wherever the Sacramento starts to wherever it carries its aqueous burdens. And it seems to us that that is not all there is in it either. The scrap between the rice growers above and the vegetable growers and their townspeople below bids fair to enforce upon the State for speedy settlement several great issues which have been heretofore dimly discerned in the offing, but which do not have to be decided face to face. Because of this wide significance and sharp imminence, we have requested our Mr. Hodges to gather up his sharpest pencils and get down to the front of this matter and write us what we ought all to think and to do about it. It is clear enough to our judicial mind that every one who can use water to good advantage in this State must, in some way, have it. So long as water enough falls in rains and snows in the mountains to keep all the activities of the valleys going all the year, it is childish to think that we have simply to decide whether the lands above shall go back to wild geese or the lands below shall go back to tules. Giving up one thing to get another is going only half-speed to prosperity; full speed is to get both, and that is the way this current dispute between the upper and lower stretches of the Sacramento river must be settled—and as that is settled, so it must be settled for all the great rivers of the State. Winter down-fall and spring run-off must be saved for summer use—whether it be to grow rice, or float steamers, or catch fish, or get modernly drunk with, as the case may be. And the current oscillation in public opinion is the road to progress. California will not be content with plain rice-pudding. She will insist on having the present issue give her a pudding that she can play Jack Horner with!

BACK AND FORTH ON IRRIGATION.

It is an interesting coincidence that the broad question of water storage precipitated by the rice situation should arise just at the time that the California Supreme Court hands down a decision that the irrigation law of 1915 and amended in 1919 is unconstitutional, and all the machinery provided and transactions undertaken under it must go to the scrap-heap. It must, of course, be understood that this condition does not apply to irrigation districts organized under the Wright act and its amendments, for the "irrigation act" was to supplement or displace the Wright act, which the court will not allow it to do. Nor does the decision affect any irrigation bonds now existing because the new act has been under suspicion of illegality for some time, and no bonds have been issued under it. Therefore, no Wright district is imperiled, nor is any irrigation security impaired—unless there should be some psychological effect produced by the decision. There is, however, considerable casualty to organizations undertaken or projected under the act which is now null and void. There are five which had taken form, viz.: Madero, San Jose, Tulare Lake, Mendota and Colusa Delta.

CALIFORNIA WEATHER RECORD

The following rainfall and temperature record is furnished the Pacific Rural Press by the United States Department of Agricultural Weather Bureau at San Francisco for the week ending August 9, 1920.

Stations—	Rainfall Past Week	Rainfall Seasonal To Date	Rainfall Normal To Date	Temperature Highest	Temperature Lowest
Eureka	.00	.12	.12	62	52
Red Bluff	.00	.01	.00	104	64
Sacramento	.00	.00	.00	100	54
San Francisco	.00	.00	.01	75	52
San Jose	.00	.00	.00	92	52
Fresno	.00	.00	.00	106	64
San Luis Obispo	.00	.00	.03	82	50
Los Angeles	.00	00	.00	88	59
San Diego	.00	00	.00	80	65
Winnemucca	.00	.00	.21	98	43
Reno	.00	.00	.20	98	48
Tonopah	.92	.92	.40	92	56

There are others which have been held up pending the decision, including Burrell, Lakeland, Deep Well, Wester, Cottonwood and Conejo. All these must apparently go back and start over again. The charge is freely made that the legislation of 1915-19, which is killed, was not undertaken with the best public motives. If that is true, it is unfortunate that the decision was not sooner arrived at. However, the practical lesson to draw from the facts is that irrigation matters are likely to occupy much of the time of the coming legislature of 1921, and there is still time to nominate and elect members of that legislature with due regard to that fact. Voters should exercise unusual interest to determine which candidates have mind enough to understand irrigation questions and honesty enough to enact only in the public interest. It is always bad to vote for any other kind of a man, but it will perhaps be worse than usual to do it this year.

QUERIES AND REPLIES

By the Editor.

Inquirers Must Give Full Name and Address. Answered questions also on other pages.

Moonshine Farming.

To the Editor: Is there anything in planting by the moon—that is in the dark or the light of it?—Subscriber, Felton.

To the Editor?—Is there any time in August when a poplar tree can be cut down so as to kill the root so that it will not sprout and grow again? I am told that there are three days in August when this can be done. If so, which ones are they?—O. W. M., Tulare.

Yes; if you plant in the dark of the moon the plants will be up to grow in the light of it. With the sun and moon both supplying light, which is essential to normal vegetative processes in plants which wear the green, the plant will grow faster with both than if deprived of either. There may not be much difference, but the way farming now is and the shorter the day your hired man gives you, the more you need to pull on the moon and lose no atom of efficiency!

The three days in August which will serve your purpose best are the three which are nearest to the formation of the terminal bud on the season's growth. As in California the season's growth is hastened, if you think August is best you had better choose August 1 to 3—though we must suggest that we believe July will usually be best to apply the rule about the terminal bud in California. We do not, however, guarantee the rule to work with willows, cork elms, poplars, etc., which do not risk their lives on the fate of a single trunk, but distribute their life's goods through a lot of valises, suit-cases and carpet-bags in the form of sprouting roots, all of which are likely to come through with some of the goods. In such cases we should dynamite the tree as it stands, grub out all the roots we could at once, and grub all others whenever sprouts show where they are. The last three days in August are best for that because you will probably have all your prunes picked up and will have more time to do it thoroughly.

Basining Orange Trees.

To the Editor: I have been told that the best way to irrigate orange trees was to dig a trench around them leaving at least six inches of earth around the trunk of the tree so that no water will come in contact with the trunk as this would chill the tree. I have always been in the habit of digging a basin around the tree and filling it with water, and would like to know if it makes a difference which way it is done so long as they get the water.—C. F., Los Gatos.

The water should not touch the base of the tree—or touch it as seldom as possible in practical operations, which must admit of accidents. This is not because of not chilling; if there is such a thing as chilling it probably occurs at the root-hairs, not at the trunk. There are two related reasons why the water should not stand around the base of the tree: first, it is apt to engender bark rot and gumming; second, it compacts a heavy soil so that the tree becomes collar-bound, which is itself not good for the bark. Not only for these reasons, but because there are few or no feeding roots there to be supplied, the water should not touch the base of the tree. In a light soil such injuries as have been indicated are much less likely to be encountered.

Early Soils and Early Fruits.

To the Editor: Will Phillip's Cling peaches do as well on sandy ground as earlier varieties, or as apricots on peach root? I am told that early fruit does best on ground that does not hold the moisture as well as heavy land does. The land can be flooded early in the summer.—W. J. L., Empire.

Light soils, benefit early fruits for two reasons: first, such soils become aerated, warmed and ready to push vegetation sooner and faster than heavy soils, and therefore hasten the maturity of early fruits, and as early fruits are usually commercially worth having only if they are early, these characters of light soils are very important. Second, sandy soils under rainfall are apt to dry out sooner; therefore, such a soil may bring an early fruit to perfection, while it might not bring a late variety of the same fruit to full size and condition. A light soil, adequately irrigated, may, however, have this deficiency remedied and made as good as a heavier soil in perfecting a later variety. Phillips cling requires a very good soil and adequate, but not excessive moisture, to reach its best condition. Apricots are apt to do better than mid-season or late peaches on a light soil because they are finished earlier.

Rye in the Barley.

To the Editor: Please give the name of the enclosed head of grain, as there was some in some barley we bought and it did much better than the barley.—D. C. H., Tehachapi.

The grain is rye, but we cannot say what particular variety. Rye will usually stand more stress than barley, and is therefore sometimes grown on land which is shy on barley or wheat. It is good for green feed, but not as good either for hay or grain for livestock as barley.

Summer Blight of Tomatoes.

To the Editor: I send a part of a tomato plant which has gone wrong. The plants were thrifty until they went this way. Please state the trouble and the remedy.—M. F. D., Corcoran.

It is the trouble which is called "summer blight" from the season of its attack and to distinguish it from other blights which appear earlier in the season. It is manifested by a collapse of a thrifty plant. On cutting the main stem it will be seen to be dry instead of sappy, and the veins on the under sides of the leaves generally assume a faint purplish tint. The cause is not known and no remedy is prescribable. An attacked plant is done for and fortunately they usually appear here and there in the patch only. Except for the mean look of it, there does not seem to be any particular reason for removing or buning plants. The cause is presumably in the soil and if serious new land should be taken for later planting.

Growing Culinary Mint.

To the Editor: I enclose a leaf of mint I am growing. I would like to know the botanical name and the name in English. Is there any way that I can improve the growth of the mint by caring for and cultivating it? When should it be transplanted?—S. M., Berkeley.

We are not able to distinguish the several mints by a single leaf, but we would not be scared to meet this one in a julep or on a slice of roast lamb. If you wish specific determination, let one of the plants go into blossom and send us a whole stalk from root to flower, and we can get a botanist to fix it up for you. To get the best growth of it, divide and plant out the roots in rows so that you can hoe and irrigate between the rows. If you do this after the rains come you will get a growth which will cover your back fence with revenue officers to see what you are doing with it.

Planting Between Stumps.

To the Editor: We are having a row of eucalyptus trees cut near the house and would like to replace them with almonds. Should the stumps be removed first, or could I plant between them this fall or coming spring? We have plenty of water and do not want to lose any more time than necessary, as we want the shade.—F. P., Napa.

As a door yard proposition, you can plant as you propose—digging large holes, throwing out all root pieces, planting in fresh dirt from a distance and spreading manure on top after planting. Get all the bark off the stumps as far down as you have patience to skin them and get after every sprout that appears—taking off the bark which sustains it. We have started garden trees that way. If you have the blue gum the stump will soon rot away if you do not let them sprout.

A Spray for Flies.

To the Editor: I started feeding skim milk to hogs and swarms of flies came as per Exodus 8:21, and as Moses is not on the job I must appeal to you for relief. Can you tell me a spray that will kill them? I would like to use my whitewash spray-pump so would like to avoid anything that would destroy the rubber hose. I have a Fresno scraper for removing the dead.—G. A. D., Brentwood,

Kerosene emulsion, shot with a good force, will fix the flies and not hurt the hose.

Flat Culture to Save Moisture.

To the Editor: Which is the better way to retain moisture where water is limited—to hill corn up, or to keep ground flat and cultivate often?—F. B. G., Modesto

Keep the ground flat and the surface loose by frequent stirring with as little turning as possible.

Grapevines and Nematodes.

To the Editor: Is there any grape that is used as resistant stock for nematodes?—W. J. L., Empire.

We do not recall anything in that line.

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Exceptional Pima Cotton on Heavy Soil.

Written for Pacific Rural Press by Donald L. Kieffer.

Pima cotton is proving a success on heavy soil in Kern county, due to a special method of irrigation being practised there. Experts have for the past few year been telling California cotton growers that they must have light, sandy soil on which to grow their crop. The reason for claiming this has been that heavy soil ordinarily forced the plants to excessive wilting, which in turn brings on the increased shedding of squares, or forms.

This year the Edison cotton district, near Bakersfield, is proving so successful that the growers are building their own gin, having organized a stock company for this purpose. This gin is to cost over $100,000. The machinery alone, which was purchased in Georgia, cost $50,000. This is to be one of three new gins in the county. The other two communities building gins on the same plan are Arvin and Shafter.

Studied Their Own Failure.

Four years ago cotton in this section was rather an experiment. It was only three years back that Pima Egyptian long-staple cotton, the choice of all varieties, was introduced. Its failure was prophesied by many, and it really did prove unsuccessful the first season. A few individual growers believed that the obstacle of too heavy soil could be overcome. Nobody could tell them the reason why this kind of soil acted as it did, so they set about studying it out for themselves.

Probably two of the most determined growers were C. C. and J. W. Brown. Their second year's crop was much better and they were encouraged. Since they had planted on virgin desert soil they could see no reason for their poor results except in connection with irrigation. Experiments were made in amounts, methods, and frequency of irrigation. Today these men have a wonderful crop and are sure they have found out how to raise cotton, especially Pima, on their heavy clay-loam soil.

Found Irrigation Methods Faulty.

It was found that the main difficulty in getting a crop of Pima cotton was not in getting the plants to grow, but to keep the squares from shedding after the blossom had disappeared, and squares should have been well set. They found, contrary to many opinions on the subject, that when the plants wilt during the day and do not revive through the night, being still wilted when the morning comes, they are apt to drop their squares within 7 to 20 days afterward. Last year this drop amount to 38 per cent of the set, which was a big improvement over the year before. This year the per cent promises to be still less, due to careful irrigation, which prevents such excessive wilting.

New Irrigation Method Successful.

The irrigation plan is not unlike that practised by many successful citrus growers to lessen the "June drop." A big irrigation is made every 30 days, which soaks the soil thoroughly. As soon as this is completed a second irrigation is begun, putting into the ditches only enough water to permit the silt to settle in the cracks which have just started to form in the drying clay. There must not be enough water to thoroughly soak the soil, as some insist upon doing, for this serves to "drown out" the plants. No more water is put on until time for the next regular monthly irrigation. The squares begin to drop about August first ordinarily. The longer this can be delayed, the more squares will stick, because they are nearer maturity.

The Brown Brothers have 50 acres of cotton, 30 of which is Pima and 20 Durango, medium staple. The Pima was planted April 6 and todays stands nearly 5 feet high. It is one of the most perfect stands to be seen in the San Joaquin Valley this season.

Water Is Precious.

In this district water is available from deep wells and is precious. It stands at a level of 75 to 110 feet from the surface and takes, on the Brown ranch, a 35-horsepower engine or motor to raise the 72 inches used for irrigation. Therefore, the water question is of prime importance. On the 40 acres which include this 30 of Pima, the 72 inches are used 313 irrigating hours per month. Other growers regularly use more water per acre.

Experiments have been made by planting the rows 38 to 60 inches apart. It has been found that a maximum crop can be obtained from close rows if the plan of irrigation told here is practised. It takes much more water to give the ground a soaking when the rows are 48 and 60 inches apart. In this case, with a given amount of water a smaller crop will result and no larger one can be obtained by using lots of water to get the perfect saturation wanted. The wider rows are much more easily picked, but water is even more important than labor.

Full Use of Sacramento Valley Water Wanted

Written for Pacific Rural Press by R. E. Hodges.

If a common hen should hatch an ostrich egg, she might be surprised at the nature and proportions of her offspring when it reaches maturity. So may the people of the Delta be surprised at the full results likely to develop from their lawsuit instituted last spring in the name of Antioch. They ask an injunction to prevent Sacramento Valley rice growers and other irrigators from using so much river water for irrigation that the resulting lack of fresh water in the Delta permits the Pacific Ocean to flow in. They have a vital case from their standpoint; but only the courts can tell whether irrigators farther up the river may be prevented from taking water. However, if the case should never come to conclusion in the courts, the Delta people have brought about a crisis that may accomplish more for themselves and the Sacramento valley than all the agricultural, irrigation, engineering, and political leaders of the past have been able.

Flood-and-Drouth Control.

For more than a quarter of a century those leaders have urged that some comprehensive scheme be carried out to get the maximum use of the valley's water and to minimize damages done by it. The flood menace compelled first attention. In 1894 C. E. Grunsky and Marsden Manson urged flood control by: (1) Rectification of channels; (2) overflow weirs at certain points; (3) leveed bypasses to carry the overflow. This proposition has been carried out to a large extent by the State Reclamation Board during a stormy career. This, however, had no relation to irrigation or power; and the problem has lately "passed from one of too much water to one of too little water."

The scope and nature of the work which may be done to increase the low water flow was recently indicated by Fred H. Tibbetts, representing the Association of Northern California Irrigation Districts: (1) Diversion into the Sacramento River of water from other watersheds, e. g., the Klamath River. (2) Storage of flood waters now running to waste during winter and spring. (3) Prevention of advance of salt water from the Bay, thus rendering usable the flow now necessary to insure fresh water in the Delta. (4) Canalization of the Sacramento River by a system of locks to decrease the flow necessary for navigation.

State Conservation District.

Last February, Prof. Frank Adams of the U. S. Department of Agriculture and the University of California proposed at a meeting of the Sacramento Valley Development Association that the entire valley be organized by the Legislature into a single State Conservation and Flood Control District, merging flood control, reclamation, drainage, and irrigation into a single unified project. "When we consider the growing gravity of the salt water problem in the lower delta," said he, "we can clearly see that there is not an acre in the valley from Redding to Rio Vista in any way dependent on the Sacramento that has not some definite financial interest in a business-like organization of the entire river system."

Importance of the project was sketched by Mr. Adams in the following words: "One-eighth of the agricultural lands of California lie between Antioch and Redding; probably one-third of the aggregate water supply of California passes out of this valley at Rio Vista; our largest possibilities of power development lie dormant between Sacramento and the Oregon boundary; on 50 or 60 per cent of the three or three and a half million acres of valley and adjacent plains a family on every 40 acres will some day measure the population of this valley empire."

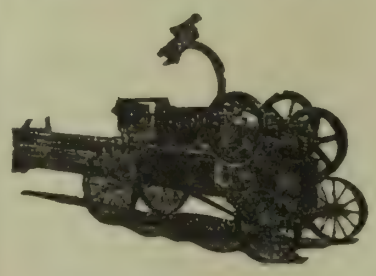
Who Would Pay the Bills?

Who should build the necessary works, and methods of financing, were recently discussed by the Irrigation Committee of the Commonwealth Club of California. Three plans were considered: (1) The State to issue bonds, build dams and power plants, and sell water and electricity. (2) The State to issue bonds and with the proceeds buy bonds of ordinary irrigation districts at low interest rates. (3) The State to appoint a commission to supervise selection, construction, and administration of irrigation projects, thus insuring their success and an easy market for their bonds. The committee favors the last-named plan as being able soonest and most economically to be put into operation. The cost in any case would finally be paid by lands benefited; but it would be much less because of State participation.

Water Users' Meeting Called.

The suit of the Antioch people has probably done more than anything else to create a lively interest in the proposed call by the Association of Northern California Irrigation Districts for a meeting of all people in any way interested in Sacramento valley water, to be held at a date not yet determined. It is hoped that such a meeting can look at the problem as a whole and work out a single solution in which flood-control, irrigation, drainage, power-development, salt-water prevention, navigation, and municipal supplies may be co-ordinated satisfactorily to all concerned.

Bale Your Own Hay



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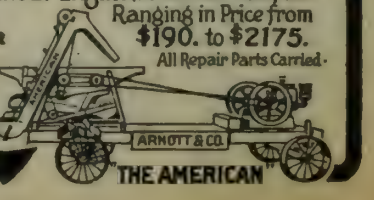

THE AMERICAN

The Canning of California's Luscious Fruits.

Written for Pacific Rural Press by W. S. Killingsworth.

How many who are connected with the fruit industry have not heard the stereotyped question asked by the newly arrived, "What is done with all the fruit that is raised in California?" That's easy. We ship part in the fresh state; we dry and evaporate part, and can the balance. The canning of fruit has for many years been a commercialized industry in California, but not until recent years has it grown to such proportions as we will attempt to explain.

Few Canning Varieties for Commercial Purposes.

Of the innumerable varieties of fruit grown in California there are comparatively few that are canned for commercial purposes. However, there is not a fruit-producing section of the State where fruits are not grown for canning purposes, and wherever such is produced in sufficient quantities there a cannery may be found. There are sections, however, where at times inclement climatic conditions interfere with production and in order that the local cannery may be put in action a requisite amount of fruit is shipped in from other districts. There are many early fruit-shipping districts that make a specialty of growing the early varieties for Eastern shipment and very little attention is given to varieties suitable for the cannery, but should the Eastern markets become overstocked, or for some other cause fail to take all of this fruit at satisfactory prices, the cannery then serves a useful purpose, which in many cases it does, provided it is not deemed advisable to dry the product. California may well be termed the Mecca of the fruit-canning industry of this nation. At the present time there is in full-running operation 226 canneries, many of which are working double shifts; that, of course, is done to prevent delay in the matter of processing, for during the hot weather that invariably prevails during the canning season it is imperative that the fruit be canned as soon as possible on arrival at cannery. All large canning establishments are equipped with cold storage rooms in which fruit is placed, where ripening is retarded for at least a limited length of time. The canneries are equipped with the latest improved machinery, thereby reducing the cost of handling fruit to a minimum. Women and girls are employed to prepare the fruit for the containers, while men and boys have in charge the unloading of trucks and railroad cars as well as the trucking and general handling of the fruit in and out of the cannery. The fruit-canning season begins with the cherry in the month of May, to be closely followed by berries, apricots, plums, grapes, peaches, pears and apples, ending in December. The cherry season for canning is of short duration as the Royal Ann is practically the only cherry canned in California.

The Peach, the King of Canners.

The peach is recognized as the most universally and extensively canned fruit, not that it is the leader in tonnage and may be easily handled, but because of its superior keeping qualities and retention, to a large degree, of its original flavor. An example of its popularity may here be seen. Of the 534,850,000 pounds of tree fruits canned in 1919, the peach supplied 314,600,000 pounds. Next in point of tonnage was the apricot, with its 143,000,000 pounds, and so on down the line, until the grand total of nearly six hundred million pounds of California deciduous fruits were successfully placed in tin and glass containers and subsequently distributed to all parts of the world.

The canning of California fresh fruit does not stop with the large commercial institutions, but there are many small canneries conducted by private individuals who can fruits on orders. A striking example of work of this kind is conducted by W. C. Hale, at Suisun, Solano county. For years Mr. Hale has successfully conducted a small cannery on his ranch, making a specialty of mixed cases of fruit—tree or vine, or both. This fruit is grown by Hale, of which he selects the best. He has an established trade, made so by doing his work well and giving his customers value received. Only to those who are directly interested in the canning of California fruits for commercial purposes, and those who may have the morbid curiosity of finding out, is it known that a healthy foreign demand for the canned article is absolutely necessary; therefore California depends largely upon an export demand. Unfortunately, during and since the world war that demand has greatly lessened, which is liable to complicate matters in no small way, and in order that we might gain some knowledge as to what the result may be, we were prompted to consult the best authority on such matters.

Foreign Demand Declines.

In order to get this we called on C. M. Griffen of the California Packing corporation, whom we know to be thoroughly in touch with existing conditions, both at home and abroad. In answer to our inquiry as to whether there was a foreign demand for California canned fruits at the present time, Mr. Griffen said, "No; there is not. About the time we think everything is all right, something happens. Foreign exchange drops to a point making it prohibitive to do business; furthermore, it is known that there yet remains a large quantity of California canned fruits in the warehouses of many of the foreign countries, and until those conditions adjust themselves there will not be a healthy demand for our canned fruits. Again, we must not lose sight of the fact that we are being brought face to face with competition in the matter of jams, preserved and canned fruits from Australia, all of which have a decided effect on the exportation of our goods. Chili has also become another competitor that must be reckoned with as they are now entering the export field on canned fruits. While we believe that the canned fruits of Australia and Chili do not compare with our goods, they take well with the countries of Europe, especially Great Britain. However, with all of this—

California Will Not Suffer.

The demand from this country has lost none of its strength, but on the contrary, it is on the increase, when financial conditions are normal." We rely implicitly on Mr. Griffen's judgment in such matters, for his intimate connection with the largest fresh-fruit packing corporation in America, operating 54 canneries on the Pacific Coast and the largest in Honolulu, places him in a position to know what may be expected, and as the numerous plants of this corporation are running in full force, we are prone to believe that there is no cause for alarm over the California fresh-fruit canning output for the season of 1920. The canners have for some time been aware of the conditions mentioned, and if they felt in any way uneasy as to future results, they would never have entered the market for fruits and paid the highest prices in the history of the industry. The canners of the State have bought of the California Pear Growers' Association 15,000 tons of Bartlett pears at $100 per ton for number one stock. Five years ago they bought pears from the same ranches from which many of these pears are coming at $35 to $45 per ton. Cling peaches at $100 per ton; five years ago $8 to $10 per ton, thousands of tons rotting on the ground as prices being paid by the canners did not justify the expense incurred in picking and delivering. Add to the cost of the fruit the high prices for labor and the unprecedented price for sugar, and it's a cinch that the canners are losing no sleep over the thoughts of a canned fruit decline.

Factory and Home Canning.

While there were 13,696,403 cases of all kinds of fruit commercially canned in California in 1919, there were thousands of cases—of which there was no record kept—canned by small private canneries. Even with all of that the canning of fruits did not stop there, for the housewife always plays an important part in the matter of canning. If it were possible to record the tonnage canned at home the figures would be astounding. It is said that there is no essential difference between home and factory canning. On that point we beg to differ, not that we have an antipathy for factory canned fruits, but no glass of jelly or jar of peaches emanating from such a source ever tasted as good as one brought from the home basement or pantry shelf. Possibly it is prejudice on our part, which we must admit is without foundation, as the canneries of the present day are, so to speak, enlarged home kitchens conducted on a high sanitary plan, leaving no doubt as to the purity of the product. However, there is an economic difference between the factory and home canning which is made possible through handling materials in large quantity by special machinery. There is also more attention paid to the grading for size, which is greatly aided by these superior facilities. A uniform and proper temperature suited to the product is another feature the factory-made goods have over that of the home. The really distinctive feature in home-canning is the use of spices and flavoring, leaving a good taste in the mouth, a valuable factor which the commercial packer has neglected.

Supply of Raw Material Deficient.

With the continual increase in the number of canneries in the State, the supply of fruit produced is not equal to the demand, all of which has prompted some of the large canneries to engage in the production of their own requirements. It was the writer's privilege, some months ago, to visit and inspect the properties of the California Packing Corporation, at Merced. There we witnessed the preparation and planting of 4,000 acres of canning fruits. Of the acreage, 3,500 was to be peaches and 500 acres about equally divided between apricots and plums. The property is known as the Del Monte Farms and Orchards, on which the Packing Corporation is spending a barrel of money, but legitimately, and we predict that within ten years it will take facilities of vast proportions to handle the output of these extensive properties. We have no authority for the assertion, but we assume that the Corporation is placing itself in a position by which there is an assurance of a full supply of fruit with a sequence of ripening through the entire season, a satisfaction they will naturally enjoy.

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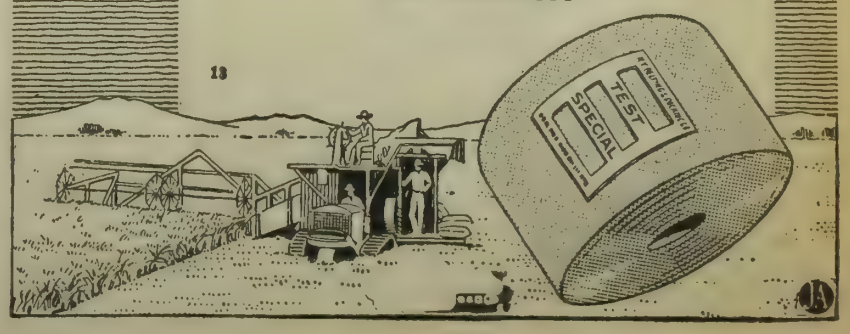

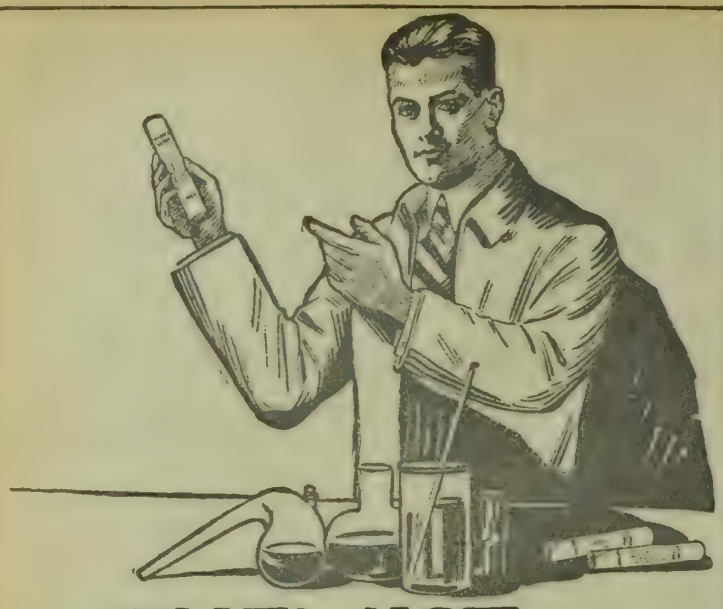

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J. C. H. HUNTTING, Care Parks Bros., Portland, Oregon.

(Read "Hal's Win Out," next issue.)

Dealers in PAPER | Blake, Moffitt & Towne
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Many small canneries throughout the State have been forced out of business by the high cost of sugar and labor, it is said.

Here and There in the Fruit Business

There Will Be No Car Shortage.

That annual nightmare—car shortage—will not disturb the slumbers of the California fruit growers and shippers this season, we are told by Wilmer Sieg, sales manager for the California Fruit Distributors. Mr. Sieg stated that the car lines are doing all in their power to prevent a car shortage, as is evidenced by the number of foreign refrigerator cars that have been called into service. In addition to the Pacific Fruit Express and Santa Fe refrigerator lines, there are 14 others now transporting fruits and vegetables from California, and in Mr. Sieg's opinion should there be a shortage it will come late in the season, at a time when the bulk of the perishable products had been marketed. There was a temporary shortage a few days ago, not for lack of cars, but labor troubles at icing stations. Men employed at the Union Ice Company and Pacific Fruit Express Company ice storage houses at Truckee and Boca quit work, and until their places were filled, there was some accumulation of fruit, but all of that has been adjusted and at the present time fruit trains are moving on schedule time. The refrigerator companies report a shortage of ice and they are appealing to the shippers to conserve as much as possible as many of the cars being used are not constructed with ice tankage capacity for a long haul, hence frequent re-icing is imperative, and ice necessarily has to be transported to intermediate points for re-icing purposes.

1920 Raisin Crop, $60,000,000.

The average person would wager that the combined mineral output of California during 1919 would be far in excess in value, to the net income from the 1920 raisin crop of the State. Figures never lie, so note the comparison. The combined mineral output of California for 1919 amounted to $41,131,636. A conservative estimate of the net value of the 1920 raisin crop of the State is $60,000,000—a difference of $18,868,364 in favor of the raisin. The California Associated Raisin Company have fixed the price for the 1920 raisin crop on a basis of 15 cents a pound to the grower. This is an increase of 5 cents a pound over last year's price. With the looked-for increased yield of the 1920 raisin crop of approximately $22,000,000 over that of last year, this will give the growers a net return of $60,000,000. The tonnage for this year is estimated at 200,000 tons against 190,000 tons for 1919. The raisin trade will have to "dig" to the extent of $80,000,000 for the 1920 crop, of which the grower will get $60,000,000. When asked why the price fixed by the association was 3 cents less than paid by the independent packers and 3 cents less than the New York raisin auction sale, President Wylie M. Giffen stated that 15 cents will be the highest price that the public will pay for raisins for food.

Bulk Peach Prices.

The California Peach Growers' Association have named prices for the 1920 bulk peach crop. Prices named are in keeping with advance of other varieties of dried fruits, which makes this season's price somewhat higher than that of 1919. The average is approximately three-quarters of a cent on the different grades and varieties. Following are the prices named by the Peach Growers' Association bulk basis: Standard yellow, 15½ cents; fancy, 17½ cents; extra fancy, 18½ cents; slabs, 15¼ cents; Muirs, 15¾ cents; fancy, 18¼ cents; extra fancy, 19½ cents; bakers' special, practically peeled, 18½ cents. Practically peeled peaches are quoted 2½ cents over prices of unpeeled. The bulk quotations on choice grade have been announced by the association, as this grade is for package goods.

Another Record Fruit Sale.

California has broken more records in the sale of fruits thus far during the season of 1920 than all previous history records. The latest to be called to our attention is the sale of Thompson's Seedless grapes, shipped from the Alta district of Tulare county, and sold in New York for $5,580, or an average of $5.80 per crate of 20 pounds net, or 27½ cents per pound wholesale, or $550 per ton. Those who have the time, inclination and curiosity might draw on their imagination as to the price the consumer would necessarily have to dig up.

Wine Grapes at Double Prices.

There is an unprecedented demand from all parts of the country for wine grapes at prices double those of the past season. It is reported that the unusual demand for grapes for shipment may cause a shortage in the raisin output. Demand for unfermented grape-juice and raisins seems to be going hand in hand, according to retailers. Citizens of an experimenting turn of mind have discovered that a raisin or two associated for a brief period in the warmth of the sun with the juice of the vine will in some peculiar manner add to the gayety of the beverage.

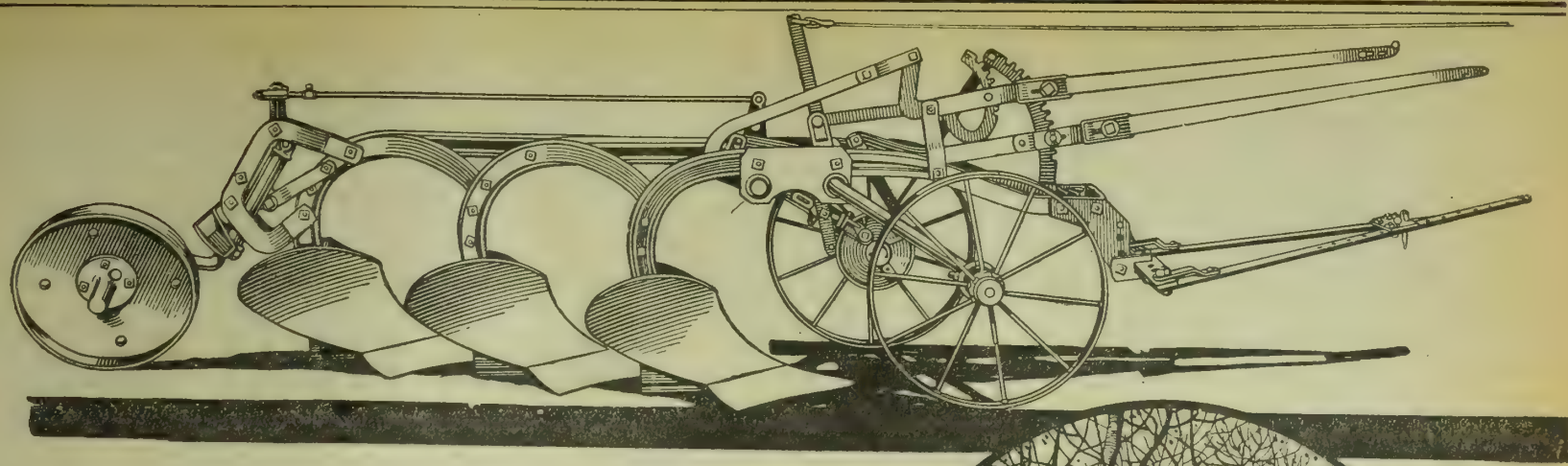
The first carload of Zante currants ever shipped from Fresno was forwarded from Fowler and Wahtoke. Although Zante currants are still in the experimental stage, a considerable acreage has been planted during the past two years.

The Chico fruit-packing plant of the California Packing Corporation has fixed a rate of 57 cents per hour and believes there is plenty of help available at this figure.

Bud Selection Expert Appointed

(Written for Pacific Rural Press.)

The Nurserymen's Bud Selection Association of California is making a vigorous campaign in the matter of location of the best parent trees from which they will in the due course of time select buds for nursery purposes. It is the intention of the association to follow this work closely, and in order that it may be done effectually, they have secured the services of Millard Sharpe of Vacaville, Solano county. The association is to be congratulated on their selection, as Mr. Sharpe has made a life study of the importance of better fruits, and as a result of his discoveries the fruit industry of California has been immeasurably benefited. Mr. Sharpe is not confining his attention solely to the detecting of strains in superior types of fruit to be used in propagation, but also, what effect the handling and holding of canning fruits will have on the appearance and subsequent keeping qualities of the fruit. He is now experimenting with different strains of Tuscans and Midsummer Clings immediately following Tuscans in the Sutter county district, by picking several dozen lug boxes of this fruit, that was held from three to ten days each, and then had them loaded in box cars with carload shipments of fruit going to the cannery at San Jose, and has himself gone to San Jose to watch the arrival of this fruit and to observe the condition of each lot and get the necessary data on the quality of the canned product gotten from each of these several separate lots. This is done for the express purpose of determining as correctly as possible which can be relied on to carry longest and still go into satisfactory packs. No praise or price can be placed on the benefits that such work will be to the fruit industry of the State. Like attention will be given all varieties of fruit whether to be used in canning, drying or shipping.



California Fruit Growers Wanted it-John Deere Built it

The John Deere No. 8 Orchard Tractor Plow is the result of a close study of the requirements of California fruit growers. The suggestions of a number of experienced fruit growers helped design it. It is an easily-handled, low-down, power-lift plow for use with small tractors in either orchard plowing or general field work. Its special hitch and lever construction and wheel base design permit work up close to the trees in throwing either to or from the row.

JOHN DEERE No 8 ORCHARD TRACTOR PLOW

has a reversible hitch and can be set out to either side so that the plow can run close to the trees when throwing either to or from the row. Note this feature in the illustration to the right.

Levers Have Side Adjustment—a feature you will greatly appreciate. See it illustrated at the right. When the plow is set to the right to get close to the row, the levers can be angled to the left. When the plow is set to the left, the levers can be angled to the right. In either case, with the plow working up close to the row, the low-set, angled levers, are conveniently back of the tractor operator, out of the way of the tree limbs and free of the tractor wheels when turning short.

Reversing the hitch and angling the levers is a simple matter—only one bolt to loosen in each operation.

Doesn't Scar the Trees. — Note also in the illustration to the right the wheel base design that permits close work in throwing either to or from the row, without scarring the trees. The furrow wheel doesn't project beyond the inner moldboard's wing. The land wheel is set inside the third beam.

Simple, Positive Power Lift raises the bottoms high and level at a pull on the trip rope by the operator. The lifting mechanism consists of a single, durable clutch on the land axle. It moves only when the plow is being raised or lowered —practically no wear.

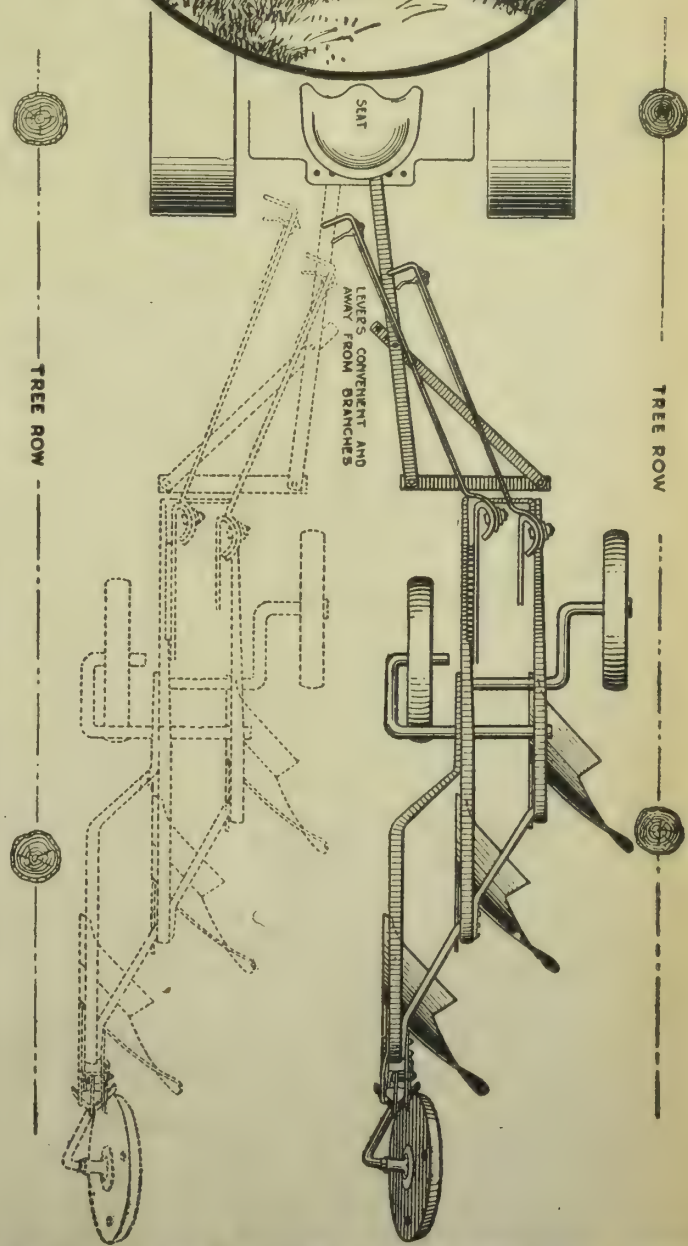
And these other features.—The hitch has a break-pin for protecting the plow when striking a stone or root, and a simple slide and pin-lock for quick landing adjustment. Land and furrow wheels have a great range of adjustment for either deep or shallow plowing. There is a great clearance in throat of beams and back of bottoms to prevent clogging in trashy conditions or deep plowing.

The construction is strong and durable throughout.

The John Deere No. 8 Orchard Tractor Plow is equipped with three 10-inch bottoms that scour and pulverize to best advantage.

If you have a small tractor, don't fail to see the John Deere No. 8 at your John Deere dealer's.

And don't forget that no matter what the size of your tractor, you can get a John Deere Tractor Plow in either moldboard or disc type that will give you especially good plowing service.



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Irrigation Law Void.

A State governed by two cities—this is not a Tammany Hall story, nor is there any taint of graft in our words—it is California. Our Supreme Court has decided that the irrigation act of 1919 is unconstitutional. As near as we can learn at this writing, the features which make it void are provisos inserted by our two largest cities, exempting themselves from its operation. The law was designed to provide a way whereby two or more irrigation districts or similar interested bodies might join their resources to carry on a project beneficial to all, but too big for any one of them. Probably the biggest project killed by the Supreme Court decision is the Kings River Conservation District, composed of fourteen irrigation districts. But the law also had a phase which caused much embarassment to projects proceeding under the so-called Wright Act. Perhaps the outstanding case of this is the Madera Irrigation District. The law of 1919 permitted rapid organization of districts, independently of the Wright Act. Five such districts had been organized within the proposed boundaries of the Madera district, presumably to exempt themselves from its jurisdiction, as pointed out by Thos. H. Means of San Francisco. Four of them were controlled by Miller & Lux, who also own the land in a district proposed under the new law on the West Side part of which had been included within proposed boundaries of the West Joaquin Irrigation District under the Wright Act. Several other districts organized under the new law are put out of commission. The Medano district, proposing to use water from Chowchilla creek, is one of them. Mr. Means believes that it will now either reorganize under the Wright Act or join the Madera district. The combination of Modesto and Turlock districts to build the Don Pedro dam, is not affected. The Madera, West Joaquin, and other projects, held up awaiting the decision, will now proceed rapidly with organization and construction, for nothing more can be done about the recently deceased law until the Legislature convenes next January. Probably at that time a bill will be presented to permit desirable combinations of irrigation districts without permitting smaller interests to embarass the big irrigation projects by withdrawing part of the lands subject to benefit from proposed works. The Kern river situation is one that needs such legislation. May it come before people get out of the notion of saving their flood waters for power and irrigation!

Avoid Spurious Hairy Peruvian.

It has been said by one high in authority that three times as much Hairy Peruvian alfalfa seed was sold last season as was produced. This, of course, tends to give the variety an undeserved reputation, and many who planted spurious seed can't see any difference between their Peruvian and common alfalfa. To prevent such fraud so far as possible during the coming season, the growers of the southern Arizona district, of whom there are probably 50 or 75, are organizing to include only those who produce no alfalfa seed except the Hairy Peruvian. They propose to have each sack labeled with three affidavits, one by the Farm Advisor, stating that the grower produced only Hairy Peruvian, one by the grower stating that the seed in the sack is from his Hairy Peruvian fields only, and one by the warehouseman, stating that there has been no mixture while in his possession. Seed users will be justified in making special investigation of any Hairy Peruvian alfalfa seed not so labeled, as practically all of the real article is produced in Arizona. The seed crop of this variety is short, and is being bought so far as possible by dealers at 40 to 45 cents per pound.

Imperial Lettuce Growers Organize.

Lettuce growers of Imperial county produced 5,500 carloads of salable heads, of which less than 3,700 had gone to market when F. N. Bigelow and James Britt of the State Market Commission were called to a meeting of growers in Calipatria, July 24. The rest was being pastured because hardly a grower had made any money and some were in debt to the commission firm which handled their shipments. They appointed J. A. O'Neill, Gay Owens, and A. S. Farley as an organization committee, which met next day with Messrs. Bigelow and Britt and decided tentatively on a non-stock non-profit form of organization. They enlisted Farm Advisor E. L. Garthwaite in active co-operation and met again August 5 with others added to their committee from other lettuce districts in the valley. Vegetable, cantaloupe, and melon growers are included in the proposed plan. Finances to offset the advances customarily made to growers by commission shippers are to be provided by using members' notes as bank collateral.

The harvesting of the largest crop of hops ever grown in the Sacramento Valley began last week. Much of the crop will be picked by machines. Hand-pickers receive $1.25 a hundred pounds, with a bonus of ten cents a hundred for all those who remain throughout the season. It is estimated the picking will cost $600,000.

This season's watermelon prices at Los Banos have been uniformly good, the bulk of the heavy sales being made at figures well over $30.

Citrus Orchard Foreman Wanted

A competent foreman for 800 acres citrus orchard, lemons, oranges; also capable packing house manager for orange packing house. Apply with references to

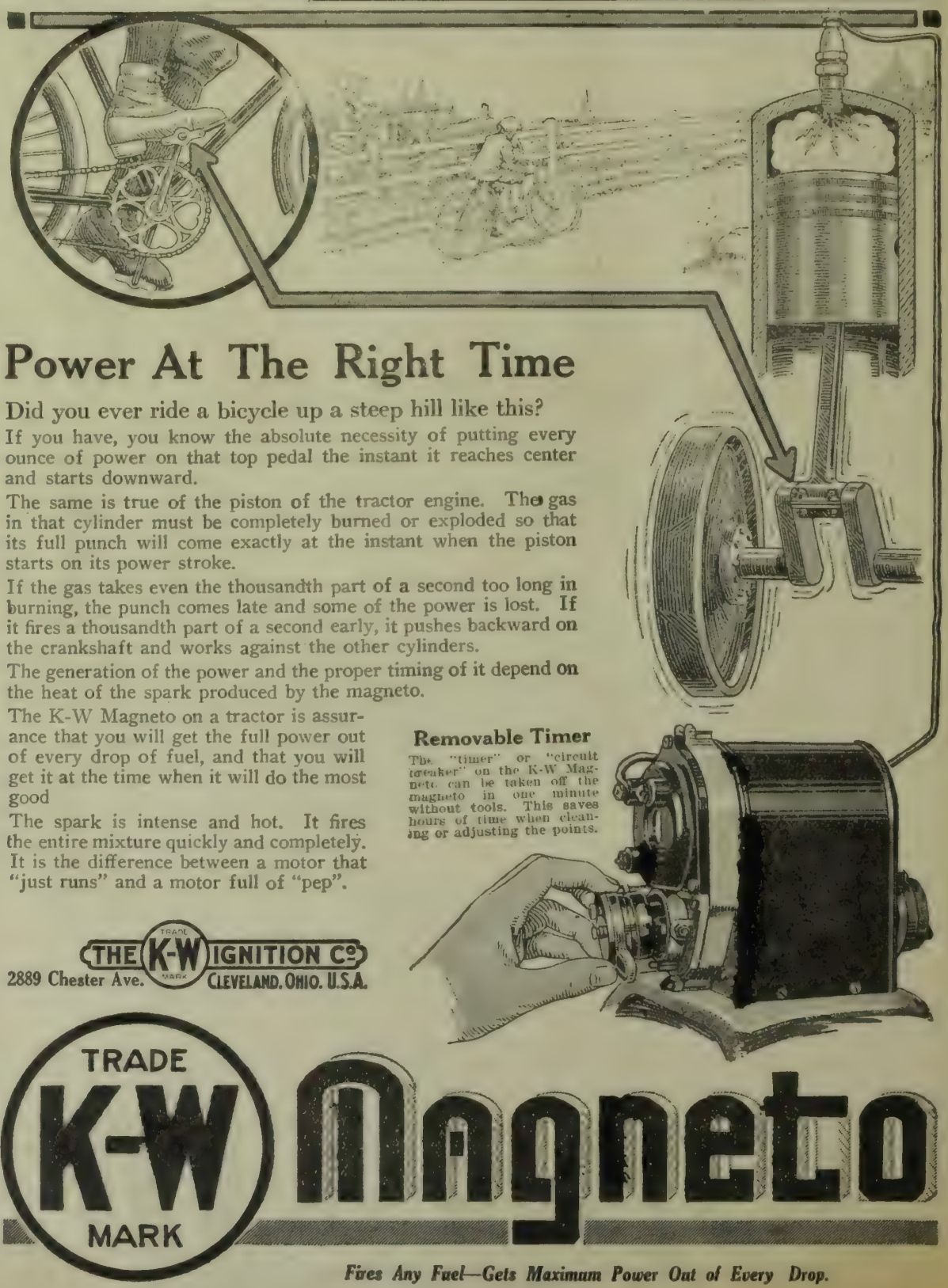
JAMES MILLS ORCHARD CORPORATION
Hamilton City, California

MARIOUT BARLEY SEED
FOR SALE

This seed yielded twice as much as common barley on my ranch this year.

Have a few hundred sacks of good clean seed left. Order early.

Julius Trescony, - San Lucas.



AGRICULTURAL AND MECHANICAL SERVICE

What Is the Matter with Barley?

A while back I could have sold my barley for three cents; now I can't sell at 2½. What is the matter with the market?—D. L. S., Contra Costa county.

Uncertainty surrounding everything connected with barley marketing has caused European and local buyers to "lay off." Those who are still transacting business are taking greater chances than most dealers are willing. Lack of European demand might be due to a concerted effort of foreign buyers to bear the market; but it is more likely due partly to the disordered condition of foreign financial exchange, partly to uncertain freight rates and service which might wipe out all profit at one swoop. Railway embargoes to gulf ports have kept shippers guessing. And it is possible that Europeans are realizing more fully the necessity of choice between enough food or less food and more alcohol. Then we must always consider the effect of prohibition and mechanical power in America on the consumption of barley. No one is willing to hazard a guess as to what would happen to barley prices if conditions should settle down to a forecastable basis.

Some Cabbage Seeded; Some Did Not.

Premature seeding of cabbages seems due to any cause which arrests growth for a period, say, of ten days or more. One man in Orange county set out a bunch of plants. A cold, dry spell followed, and so many plants went to seed afterward that he shipped only three or four tons per acre. He sold plants from the same seedbed to a neighbor, who planted them later and got more moisture. The neighbor shipped eight or ten tons per acre.

Underground Tile Irrigation.

Has there been devised a method of laying concrete tiling for irrigation purposes directly in the ditch where they are to be used?—S. F. S., Stanislaus county.

Underground cement pipe carries water to outlets at the head of orchard rows or at the upper ends of irrigation checks in many parts of the State. If you refer to subirrigation by use of loosely laid tiling, there is commercially none of it in California. It has been tried in market gardens of Florida. Any subscribers who have had experience will benefit our readers by telling us about it.

IRRIGATION DISTRICT FOR 350,000 ACRES.

(Written for Pacific Rural Press by Secretary D. R. Hanhart, Madera Irrigation District.)

Active engineering work has started on the 350,000-acre Madera Irrigation District project under the supervision of Chief Engineer F. M. Carter. Several parties are in the field running the necessary surveys for the system, all of which must be submitted to the State Water Commission, preparatory to the bond election, which will be called some time this coming fall or winter.

The Madera project is the second largest in the State of California, being exceeded in acreage only by the Imperial district. Only one-seventh of it is now irrigated.

It is proposed to dam the San Joaquin river at a point about a mile east of Friant, and to take water in a high line canal running generally along the east and north boundary of the district, with the laterals running generally west and south. It is also proposed to install pumping plants and drainage canals in the western part of the district in order that whatever drainage problems may arise can be met effectively; it is also proposed to install electric power plants at the dam, which will produce enough power for the use of the district and the balance of which will be sold for enough to materially assist in paying the cost of the entire project.

The Largest Dam in the West.

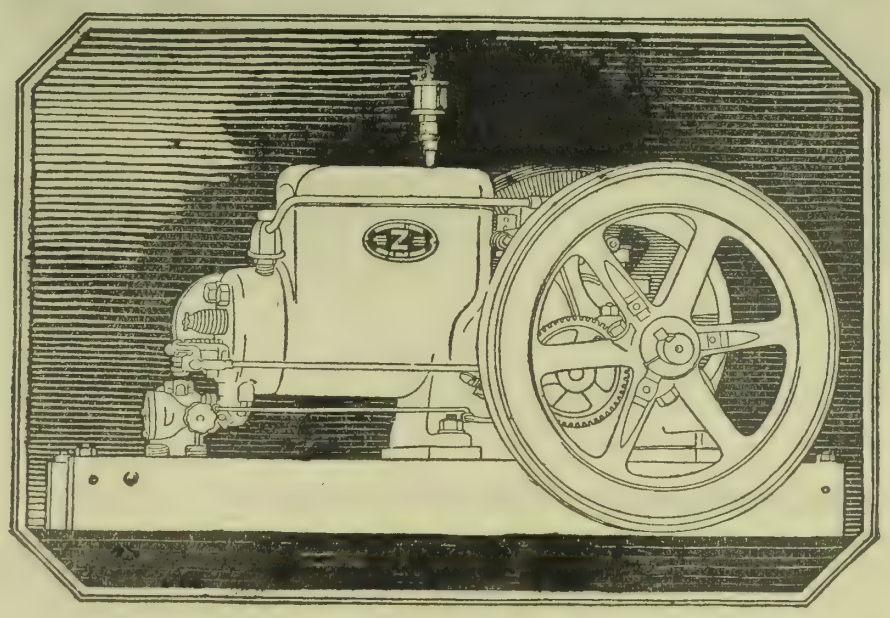
The proposed dam will be the largest in the West. It will be 280 feet high and approximately one mile across the top. The dam is being designed by the firm of Quinton, Code and Hill, of Los Angeles. Mr. Hill was the supervising engineer on the Roosevelt Dam on the Salt River, Arizona project. The same firm will design the hydro-electric plants. Thos. H. Means of San Francisco is laying out the distributing system. Mr. Means is one of the best known irrigation engineers in the West.

The preliminary estimates of the cost of the project run to approximately $15,000,000, which includes the dam, power plants, and distributing system for the entire district. Figuring the bond interest, sinking fund, and maintenance charges that the district will carry, it is estimated that the cost of the system per acre per year will be between $3 and $5. This is between one-fifth and one-third of the average cost of pumping-plant irrigation. An exhaustive study of the cost of irrigation by means of pumping plants was made last year by Federal Engineer A. Lincoln Fellows, who was sent to Madera to study the underground resources of the district. His figures show a cost of between $3 and $30 per acre per year, depending upon soil and variety of crop, or an average of about $16 an acre.

The Madera District was formed on January 1st of this year by a vote 97 per cent favorable to organization. The people of the district are practically a unit in their desire for gravity water; and when the bond election is called it is expected that the vote will be fully as favorable. The directors of the district are: E. M. McCardle, (President) W. H. Benson, J. W. Schmitz, N. E. Sanders and J. B. High.

Baled alfalfa sold for $28.50 at Tipton was the top price paid during July at that point.

FAIRBANKS-MORSE "Z" FARM ENGINES



As Clean Cut as a Thoroughbred

The clean-cut business-like design of the "Z" Engine was not just accident. A farm engine, to be efficient, *must* be properly designed. The "Z" has graceful, natural lines—free from geegaws.

The parts are strong—weight where weight is needed. Strains foreseen—contact parts case hardened—*all* parts carefully, precisely made by accurate machine work.

Looks like a thoroughbred—*is* one. Delivers a steady flow of power—runs smoothly—operates economically. Correct design and precision methods give the "Z" its built-in quality. It is a mighty pleasing engine to look at.

Other "Z" features are: Runs on kerosene, as well as gasoline; Bosch magneto; more than rated power; parts interchangeable; long life.

Let your nearby dealer show you why you should have a "Z."

PRICES:

1½ H. P.	$ 85.00
3 H. P.	135.00
6 H. P.	220.00

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FAIRBANKS-MORSE QUALITY F M 100%

FAIRBANKS, MORSE & CO.

MANUFACTURERS — CHICAGO

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SMOOTH-ON REPAIR BOOK

Why spend dollars for repairs when cents will do? Write for this free Booklet and learn how. Smooth-On Iron Cement No. 1 35c in 6-oz. cans, 60c in lb. can at Hardware and Auto Supply stores. Will save you money.

SMOOTH-ON MFG. CO. 56 Sacramento St., S. F., Cal.

SMOOTH-ON IRON CEMENT No. 1 For Motor and Household Repairs

RHUBARB Wagner's GIANT

PLANT NOW—August is a good month to plant. Growers who planted last July and August have already harvested over 15 tons per acre, netting $1,000 eleven months from planting. For further information, write J. B. WAGNER, Rhubarb Specialist, 1550 East Villa Street, Pasadena, Cal.

SEEDS Aggeler & Musser Seed Co.

620 South Spring Street
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STUMPS and WILLOWS

Get Rid of Them Now With CRESOLITE

A few ounces applied now in the hot weather to a stump will paralyze and kill it in a week. Sample can of 13 lbs. $2.15. Money back if it fails. Bbl. lots at 12c per lb.

LOUIS BAHRS, LOOMIS, CAL.

Attention

Beet-Growers

KILLEFER QUALITY TRADE MARK
KILLEFER EFFICIENCY

should anticipate their wants in Beet harvest tools and repairs for same, as much as possible this year.

The steel mills are not able to supply the usual quantities of high-grade steel used in the manufacture of our beet tools and repair parts. We have on hand a limited number of Two-Row and Four-Row Automatic Lifting Beet Plows for tractors and the Single-Row Riding Plows for teams. We also carry a stock of extra Shares, Shins and Points. If your dealer does not stock these extra parts, write us and we can fill your order by express, freight or parcel post.

Write for Catalog No. 1

The Killefer Manufacturing Co.

2209-21 SANTA FE AVE., Box 156, Arcade Station P. O., LOS ANGELES, CAL.

POWER IRRIGATION PERMITS INTENSIVE FARMING.

W. H. Porter of Los Angeles county has been making his living for 18 years by raising potatoes, sweet potatoes, melons, sweet corn, etc. He has 25 acres. Full use of the land required double-cropping. Double-cropping required summer irrigation, which Mr. Porter bought from neighbors who had pumps. This was often inconvenient and more or less expensive. Sometimes he couldn't get water in time, and so missed the opportunity to raise a second crop on certain pieces of the ranch. So he figured it would pay better to have a well of his own. This was installed last year, with a five-inch centrifugal pump run by a 15 h. p. motor and lifting 700 gallons per minute at full capacity about 15 to 20 feet. This water is sent across his sandy ranch through underground cement pipe with a standpipe outlet every 100 feet.

Controlled irrigation enables him to grow early potatoes planted in February and all dug by the first of June. British Queens have replaced White Rose because they yield better. With a month to prepare the ground, and irrigate, sweet corn is planted about the first of July for the fall trade.

Another second-crop, tried this year for the first time because Mr. Porter has his own pump water, is cauliflower. This was drilled in rows in four checks about 12x40 feet long, so they could be flooded and cultivated. They were ready to transplant to the field in the middle of July. A few acres of cantaloupes and honeydews are grown each year. These are generally planted about six feet apart in rows eight feet apart. They are irrigated by running water down one furrow for each center, filling four furrows at a time, then diverting into the next four furrows by use of a tampoon. The cantaloupes were so far along in mid-July that they could not be cultivated again, but vines will shade the ground after the additional irrigation that followed. Six acres of mixed orchard furnish prime fruit for the local market whither it is hauled along with the vegetables and melons by motor truck. Horses to cultivate the ground are fed grain hay raised on the place and followed by sweet corn.

White and yellow yams are put into hot-beds in February and plants set in field in May and June to be harvested in October. Whites are very large and yield more per acre, but do not sell so well as the yellows. All of them are kept until spring, when prices are better. If dug before frost touches the vines and handled carefully, they "can be kept most any way," but Mr. Porter recommends piling them in long ricks on the sandy ground and covering with tar paper to turn the water, fodder being piled on top of the paper to help keep an evenly cool temperature. If the vines are even a little browned by frost, the sweets rot earlier in spring.

ELECTRIC SHORTAGE REDUCED.

Rice growers alone will use almost as much electricity this summer as was used in 1918 for all kinds of irrigation; and rice growers use more than any other class of power users, except street railroads, as stated to the Pacific Rice Growers' Association recently by State Power Administrator H. G. Butler. Rice growers are using 30,000 horsepower from the power companies, and 10,000 horsepower developed by private plants. Last spring it looked as if there would be a 20 per cent power shortage in the State, but due to late rains, cool weather, and conservation measures, the shortage has been much reduced and will not be serious except in case of accident. This optimistic condition depends on continuation of present conservation practices.

FEED-CUTTER BELT OUT OF WAY.

The belt which runs a sixteen-inch feed-cutter on the San Joaquin ranch in Orange county is not in the way of men or loads of feed. It is high above either. The 20-horsepower motor which furnishes power is set on a high-covered platform, and the belt runs horizontally four or five feet above the cutter to a lineshaft fixed to the side of the chopped-feed storage barn. From the lineshaft, one belt drops about seven feet, almost vertically, to a pulley that runs the cutter. Another belt drops to a pulley on the opposite side of the machine and runs the blower.

Gasoline in Portland has gone to 29c a gallon.

HYATT
ROLLER BEARINGS
For Abundant Harvests

TO make harvests more abundant—to make farm profits larger—to make farm work easier and farm life happier—these are the achievements of power farming machinery.

And it is highly significant that in the best of these machines whether they be trucks, tractors, plows, threshers or other agricultural implements, you will find one constructional feature in common—Hyatt Bearings.

This universal use of Hyatts expresses the combined opinions of hundreds of manufacturers and thousands of farmers who have proved to their own satisfaction that Hyatt Bearings make better farm machinery.

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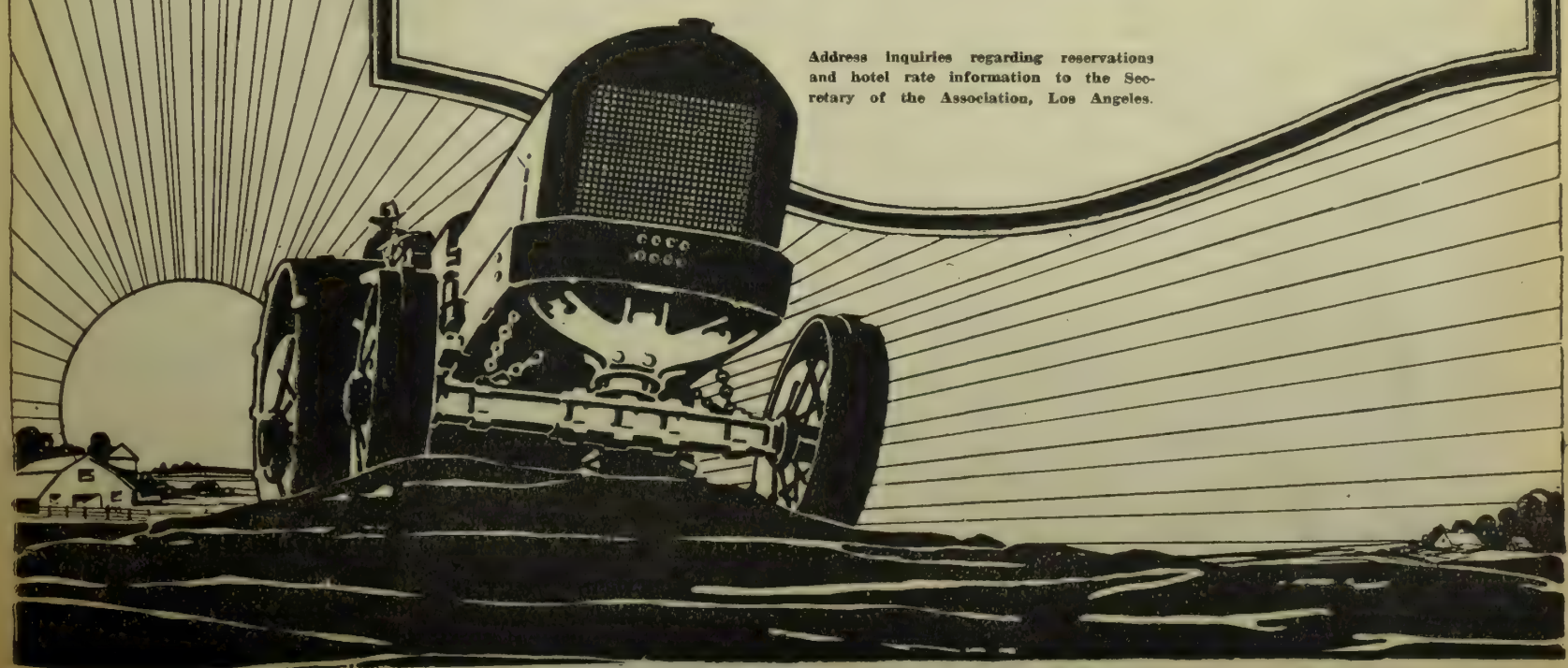
GUY H. HALL, Manager

Address inquiries regarding reservations and hotel rate information to the Secretary of the Association, Los Angeles.



LAST CALL FOR

PATTERSON HOLSTEIN ASSOCIATION

AT PATTERSON FAIR, AUGUST 21

UNDER THE AUSPICES OF THE

STANISLAUS COUNTY HOLSTEIN BREEDERS' ASSOCIATION

It is the opinion of Holstein men in a position to know, that the show of Holsteins at the Patterson Fair is going to be one of the best of the season, even rivaling that of the State Fair. Upwards of 100 head are to be exhibited, and 45 head selected for this show and sale are to be sold the last day of the fair.

Here is what the committee who selected the cattle for this sale have to say in regard to the cattle they have selected:

"I believe we have selected 45 as good Holsteins as have ever been offered in any sale in this state."—A. M. Bibens.

"I have attended many of the Holstein sales in this State and I honestly believe the cattle we have selected are better in quality and type than I have yet seen in one sale."—R. L. Holmes.

"I have attended every State Fair for fourteen years, and it is my judgment that the Holsteins we have selected for the show and sale at Patterson, will bring together more cattle of real show type and quality than I have yet seen at one show."—H. E. Cornwell.

Enough said. Every admirer of good Holsteins can well afford to spend the day at Patterson when these cattle are sold. Stanislaus County breeders have allowed there best to be selected for this sale. Come and set your price on them.

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A. M. BIBENS.	BRIDGFORD HOLSTEIN CO.	R. H. DAVIS.
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All are tuberculin tested and sold under the strongest kind of a guarantee.

THE TIME AND PLACE,
10 A. M., AT PATTERSON, CAL., AUGUST 21.

Sale Committee:

H. L. HOLMES, A. M. BIBENS, H. E. CORNWELL

For catalog and information, write E. M. Morrow, Sec'ty, Modesto, Cal.

Ask Any Cow!

Ask any cow what keeps her in best condition to give the most to the milk pail.

Pasture—green feed. Every farmer knows the answer. An Indiana Silo enables you to put your pasture under cover and feed it when green feed is scarce. Silage rations increased butterfat production from a University of California herd 10 per cent! You can do as well.

Indiana Silos Are Proven

Twenty thousand Indiana Silos on the Pacific Coast prove their success. Indiana Silos save storage space, fodder wastage, and cut down expensive mill feed. No. 1 Fir staves. Airtight tongue and groove joints. Patented door frame made up at factory. Compression cam lock doors. No hinges. Roof supplied with door section finished. Three men can erect an Indiana in three days. No carpenter needed. Money-back guarantee.

Free Book on Silos—Write for free silo book. Written for Western farmers. Mail coupon today.

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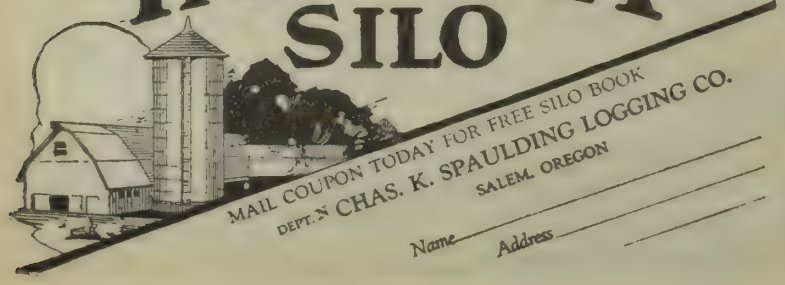


More Light on Cost of Producing Milk

(Written for Pacific Rural Press by Ralph Newman.)

The other day B. F. McLeod, cost accountant with the Northern California Milk Producers' Association, showed the writer what it cost to produce milk on ten typical dairies in his territory for six months preceding June 1, 1920. The dairies ranged in size from 10 to 125 cows, and may be taken as a fair sample of the dairies in the northern territory.

Into the cost of production are figured: Interest on investment in stock, dairy buildings, equipment and land actually covered by buildings and corrals; labor at $5.00 a month per cow plus 10 per cent of milk credits; taxes and insurance; depreciation at 15 per cent on stock, 5 per cent on buildings and 10 per cent on equipment; feed at market price when used.

The credits include all milk sold, milk used on the ranch, calves at actual value, manure at $10.00 per cow per year, and all hides and grain sacks sold. Worked out in cost per 100 lbs of milk, the carefully kept figures from these ten dairies gave the result tabulated below:

	Aver. cost per 100	Receipts
December, 1919	$5.20	$3.42
January, 1920	6.07	3.57
February, 1920	5.54	3.08
March, 1920	4.24	2.84
April, 1920	2.73	2.79
May, 1920	3.52	3.08

Now, if you will average this up for six months you will find the average cost of production per 100 lbs. of milk was $4.55, while the producer's net receipts per 100 lbs. of milk were $3.13—a loss of $1.42 per 100 for the milk produced from December 1st to June 1st. Of course, this is only for 10 dairies. If all the dairies in the territory had been in, the figures might have been different, but those who know the ten must admit they are the average run, and the conclusion is very clear that for some time the receipts from them have not covered the cost of production.

How does the dairyman get by at all in the face of such a showing? Well, he forgets all about interest; he lays nothing away to meet depreciation; he foregoes the 10 per cent of milk credits, which is his salary, and does all he can himself of that $5.00 per cow labor in order not to have it to pay out, and he charges only actual cost of feed grown instead of market value.

Now that is fine business, isn't it? The dairy industry is absolutely essential—it is basic in our civilization, and we ought to be appalled when we think of the financial condition it is in. No industry, not even the dairy, can endure for long on any such basis as this. If we don't get busy pretty soon with a new and sane policy of financing the dairy industry, we will wake up some of these times and find that this main pillar of our civilization has given way.

Housewives' League papers, please copy.

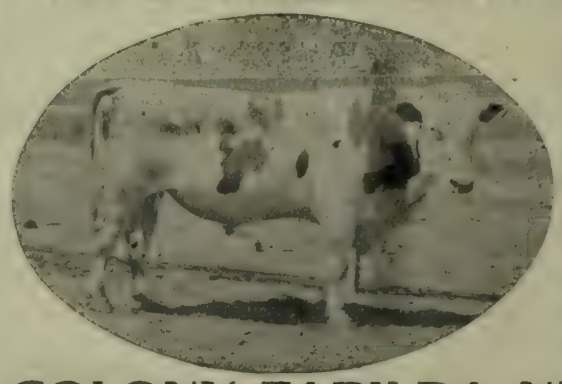
With national record showing the heavy increase in operating expenses of trucks over horses, with the trebling of the price of gas in five years, with truck and tractor drivers demanding one dollar per hour for their work, more and more demands are made on ranches for horses and mules for draft work while the price goes soaring. Breeding to good big mares with good big stallions is better than investing in "wild cats" that may bring fortunes, but most generally bring tears.

Six large silos are filled with corn every year at San Julian Rancho midway between Gaviota and Lompoc. Soil and conditions at this place are especially favorable for growing an excellent silage corn without irrigation.

On one tract of the Durham State Land Settlement, corn for silage planted about July 1st was, on August 1st, from 2½ to 3 feet high, with as fine foliage as could be desired.

E. E. Greenough of Merced has sold 3 Jersey calves to members of the newly organized Petaluma Calf Club.

WHO WILL OWN HIM?



There are only two cows in the world that have ever produced over 33,000 pounds milk in one year—Tilly Alcartra and Zarilda Clothilde 3d De Kol.

There are only four bulls of service age in the world, having dams that have produced over 33,000 pounds milk in one year.

COLONY ZARILDA NEWMAN

is one of the four, and he will sell at public auction, to the highest bidder in the

COMPLETE DISPERSAL OF THE WM. M. BRAY HERD
50—HIGH-CLASS REGISTERED HOLSTEINS—50
State Fair Grounds, Sacramento, Calif.
THURSDAY, AUGUST 26, 1920, AT 10 A. M.

The offering consists of 47 females and 3 bulls—a splendid herd of young, healthy cattle of exceptional type and backed by some of the breed's greatest production.

A large number of granddaughters of MARGIE NEWMAN, the former world's record milk cow, will be in the sale, including a great 7-year-old cow that made 31.60 lbs. butter in 7 days from over 740 lbs. milk as a junior 4-year-old. Also a large number of young cows and heifers out of dams with official records up to over 31 lbs. butter in 7 days.

The foundation of this herd originally came from a Federal accredited herd and a herd under Federal test. It has passed two Federal tests and one by a State authorized veterinarian without a reactor. There has never been a case of abortion in the herd. Every animal positively guaranteed to be a breeder; every animal over six months old tuberculin tested and sold subject to retest by the buyer.

Catalog free on request. Write for one.

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Facts in BLACK & WHITE

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To the general public, milk is milk. It does not appreciate the fact that no other organic foodstuff, except meat, shows such marked variation in food value. It is not the fat in milk, but the proteins, which build bone and muscle and impart vitality. **Purebred Holstein cows' milk is low in fat percentage, but rich in those desired proteins.** Scientists have established the fact that the big, healthy, vigorous Holstein cow possesses more vitality than other breeds, and is able to transmit that vitality through her milk to the consumer. It is vastly superior to ordinary cows' milk for infants, invalids and convalescents, or for regular family use. It is more easily digested, owing to its small fat globules.

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Stock Raising in WESTERN CANADA

is as profitable as grain growing. Successes as wonderful as those from growing wheat, oats, barley, and flax have been made in **raising Horses, Cattle, Sheep and Hogs.** Bright, sunny climate, nutritious grasses, good water, enormous fodder crops—these spell success to the farmer and stock raiser. And remember, you can **buy on easy terms**

Farm Land at $15 to $30 an Acre

—land equal to that which through many years has yielded from **20 to 45 bushels of wheat to the acre**—grazing land convenient to good grain farms at proportionately low prices. These lands have every rural convenience; good schools, churches, roads, telephones, etc., close to live towns and good markets.

If you want to get back to the farm, or to farm on a larger scale than is possible under your present conditions, **investigate what Western Canada has to offer you.**

For illustrated literature with maps and particulars regarding reduced railway rates, location of land, etc., apply to Department of Immigration, Ottawa, Canada, or

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REMEMBER LOS ANGELES LIVESTOCK SHOW.

With $100,000 guaranteed and definite plans announced for the Third Annual Los Angeles Livestock Show at Exposition Park, October 2 to 10, widespread interest in the show is manifest and there is every promise of the most successful exhibition ever staged in California.

Copies of the premium list and entry blanks may be had from Manager C. R. Thomas at the Chamber of Commerce, Los Angeles.

The program will include exhibits of every breed of farm stock; an exceptionally high-grade horse show; the most startling rodeo ever conceived; running races and poultry and pet stock shows.

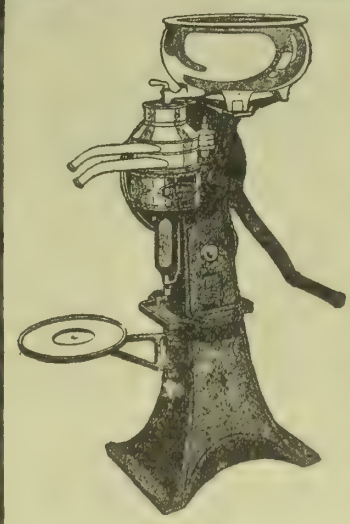
In releasing the premium list the directors make the following announcement: "Southern California's annual livestock show presents to the breeders of the United States an opportunity of displaying their stock before a most appreciative audience. Since the inauguration of these events, there has been a marked development in the livestock industry in Southern California, and today the interest in pure breeding is greater than at any time in history. Notable increases have been reported in various established herds, and it is gratifying to note that there is a general awakening among the small farmers to the importance of purebred farm stock.

"These annual exhibitions are cooperative enterprises, designed to educate the people at large to the importance of the livestock industry and its possibilities. The splendid response on the part of the growers in the past is steadily growing stronger.

"The Los Angeles livestock show is not a private enterprise, but a great public institution, the activities of which tend to stimulate better conditions and finer cattle throughout the country."

Labor is the problem these days, and it will have an influence against a large exhibit of livestock at our fall fairs, is feared by many. It may possibly reduce the numbers slightly, but it ought not to affect the quality. Breeders should make an exhibit if it is within the possibilities, even though they may have to cut down the number shown.

Farm centers throughout Kern county have taken up the question of securing help for the coming cotton crop of 10,000 acres.



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CREAM SEPARATOR

Quickly pays for itself in these times of high butter-fat prices and scarcity of labor. It does so doubly quick if your present separator is too small, half-worn-out, or you have none at all.

The De Laval Separator skims cleaner, is easier to turn and wash, and lasts longer—that is why there are more De Lavals in use than all other makes combined.

The De Laval is the World's Standard Separator.

A De Laval purchased now will pay for itself before Spring.

See the nearest De Laval local agent at once, or write the nearest De Laval office below for any information desired

DE LAVAL DAIRY SUPPLY CO.

THE LARGEST DAIRY SUPPLY HOUSE ON THE PACIFIC COAST

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50,000 Branches and Local Agencies the World Over

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Creamcup Herd offers service bulls and bull calves of 34-lb. breeding. Females offered for foundation stock.
Tuberculin tested.

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R. D. "A," Box 437,
Two miles out North First Street.

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For Size, Bone and Quality

More is required of Horses than ever before hence the need of more size, weight and power. Large geldings never were higher. Shire Geldings usually top the market. Use Shires to raise larger and better horses.

For information on Shires, write W. G. Lynch, Secretary, The American Shire Horse Association, Tonica, Illinois.

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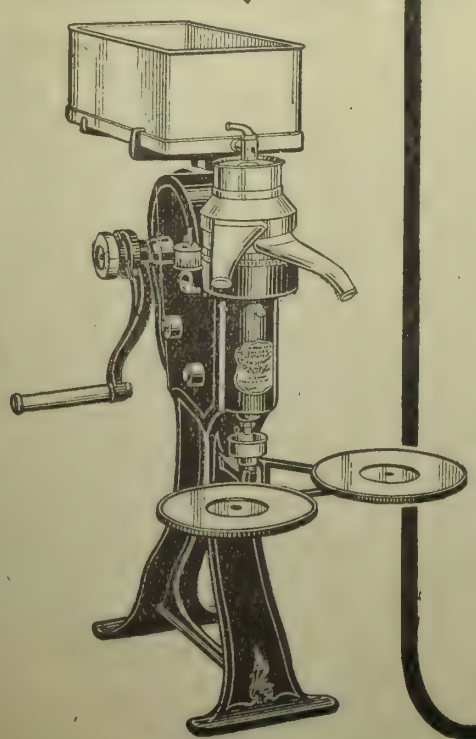
WITH PERFECTED DISC BOWL



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Is it too much to expect?

A machine may be said to have reached perfection when, through mechanical and engineering excellence, it renders a degree of service in money- and labor-saving never before attained.

Years ago, the United States Cream Separator reached the peak of perfection as a money saver, by winning in open competition the world's record for close separation—a record that still stands.

The perfecting of the United States Disc Bowl is the last big achievement in cream separator building. With this notable refinement, the labor-saving features of the United States challenge and welcome all comparisons.

Those who know the ease of operation, the simplicity of cleaning, say the United States represents perfection in the most important detail of milk handling.

Write for literature today—but be sure to have the United States dealer near you show the machine itself.

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Bellows Falls, Vt. — Chicago, Ill.
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No Installation
Ready for Use When Unboxed
No Pipes--No Pulsators--No Gauges

Over a million cows a day are being milked with Sharples Machines. Every user is an enthusiastic booster. The Moto Milker operates from any voltage power line or farm lighting plant. Has the famous "Compressed Air Squeeze," the same as the pipe line machine, which guarantees the protection of your cows. Write us for a catalogue and list of satisfied users in your vicinity. We give a free demonstration upon request.

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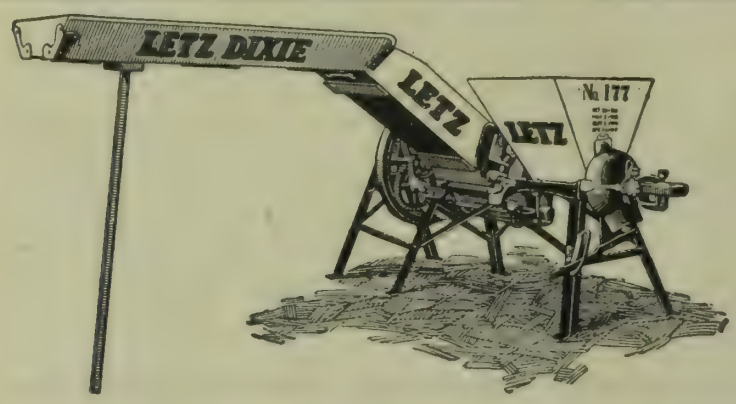

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All is due to the famous Letz Patented Self-sharpening, steel-grinding plates, with their thousands of keen-cutting, scissor-like edges. Grind everything—wet, dry, oily—and can't clog. Guaranteed to outlast three sets of ordinary plates.

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DIGESTER TANKAGE

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Feeding Hogs at the Diamond Bar

(Written for Pacific Rural Press by Thos. F. McConnell.)

Hog breeders, and especially those who have a predilection for the red hog of the Duroc-Jersey kind have heard of that great breeding establishment, the Diamond Bar Ranch. Located at Spadra, on the eastern border of Los Angeles county, it is of itself a larger community than the station and post-office near. It has not been in existence long, but it already has a reputation for good hogs and lots of them.

It is the aim of the owner, Fred Lewis, to have 5,000 hogs—all purebred Duroc-Jerseys. He has made a great start, both in buildings, equipment and animals.

The Old Idea of Hog Raising.

The old idea of raising "hawgs" forty or fifty years ago, when our American breeds were in the making, was much different from what it is now. Then any old place, so long as it was "hog tight," was good enough for the grunting, squealing pork-producers. The hog-raiser was not a specialist; he was only a farmer, growing, killing and curing his own pork. If he raised a hog or two more than he needed for his own use, he might sell it, either alive to the local butcher, to the drover, or wait until he killed it for his own use during the winter, when the surplus carcasses would be marketed.

The farmer raised not only the hog, but all the feed for it. Such feeds as tankage, blood meal, fish meal, etc., were not in existence, and balanced rations were unthought of and unknown. Such needs were supplied unthinkingly in the form of "swill" from the kitchen of the farmhouse, containing much skim and buttermilk. The fattening ration was largely Indian corn "in the ear."

The Modern Idea.

All this is changed now—not only in California, but in the older swine-growing sections. In the old days, any one buying feed for hogs would have been considered a promising candidate for the insane asylum. At present much feed, even for market hogs, is bought, either in the form of "mill-feed" or whole grain. To be profitable, the hog raiser has to be a business man. He must buy good feed cheaply and in large quantities. This may necessitate co-operative buying in the case of men using small quantities.

It is the aim at the Diamond Bar Ranch to raise a great many good hogs and to care for them in a very economical way. To feed 5,000 hogs, or even the 1100 now at this place, could not be accomplished by the old "bucket" method. It would take an army of men. Therefore, the use of business methods and machinery is necessary.

Operations on Wholesale Scale.

Feed and other material is purchased in carlots and "set in" on the spur track or switch by the "Salt Lake" railway, from which point it is picked up by the ranch switch engine and taken to the point desired. In the case of grain feed in bulk, the car is "spotted" at the grain warehouse, where it is unloaded at the rate of 30 tons in 12 minutes.

So far nothing so very unusual has occurred, except that it is in connection with a hog farm. Four and one-half miles of standard gauge railroad track is laid and in use in the operations on this wonderful ranch in the making, for it is not complete as yet. The buildings are so arranged and connected with this railroad system that the operations of feeding hogs from mixing the feed to the distribution to the troughs of the various pens is carried out by its aid. Eleven hundred hogs are fed or slopped in 40 minutes by three men. Each pen receives its portion of perfectly mixed slop from the tank, containing 1,700 gallons, as it is hauled slowly along past them.

Improved Feeding Arrangements.

Much ingenuity has been displayed in devising this feeding apparatus. It is not complete, for it is not entirely automatic, as it no doubt will be at no far distant time. First, there is a flat car carrying a round wooden tank of 1,700 gallons' capacity. This tank car, containing the proper amount of water, is hauled by the switch engine to the feed warehouse. Into it is then dumped ground feed, which is thoroughly mixed by a power-driven agitator, which is constantly in operation until the feeding operation is complete.

Now they are ready to commence feeding. The pens containing the hogs are built with the feed troughs at the end next to the railroad track. Before feeding the hogs are kept from these troughs by vertical gates, suspended by hinges at their upper ends and held in position by latches. As the car is hauled along the pens, one man operates a large spout of iron pipe containing a quick-acting valve, through which the required amount of feed or slop is deposited in each trough. A boy on the rear end of the car, as it passes along, trips each latch on the vertical gates, allowing them to swing outwardly and give the hogs access to the ration. The 1,100 hogs are thus fed as quickly as the same number of men would feed 100 under ordinary conditions.

Manual Labor Minimized.

It was said that the operation was not as completely automatic, as in time the only man necessary will be the engineer. The valve in the feed spout and the gate trip will be operated automatically. The manual labor in the feed-mixing operation will be reduced, so that one man will simply do the thinking and the machinery the work.

Feed cooking, the manufacture of the tankage used, and many other things now done elsewhere, will be performed at the ranch.

System and the limitation of manual labor is the aim. It is hoped before long to be able to reduce the number of men employed at least 75 per cent.

No attempt in this article has been made to say anything about the Duroc-Jerseys raised, as that requires an article by itself. It may be said however, that it was the aim of the management to have nothing but the very best of the breed and to make Diamond Bar Ranch the synonym for the highest type of livestock.

PUBLIC LIVESTOCK SALES AT FAIRS.

Public sales at the coming fall fairs seem to be the vogue this year. Just how or why it was started we cannot say. Perhaps, as we say in stock breeding, it is "a reversion to type." That, is going back to the original form, for, as most of us know, the county and district fair is the outcome of fairs held for the original purpose of sale and exchange of livestock.

Such auctions should be a success especially when like the one to be held on Saturday, August 21st, at the Patterson Fair, the Stanislaus County Holstein Mreeders' Association will offer the cream of their herds—not he culls, but producing stuff that is show stock as well. It is thought by many, and it is to a great extent true that animals cannot be both show and utility stock, but in dairy animals some of the greatest producers are almost perfect specimens of the breed.

Several other fairs and livestock shows feature sales of purebred animals. Among them are the San Fernando Valley Fair and Market, Los Angeles Livestock Show and others.

Dairymen on the Durham State Land Settlement have extended co-operation to veterinary service. Each owner of stock pays a stated sum, according to the number of animals he has, into a salary pool. The Colony veterinarian, who is now Dr. Bonnikson, works for the colony on a salary and any dairyman is entitled to his services as needed. The doctor says the plan is working well.

"A-1 Duroc-Jersey Ranch"

(Written for Pacific Rural Press.)

That is the way the sign reads leading to the swine ranch in the making where the red hog reigns supreme. John P. Walker, the owner, is a young man and as soon as he was out of Uncle Sam's service he selected a location a short distance east of Visalia on the highway leading to Exeter and still off of it—close enough to be convenient to the public interested in hogs, but not close enough to be annoyed by the idle curious.

So much for the location. He has good hogs, too. Not as many as some of the older breeders, but a most excellent foundation. The Defender, Pathfinder and Creator strains are found in his brood sows.

One of his purchases was Orion Crimson Lady at the Diamond Bar sale last winter. This sow was bred to Ace of Pathfinders. Out of the resulting litter there are several pigs that look exceptionally good. They were farrowed on March 2d and one of the boars at 4 months weighed 145 pounds, measured 42 inches long and 26½ inches in height. More than that, he is so smooth and right in every way that he looks a sure enough winner anywhere.

Mr. Walker has high ideals. He wants 100 good brood sows, and his buildings and equipment so arranged that 3 men can always care for them in the best manner. A start has been made in the arrangement of his hog-house, as all feeding and handling of doors and gates can be done from a central alley. The water is furnished by an automatic pressure system and tank that is both much cheaper and better than the ordinary tank and tower. Certainly this is a start in the right direction all along the line.

LIVESTOCK AT THE STATE FAIR.

Stockmen will be interested to know that entries this year in the live stock department of the State Fair are way beyond anything ever before shown, both as to quality and quantity. Over fifteen hundred head have been entered to date and the prospects are that the list will exceed two thousand before entries close. The fair show may well be called the "cream of the livestock" of the Pacific Coast.

Among those entered of especial interest to breeders is the young Hereford bull, Herod's Standard 2nd, 425030, owned by J. H. Cazier & Sons Co., of Wells, Nevada. This animal has never been beaten on the coast and will be shown with a complete herd. Cazier & Sons will also show the noted bull, Beau Blanchard 76th, 685487, for which they paid $10,000 as a yearling calf. This fellow won second at the Royal as a senior calf, was third at Denver in a class of 23, and will be shown at the fair with two of his junior calves.

A PRIVATE HERD CATALOGUE.

Ormondale Ranch at Redwood City has published a very neat little booklet, giving a list, with pedigrees, of the purebred Shorthorns at this well-known breeding establishment, with cuts of the herd bulls, Golden Goods Jr. and Imp. Boquhan Guinea Stamp; also three noted females—Mayflower 4th, Sweetheart and Little Sweetheart 2d.

The 1919 Pacific Coast and Chicago International Grand Champion Shorthorn female, Little Sweetheart, was the result of the mating of the above-mentioned animals—Golden Goods Jr. and Sweetheart. T. S. Glide of Davis purchased this coming prize-winner at the Shorthorn consignment sale in April, 1918, while still undeveloped. She was a good individual, but Mr. Glide was the prophet who saw future championship timber, and it was at Hillcrest Stock Farm that Little Sweetheart was grown out and gotten into championship form.

Oregon cheese sells at a premium in eastern markets.

Live Stock Insurance

The fall fair and exhibition season is at hand.

THE HARTFORD LIVE STOCK INSURANCE COMPANY

will insure your show stock (horses, mules, jacks, cattle, registered milch goats, and registered swine) against death from any cause, while at home or on the road, including the hazards of transportation. Policies broad and liberal; rates reasonable—yet adequate to insure prompt settlement of claims. Before shipping see the Hartford Agent in your town, or address

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SELECT FALL and YEARLING BRED GILTS

In service to ORION'S KING GANO, the boar with a coast-wide reputation and ROYAL I AM, one of the very best grandsons of GREAT WONDER I AM. The kind that feed right, grow fast and show best. Satisfaction sure.

GRAHAM & HENSHAW (Successors to Donald H. Graham.) Lancaster, California

HAVE YOU SEEN
THE DUROC PROSPECT?

HERD SIRE CHOICE WONDER III { Mahaska Wonder { Great Wonder, Grand Lady 20th; Grand Lady 72nd { Grand Model, Rose

Littermate (gilt) topped Ed Kern's Last Sale at $5600

Write for yours from the most select herd in California.

V. F. DOLCINI, JUNE ACRES STOCK FARM, DAVIS, CALIF.

GUASTI BERKSHIRES

Weaned pigs, both sexes, from sows that farrow large litters and raise them. Priced reasonable—they are money-makers.

BIG PUBLIC SALE OF BERKSHIRE SOWS, AUGUST 14th

ITALIAN VINEYARD COMPANY

ALEX M WILSON, Supt. Guasti, Calif.

CLARK, HUNTER & CLARK

Livestock Auctioneers

915 I STREET, MODESTO, CALIF.

Registered Hog Sales a Specialty

DIAMOND BAR DUROCS Double Your Dollars

Ace of Pathfinders

This great boar headed the World's Grand Champion Duroc herd at the 1919 National Swine Show; also the first prize get of sire herd. All animals in both herds are owned by us.

He was Grand Champion at the Los Angeles Livestock Show and stood second to the world's grand champion at the National.

He is by Pathfinder, out of Hiawatha, by Crimson Prince, and, besides his show ring record, he is considered one of the greatest sires of the breed.

BUY THESE BREED IMPROVERS

Now that we have decided not to hold a summer sale, we are ready to offer at private sale the greatest array of Duroc breeding and individuality ever put before California buyers. We have culled closer than ever this season, and every animal not fully up to the high Diamond Bar standard has been sent to the fattening pen. And those that remain—say, man, they are real ones!

No matter whether you want a foundation herd, new blood for an established herd, or simply a boar to breed up a grade herd, we can satisfy you from the world's largest Duroc herd. While quality is high, our prices are reasonable, and every animal is sold under a guarantee of complete satisfaction.

CALL OR WRITE

DIAMOND BAR RANCH

FRED LEWIS, OWNER AND MANAGER — R. K. WALKER, Hog. Dept.

SPADRA, Los Angeles County, CALIFORNIA

THE MOST PROFITABLE BROOD ANIMAL ON THE FARM

THE OLD RED SOW

She Is No Slacker, but Does Her Bit and Guarantees Returns on the Investment.

SHE IS ALL THIS BECAUSE

The Duroc sow reproduces more rapidly.
The Duroc sow is a good mother.
The Duroc sow is a wonder grazer.
The Duroc sow is a prepotent breeder.
The Duroc sow is an easy feeder.
The Duroc sow is the most popular.

SHE FEEDS THE WORLD, PAYS DEBTS AND MAKES PROSPERITY.

For information relative to DUROC-JERSEY HOGS, write to J. P. WALKER, Secretary-Treasurer

California Duroc-Jersey Breeders' Ass'n

VISALIA, CALIFORNIA

Duroc-Jersey Hogs for Sale

BOARS AND GILTS
BRED SOWS
SOWS WITH LITTERS

DIABLO STOCK FARM, E. F. PETERSEN, Supt., Danville, Cal. G. W. EMMONS, Owner, Oakland.

They are the large type and the best blood strains to be had anywhere.

HERD BOARS AND SOME OF THE SOWS

Lucy Orion's Model
California's Defender
Diablo Orion Model
Defender Colonel 70th
Lucy Orion's Mayflower
Great Wonder I Am Gano
Pathfinder's Queen
Prize of Tulare Belle
Twin Oaks Attraction
Lady Defendress 70th
and 50 others

WEANLINGS, $15.00 EACH AT RANCH.—A large number always on hand to choose from. Crates, $2.50 each, refunded when returned prepaid in good condition.

MAIL ORDERS SOLICITED. SATISFACTION OR MONEY BACK.

—AT THE—

PATTERSON HOLSTEIN SALE

AUGUST 21st

Will be sold 6 head from my herd, including the Great Cow.

IRENE BEAUTY

A five-year-old daughter of Johanna King Prilly Segis 2d, due to calve about sale time.

Also 2 of her daughters.

A 22.95 lb. daughter of Alma Goldstone Sir Alcartra;

An 11-months-old heifer and a 5-months-old bull calf, both by a son of Colantha Sir Pontiac Aaggie.

Come and look them over before the sale.

E. PETERPOSTIN HUGHSON, CALIF

LIVE OAK STOCK FARM

SHROPSHIRES
RAMBOUILLETS
and
AMERICAN MERINO
SHEEP

We have for sale this season 400 head rams, yearlings and 2-year-olds. All purebred. Will sell singly or in carload lots.

Also 15 Head Purebred Red Polled Yearling Bulls

For further particulars apply

F. A. MECHAM ESTATE

PETALUMA, CAL.

BULLARD BROS., Woodland, Cal.

BREEDERS OF

RAMBOUILLET SHEEP

Have for immediate sale

50 Registered Yearling Ewes
15 Non-Registered Yearling Ewes

WRITE FOR PRICES AND PARTICULARS

HILLCREST STOCK FARM

Shorthorn Cattle

Shropshire and Merino Sheep

RAMS AND BULLS FOR SALE

Single or in Carload Lots

T. S. GLIDE, Prop. Davis, California

ROSEDALE FARMS
EUGENE, CALIF.
Offers for sale
20 Registered Yearling Hampshire Rams, all sired by imported rams.
Also
10 Purebred Rambouillet Yearling Rams.
D. E. KELLIHER, Owner

The Finnell Stock Farms Company of Galt recently purchased the Kiesel herd of registered Herefords numbering 180 head, and now have these cattle at their farm. They will retain 35 females as a breeding herd and dispose of the rest at a public sale, the date to be announced later.

Livestock and Dairy Notes

The Dairy.

R. L. Holmes of Modesto will have sixteen head of his Holsteins at the State Fair.

One of the large dairies in Kings county near Corcoran will sell 500 head of dairy stock and go out of the milk production business. The land will be used for cotton raising.

Floretta Clay, a Milking Shorthorn cow owned by Thos. Harrison of Santa Rosa, is milking 70 pounds daily in the third week after freshening. She is going on official test.

Cows to the number of 107 attained a place on the roll of honor in the Stanislaus County Cow-Testing Association, producing over 45 lbs. of fat each during the month of June.

New England's largest dairy farm, where 750 cows are milked, is going out of business, owing to labor troubles and the imposition of the "daylight saving' 'ordinance in that locality.

The superintendent of the Durham State Land Settlement says the Colony will have some 200 tons surplus alfalfa, which they would like to sell direct to dairymen at a reasonable price.

H. E. Cornwell of Modesto had the cow producing the largest amount of butterfat in Stanislaus County Cow-Testing Association. She averaged 69.9 pounds milk daily, testing 5.6 per cent, with a total of 117.3 lbs. fat for the month.

Vive La France, the great Jersey cow owned by Pickard Bros. of Marion, Oregon, has exceeded her former record and has produced 1,040 lbs. of butterfat in one year. She leads all breeds for four years' continuous butterfat production.

Belle Faskie De Kol Witkop, a Holstein cow owned by E. E. Freeman of Modesto, won $142.50 in prizes offered by the Holstein-Friesian Association of America. This is the largest amount won by any one cow in this association last year, and places her at the head of the list in this respect.

Freeman & Edwards of Modesto have sold to W. A. Walker of Ripon a son of Vina Pietertje Hengerveld De Kol 2d, who has a record of over 32 lbs. butter and 844 lbs. milk in 7 days, 126 lbs. butter and 3,400 lbs. milk in 30 days and has to her credit 818.62 lbs. butter and 21,581.8 lbs. milk for the first 231 days of a yearly semi-official record. She is making 3.25 lbs. butter daily 240 days after freshening. The sire of the bull Mr. Walker bought is Segis Pontiac De Kol Dutch, whose 3 nearest dams are 1,000-pound cows.

Swine and Swinemen.

Fred Gatewood had the misfortune to lose his boar, Fresno Boy, recently.

Market hogs at Modesto during the first week in August sold for $16.10 top, with 176 hogs weighing 33,130 lbs., bringing $5,122.68.

The last week in July showed good results in the market hog auctions of the Farm Bureau. The top was $16.85 and the bulk from $14.90 to $16.30.

Carruthers Farm, Live Oak, has recently sold four bred Berkshire sows to Rose & Stafford of Lassen county, and a car of Shorthorn bulls to the Newhall Land and Farming Company of Santa Maria.

Sam McKelvie, the veteran Poland-China breeder of Fairfield, Clay county, Nebraska, was a recent visitor at this office. He reports the purebred swine business in good shape in his home State. Mr. McKelvie has been breeding Polands almost half a century.

Poland-China breeders should not forget the Shinn-Elliott-McCarty sale of September 27th at Tulare. This will be a combination sale of Big-Type Polands of very high quality. All these breeders will make exhibits at the State Fair, and those interested in good Polands of fashionable type and breeding will have a chance to

NEVADA HEREFORD RANCH

OVER 200 CHOICE BREEDING COWS IN HERD

Herd Bulls in Service:
HARRIS STANDARD 2nd (125030)
BEAU BLANCHARD 76TH (685187)
ABE MISCHIEF (976926?)
BOCALDO 21ST (720836)

A 100% HEALTHY HERD

Former Herd Bulls Used in Herd:
DEBONAIR 64TH (616840)
McCORD (279679)
PRECURSER (66671)

We have raised cattle thirty years, and bred registered Herefords sixteen years. We have never had a single animal rejected by the general health or tuberculosis test. Last June we applied for the federal accredited herd list and our entire registered herd, of 327 head, passed the Federal test without a reactor. Statistics show that Herefords are practically free from tuberculosis and our record proves our herd equal to any.

A RICHLY BRED HERD

We have studied the type and blood lines that have produced the most satisfactory results; we have endeavored to establish a herd of good individual animals; to select our breeding stock from the best producing families in the Hereford breed; to keep in the herd only animals that are good, regular producers.

WILL SELL 55 CHOICE HEREFORDS AT PUBLIC AUCTION NOVEMBER 5

FRIDAY, NOVEMBER 5, at Fair Grounds, Sacramento, we will sell at public auction 55 head (50 cows and heifers, and 5 bulls) of our choicest breeding Herefords. We will offer 28 splendid two-year-old heifers, most of them sired by our herd bull, HARRIS STANDARD 2ND, and safe in calf to our younger herd bulls,—over half bred to our $10,000 BEAU BLANCHARD 76TH, eight young cows with calves at foot and rebred, ten select yearling heifers and four bulls.

Watch this space for further particulars regarding our breeding herd and cattle to be sold. Study the pedigrees of our herd bulls. We believe you will like them.

We also have a nice lot of cows and heifers, for sale here at the ranch and forty good range or ranch bulls.

CORRESPONDENCE AND INSPECTION INVITED.

JNO. H. CAZIER & SONS CO. (Box D) WELLS, NEVADA

OTIS CORDELL, Herdsman.

see the kind of hogs that will be offered at their sale at this fair.

Graham & Henshaw, breeders of Duroc swine at Lancaster in the Antelope Valley, have just sold a show boar to the Weld Ranch of the same place. He is sired by Pathfinder's Likeness, out of an especially fine Colonel sow, which Mr. Graham brought out from the East last year. A brother to this boar went to D. W. Sexton of Inyokern, and this is said to be the finest Duroc ever taken into Kern county. A very fine Sensation boar of last fall's farrow was sold to Dr. E. Avery Newton, owner of Arenal Ranch, Lankershim, for which the doctor says he "would not take $2,500.

Beef Cattle.

According to the Sacramento Bee, auction sales of market cattle will be held in Big Meadows, Plumas county, September 1st, and in Cottonwood September 12th.

Five Milking Shorthorn bulls were sold by Thos. Harrison of Santa Rosa Stock Farm, Santa Rosa, to the Hammond Lumber Co. of Humboldt county, for use in their range herd.

Public sales of purebred cattle are looming up for the fall months in northern California. The first is that of Wm. Pierce of Suisun, who will disperse his herd of registered Shorthorns on September 30th. Then, beginning on November 4th the breeders of registered Hereford cattle of the Pacific Coast will stage a three-day sale, at which 150 topnotch "Whitefaces" will be offered. The first day will be a consignment sale with offerings by the various breeders. The second day Jno. H. Cazier & Sons Co., Wells, Nevada, will sell 55 head. The third day, H. M. Barngrover of Santa Clara will have his innings and offer 45 head. The Hereford sales will all be held at the State Fair Grounds at Sacramento and under the management of the California Breeders' Sales

Livestock Miscellaneous.

The Mossom-Boyd herd of Polled Hereford cattle was dispersed recently in central Saskatchewan, owing to the death of Mr. Boyd, who was one of the originators of this strain of hornless Herefords.

Further developments in the situation at Sutter City would indicate that the death of the twelve animals recently reported was due to anthrax, and that two more animals on another ranch had died from the same cause. Vaccination of stock in the infected locality has been ordered.

Among official premium lists of recent arrival at this office, we note the Los Angeles Lixestock Show, October 2-10; National Swine Show at Des Moines, Iowa, October 4-8; Dairy Cattle Congress and International Belgian Horse Show, Waterloo, Iowa, September 27 to October 3.

Publicity Director Robson writes that the prospects for a great livestock show are of the very best. Herds from as far east as Indiana are on the list. Santa Anita Rancho will show their $41,000 bull with 33 others; and the $10,000 Duroc sow, Queen of the Pathfinders, is among the entries by the Diamond Bar Ranch.

LIVESTOCK DIRECTORY.

Rate 3½ cents per word each issue.

SWINE.

Duroc-Jerseys.

DUROC-JERSEY SWINE

JUMBO SENSATION
Our new Herd Boar is one of the largest boars in the world for his age. We have some real buys in purebreds.
WHITLEY
TU-TOCK-A-NU-LA- RANCH
Ventura Boulevard and Hazeltine Ave.
Mrs. R. E. Whitley, Mgr.
Phone 160-J Van Nuys, Calif.

FIFTY DUROC-JERSEYS — Mostly bred sows and gilts. Some small pigs. Three service boars and five March boar pigs, grandsons of Mary Jane Pathfinder, the five pigs sired by Lord's Orion Cherry King. One son of Orion Cherry Pathfinder, out of Lamb's Model Lady. Elmer Lamb, Ceres, Calif.

FOR SALE—About 150 Duroc-Jersey Hogs—from weanlings to full grown—sows, boars and barrows—part grade, part subject to registration. A fine bunch of pigs, some with unusually good pedigrees.. Address R. B. Swayne, 805 Royal Insurance Building, San Francisco.

DUROCS—BIG-TYPE—HIGHEST QUALITY—popular blood lines. Herd headed by Johnson's Defender, Jr, and Western Pathfinder. Bred sows and gilts and young boars for sale at moderate prices. Greenwood Farm, Witherow & Stafford, Live Oak, Cal.

FOR SALE—Big rangy April Duroc boar and sow pigs sired by the famous champion, King Orion Jr. Defender dam; weight better than 100 lbs. at 16 weeks. See them at the Napa County Fair August 19, 20 and 21st. Cecil Slack, Napa, Cal.

BIG-TYPE DUROCS—Herd headed by California Orion King. Am offering excellent young boars at right prices. Inquiries invited. Harvey M. Berglund, Dixon, Calif.

REGISTERED DUROCS — April farrow—one boar, Orion's Monarch, by Borge's Monarch and Orion's Lady; also gilts. Lowell Beaver, R. "C," Box 397, Fresno, Cal.

JACK LONDON RANCH, Glen Ellen.—Exceptionally good weanlings. Bred sows and gilts. One good yearling boar and one fall boar. Prices reasonable.

ROCSTEIN RANCH DUROCS headed by Lord's Orion Cherry King. Breeding stock for sale at all times. W M. Way & Son, Rt. 1, Box 320, Modesto.

BARGAINS in bred sows and gilts. Pathfinder and Great Wonder I Am blood. Derryfield Farm, Capital National Bank Building, Sacramento, Cal.

DUROC-JERSEYS — Fine big-type gilts, tried sows and boars. Eastern and California bred. H P. Slocum & Son, Willows, Calif.

WINSOR RANCH DUROCS—Young boars and some top gilts bred to WINSOR'S GIANT ORION—Morris C. Allen, Mgr., Bonita, Cal.

REGISTERED DUROCS—Choice gilts and weanlings, either sex. Breeding and satisfaction guaranteed. H. E. Boudier, Napa.

BIG-TYPE DUROCS — Gilts and boars of Winsor's Giant Orion breeding. Falfadale Farms, Perris, Calif

DECEMBER AND MARCH DUROC BOARS—Pathfinder breeding. Sterling Smith, Route 1, San Diego.

FOR THE BEST in Durocs, write June June Acres Stock Farm, Davis, Cal.

Poland-Chinas.

TOHOQUA POLAND-CHINAS — Big type. A good big tried sow to sell. Has farrowed two litters of ten pigs each. Bred for August farrow. Also a dandy young boar pig from the Grand Champion sow of Glenn Co. Fair. This stuff is good, fully guaranteed and priced to sell. Ferguson and McKaig, Orland, Cal.

ELDERSLEY AND SHADY BROOK Farms big-type Poland-Chinas that make money for the Feeder, the Farmer and the Breeder. Prices reasonable. J. H. Ware, Brown's Valley, Calif.

BRED GILTS for sale. A few choice ones bred for fall farrow, to a good son of F'Big Jones, the Iowa 1920 Grand Champion. N. Hauck, Alton, Humboldt Co., Cal.

J. F. McSWAIN, Breeder of Poland-China hogs. Herd headed by Big Model Fellow, Reserve grand champion 1919 State Fair. Young stock for sale. R. 3, Merced, Cal.

WAUKEEN HERD POLAND-CHINAS — Home of King's Big Bone Leader. A few service boars for sale. Les McCracken, Ripon.

REGISTERED POLAND-CHINAS — Large type, 3 to 4 months gilts cheap. Satisfaction guaranteed. J. E. Thomas, Gilroy, Cal.

LAKESIDE STOCK FARM—Large, smooth and big-boned Poland-Chinas. Geo. V. Beckman & Sons, Lodi, California.

REGISTERED POLAND-CHINA SWINE—Prize-winners. Finest stock in the State. Bassett Bros., Hanford, California.

BIG-TYPE POLAND-CHINAS—Good as the best. Always glad to show you. Houck & Lewis, Winton.

REG. BIG TYPE POLAND-CHINAS—Service boars and weanling pigs, J. H. Cook, R. 4, Chico.

LARGE TYPE POLAND-CHINAS — Winton Poland-China Farm, Winton, Cal.

POLAND-CHINAS—Strictly large type. J. F. Lehman, Lodi, Cal.

Berkshires.

BRED GILTS.

Sired by Mayfield Rookwood 2d, a Grand Champion Boar, out of 600-700 lb. sows, and actually bred to "ACHIEVER," our English

Blood Boar, the Sire that puts more bone and pork-making qualities into his pigs.

Priced reasonably and absolutely guaranteed.
Castleview Ranch, Santa Rosa, Calif.

The only herd of English Berkshires in the West. Bigger, better, stronger litters. More pounds of meat for less feed. Weanling pig, $35. Satisfaction guaranteed or money refunded at once. Sandercock Land Co., 703 Market St., S. F. In charge Natomas Land Sales.

ANCHORAGE FARM BERKSHIRES
Orland, Calif.
HERD BOARS—STAR LEADER, Junior and Reserve Grand Champion of the World. The Grand Champion carload of barrows, over all breeds, at the San Francisco Live Stock Show, was sired by a son of Star Leader, NATOMAS BARON DUKE, grand champion of California. For sale, bred gilts, open gilts, young boars and weanling pigs. Write for booklet, prices and list of sows.

GRAPE WILD FARMS—Berkshires—Guernseys. Big-type Berkshire Boars of serviceable age, sired by Big Leader—greatest son of Grand Leader 2nd. Panama-Pacific Grand Champion. A. B. Humphrey, Prop., Escalon.

QUALITY BERKSHIRES — Young stock, both sexes. Calac Orchards, Geo. P. Upham, Martinez.

BEST BERKSHIRE BOARS—Buy one and grow pigs that will mature quickly and make hogs that produce the largest percentage of salable meat. Pigs carry the blood of Ames Rival 70th, Ames Rival 118th, Ideal Royal Lee, Champion Masterpiece 8th, Escalon Majestic and Achiever. The dams are sows of excellent individuality. Females for sale also. Write for prices. Geo. A. Stangle, Lark Meadow Ranch, El Monte, Cal.

BERKSHIRES—We are compelled to reduce our herd, owing to green feed shortage. Write us today. R. J. Merrill & Son, Morgan Hill, Cal.

REAL GOOD BERKSHIRES — Cholera immune. Frank B. Anderson, Sacramento, Cal.

CARRUTHERS FARMS' BERKSHIRES — Cholera immune. Live Oak, California.

Chester Whites.

CHESTER WHITES — E. E. Fulton, Fair Oaks, Cal.

Hampshires.

PUREBRED HAMPSHIRES—3 of those, now 5 months old, sows and 1 boar—not related—yet for sale. Weanling pigs to be farrowed August 8, sired by HARVESTER, 57237, 3rd descendant from World's Champion boar, 1915. Rio Hondo Rancho, Compton, California.

DAIRY CATTLE.

Holsteins.

TOYON FARM ASSOCIATION
UNDER STATE AND FEDERAL SUPERVISION
SMALL FOUNDATION HERDS,
HEIFERS and BULLS
PERFECT IN HEALTH, RIGHT IN TYPE, PRODUCTION AND BREEDING
MILLS BLDG., SAN FRANCISCO
Farms at
BRENTWOOD and LOS ALTOS
350 HEALTHY HOLSTEINS

THE LEWIS COMPANY BAYWOOD HERD
Bulls from yearly record stock.
Health under State supervision.
Terms on purchases if desired.
Herd Sire: Ormsby Segis Marie Lad.
Martin Zgragen, Herdsman
Hollister, California
THE LEWIS COMPANY, Owners
The Lewis Building, San Jose

EIGHT EXCELLENTLY BRED Registered Holstein cows for sale. Tuberculin tested. Just what you want. Terms liberal. Fine bull out of 24-lb. dam and sired by Segis Pontiac De Kol Burke is bred to these females. This bull also for sale. S. J. Strauss, P. O. Box 62. Phone 217, or call at 1016 Eye St., Modesto, Cal.

YOUNG BULL by grandson of Tilly Alcartra, out of dam with good record. His half sister milking 68 lbs. per day as senior yearling. Also bull calves. H. M. Cross, Merced.

OAKDALE HOLSTEIN FARM, Pacheco, Contra Costa Co., J. M. Christen, Prop., Breeder of registered and high-grade Holstein cattle and purebred Hampshire swine.

TWENTY-THREE A-1 high-grade young Holsteins, milk cows, tuberculin tested, registered Holstein bulls. J. Darling, Rt. J, Box 348, Fresno.

REGISTERED HOLSTEIN-FRIESIANS — Both sexes choice stock; tuberculin tested. Sunnybrook Ranch, H. H. Sisson, Mgr., Willits, Cal.

THE VICTORY HERD—Registered Holstein cattle and Duroc Jersey swine. H. E. Spires, Hillcrest Farms, Caruthers, California.

PALO ALTO STOCK FARM, Palo Alto, breeders of registered Holsteins. Heifers and service bulls. Reasonable prices.

CREAMCUP HERD — Registered Holsteins. Pontiac bull calves. M. Holdridge, Rt. A, Box 437, San Jose.

REG. HOLSTEINS, both sexes. World's record backing. Kounias Reg. Stock Farms, Modesto, Cal.

REG. HOLSTEINS—A. W. Morris & Sons Corp., Importers and Breeders, Woodland, Cal.

F. H. STENZEL, SAN LORENZO—Breeder of Registered Holsteins. High test producers.

REGISTERED HOLSTEINS — Best blood lines of the breed. R. L. Holmes, Modesto, Cal.

CHOICE HOLSTEIN bulls for sale. No females. Millbrae Dairy, Millbrae, California.

GOTSHALL & MAGRUDER — Breeders of registered Holstein-Friesians. Ripon, Calif.

EL DORADO HERD OF HOLSTEINS — Alex. Whaley, Tulare, California.

Jerseys.

SERVICE JERSEY BULL, bull calves. Financial King blood, Chester White boars, prize winners. Best blood, type, production. N. H. Locke Co., Lockeford, Cal.

SUNSHINE FARM JERSEYS—No females for sale. Bulls from high-testing cows for sale. E. E. Greenough, Merced.

JACK LONDON RANCH, Glen Ellen—Two fine Jersey bulls, one ready for service.

Milking Shorthorns.

REGISTERED MILK AND BEEF SHORThorns, bulls and heifers for sale; catalogue free. Thomas Harrison, Santa Rosa Stock Farm, Santa Rosa, California.

INNISFAIL HERD MILKING SHORThorns—Young stock for sale; both sexes. Owned by Alexander & Kellogg. Leased by J. D. Rowe & Son, Davis, Cal.

BREEDERS OF REGISTERED SHORThorns—Milk strain; choice young stock for sale. John Lynch Ranch, Box 321, Petaluma.

Ayrshires.

ELKHORN FARM AYRSHIRES — Choice young bulls at reasonable prices. J. H. Meyer, 440 Montgomery St., San Francisco, Calif.

STEYBRAE AYRSHIRES — Registered; all ages. E. B. McFarland, 414 Claus Spreckels Building, San Francisco, Calif.

NORABEL FARM AYRSHIRES—Le Baron Estate Co., Valley Ford, Cal.

BEEF CATTLE.

SHORTHORNS—The foremost beef breed—Have a limited number of stock for sale, both sexes. If you wish to start a small herd I can probably supply your needs. T. T. Miller, Hollister, Cal.

ALAMO HERD REGISTERED HEREFORDS (founded by Governor Sparks). Herd and range bulls. Reasonable prices. W D. Duke, Gazelle, Siskiyou county, California.

RANCHO SAN JULIAN SHORTHORNS—Purebred range bulls, unregistered, for sale. Estate Thos. B. Dibblee, Santa Barbara, or Lompoc, Calif., John Troup, Supt.

REG. SHORTHORNS — Good dual-purpose animals raised without pampering. Young stock for sale. Prices reasonable. W. E. Rucker, Willitts, Cal.

HEREFORDS—Sierra Vista Herd, Minturn, California. Over 100 registered animals. Fairfax and Repeater bulls head the herd. On highway.

THE NEVADA HEREFORD RANCH—Jno. H. Cazier & Son Co., Prop., Wells, Nevada. Reg. Hereford cattle. Breeding stock for sale.

JACK LONDON RANCH, Glen Ellen—Shorthorn bull ready for service, and some good bull calves.

ABERDEEN-ANGUS cattle of quality and breeding. Lilac Ranch, Escondido, Cal.

SIMON NEWMAN CO., breeders of Registered Herefords, Newman, California.

HEREFORDS — Mission Hereford Farm, J. A. Bunting, Prop., Mission, San Jose, Cal.

REGISTERED HEREFORDS—H. H. Gable, Diamond G Ranch, Esparto, California.

GEORGE CALLAHAN—Breeders of registered Herefords. Milton, California.

GEORGE WATTERSON — Breeder Registered Herefords. Bishop, California.

REGISTERED SHORTHORNS — Fair Oaks Ranch, Willits, Calif.

SHORTHORNS — Carruthers Farm. Live Oak, California.

SHEEP AND GOATS.

FOR SALE—Rambouillet rams and ewes—purebred; the very highest grade of large smooth body; heavy shearers; the wool and mutton type. Immediate delivery of individual or carload lots. You can find none better or of higher grade. Address Glenn, Cal. Location, 8 miles south Hamilton City, 1 mile west Ordbend. Windell Orchards Co.

TOGGENBURG DAIRY GOATS — Some beautiful, well-marked yearlings bred to registered buck, $25 and upward, according to quality. If you have babies you can't afford not to feed them goat's milk. Glendale Goatery, 7256 Chabot Road, Oakland, Cal.

F. A. MECHAM ESTATE, Petaluma, Cal.—Breeders and importers of Shropshire, Rambouillets and American Merinos, both sexes. Also Red Polled cattle. Take electric car at Petaluma or Santa Rosa for Live Oak Ranch.

FOR SALE—155 head of sheep, nearly all white faces.. About 70 spring lambs, rest ewes nearly all young. All in good shape and will sell cheap. Box 24, McFarland, Cal.

WRITE ME for early Rambouillet ram lambs, ready for light use, by September 1. Also a few yearlings. Carl Lindheimer, Woodland, Cal.

HARRY L. HUSTON, Winters, Calif.—breeder and importer of Shropshire sheep. Stud and range rams. Prices on application.

J. B. BLOOM, Dixon, Calif.—Twenty-five years breeder of purebred Shropshire sheep. Rams for sale. Single or carload lots.

DORSETS AND ROMNEYS — Dorset ram lambs for sale. John E. Marble, South Pasadena, California.

SNAP FOR SALE.—1,000 head ewes. Will sell in lots to suit. Chas. G. Owens, Livermore, Cal.

H. G. BROWN, Dixon.—120 Choice Rambouillet yearling rams for sale. Price reasonable.

HARVEY S. VAN VLEAR, Lodi, Cal.—Breeder and importer of Registered Hampshire sheep.

CALLA GROVE FARM, MANTECA, CAL.—Breeders and importers of Hampshire sheep.

KAUPKE BROS., WOODLAND, CALIF.—Breeders and importers of Hampshire sheep.

FOR SALE—600 two-year-old Merino ewes. Swall & Wilson, Box 742, Bishop, Cal.

CHAS. KIMBLE—Breeder and importer of Rambouillets. Hanford, California.

BULLARD BROS., Woodland, Calif.—Breeders and importers of Rambouillet sheep.

MILK GOATS — Selling out cheap. Cash Nursery, Sebastopol.

MISCELLANEOUS.

BUTTE CITY RANCH
SHORTHORN CATTLE, SHROPSHIRE Sheep, Berkshire Hogs, Shetland Ponies, Bronze Turkeys, White Plymouth Rocks. Stock for sale at all times. W. P. Dwyer and W. S. Guilford, Box P, Butte City, Glenn county, California.

FOR SALE—Few graded Guernsey and Jerseys, fresh and coming registered Guernsey bull, 3 years. Address W. J. Rhoads, 15 N. Cal. St., Stockton, Calif.

WANTED IMMEDIATELY—15 or 20 fresh cows, T. B. tested, or subject to test. Address, Meadowlark Dairy, Inc., Pleasanton, Cal.

50 HEAD GOOD DAIRY COWS for sale. For further information, write, Box 573, Oakdale, Cal.

CHOICE STOCK EWES AND BUCKS. Also herding Collie dogs. John G. Mee, St. Helena, Calif.

Poultry for Profit

USE CALIFORNIA LEGHORNS.

To the Editor: Kindly tell me if you would advise keeping White Leghorn roosters to breed from next year that have lop combs, large feet and shanks, and are light in color, body short and large? In February last I sent to an advertiser in Missouri and received 15 eggs; got five roosters and five pullets They look nothing like the picture of the White Leghorn stock sent to me. At $3.00 per setting I expected better stock. One never feathered until he was about 2 months old, like some of the larger breed.—Mrs. C. A., Folsom.

The above description causes one to think that the eggs received may have been from stock that are not purebred Leghorns, but unless we could have a look at the birds it would be unfair to say that they are cross-breds. Under any condition it is not advisable for a poultry keeper to breed from fowls that he considers inferior. It is a mistake to send to other States for Leghorn breeding stock or eggs. Our best California breeders have the most excellent Leghorns in the world, either for show or utility, as well as birds possessing both qualifications in a marked degree. Many breeders in foreign countries obtain their breeding Leghorns from this State, and thousands of California-bred Leghorns are shipped to breeders in other parts of the United States, who intend to place the best specimens in exhibitions or egg-laying contests.

A CASE OF INDIGESTION.

To the Editor: Please give me some information as to treatment of a disease in my chickens, as I describe it. About nine months ago my first hen showed signs of diarrhoea, which killed her after about three days. About three months later a second took sick with the same disease. This kept up at intervals until two weeks ago. Since then I have lost three. The chickens show signs of moping, comb and bill lose their good color, becoming hot and dry. Finally weakness and death ensue. The droppings are watery and mucous, some streaked with yellow. So far it has not affected the older chickens of the Rhode Island type. The roosters as well as the hens become diseased. I have cured some by giving a few drops of castor oil with a little red pepper. The chickens are given fresh water every day, and are on Sure-lay, wheat and table scraps. The ground is a gritty soil. Can you prescribe treatment?—W. D. H., Clovis, Cal.

We think this trouble is the result of simple indigestion, but we cannot decide what may be the cause. We suggest that something fed among the table scraps may be responsible. If the fowls do not receive a constant supply of proper hard grit, crushed shells, and charcoal, provide them at once. Once a month give the entire flock a dose of Epsom salts. Dissolve the salts in water at the rate of about one-half a teaspoonful for each mature fowl and use this solution to mix in a wet mash.

FORMULA FOR POULTRY TONIC.

To the Editor: Same time ago you printed a receipt for a tonic for chickens It was very good. I gave it to my chickens while they were moulting and the hens laid all the year. I have misplaced the receipt. Would it be asking too much of you to send it to me?—Mrs. C. E. G., Anaheim.

Perhaps our correspondent refers to Improved Douglas Mixture, which is made as follows: Mix two ounces sulphate of iron and one-half ounce sulphuric acid dilute, and stir with a stick. Add hot water until dissolved. When cold add enough cold water to make one gallon of mixture. Keep in glass or earthenware container. One teaspoonful of this mixture to one quart of drinking water makes a strong tonic; half that amount is sufficient when used constantly for a week or longer; and one-quarter the amount for young chickens.

RAISING DUCKS FOR BREEDING.

Breeding ducks, if not kept for the production of market eggs, should have a grass range, if possible, after the hatching season is over and be fed sparingly on a mash of 1 part, by weight, corn meal, 2 parts bran, 1 part low-grade wheat flour, 1 part green feed, 8 per cent beef scrap, and 3 per cent grit, given once or twice daily, with one feed of mixed grains; or the mash may be made of 3 parts, by measure, corn meal, 4 parts bran, 2 parts low-grade wheat flour, ¾ beef scrap, and 2 parts of green feed, with a small amount of grit and shell or mineral matter.

Feed Pekin ducks for eggs, beginning about December 1, on 1 pound of corn meal, 1 pound of low-grade flour or middlings, 1 pound of bran, 15 per cent of beef scrap, 15 per cent of vegetables or green feed, and some grit, feeding this mash twice daily, in the morning and at night; also giving 1 quart of mixed corn and wheat to every 30 ducks at noon when they are laying heavily. These laying rations should be fed throughout the year to Indian Runners or to any breed of ducks kept principally for the production of market eggs, poultry specialists of the United States Department of Agriculture say. If the Indian Runner ducks are not laying, they should be fed sparingly. All rations are by weight unless otherwise stated. Thirty laying ducks (Pekins) will eat about 10 quarts of moist mash at each meal.

EGG-LAYING CONTEST AT THE STATE FAIR.

A feature of the Santa Cruz County exhibit at the State Fair will be an egg-laying contest exactly as conducted by the Farm Bureau at Santa Cruz. This institution has become more than of State-wide interest and bids fair to soon become a national contest. The egg-laying contests bear the same relation to the poultry world that cow-testing associations do to the dairy world. By a system of daily rations, tests and the keeping of daily records, the "boarders," or non-producing hens, are eliminated from the flocks.

At the State Fair exhibit the practical working of these contests will be demonstrated and will be explained by Max Kortum, manager of the California Farm Bureau Egg Laying contest at Santa Cruz. Baby chicks will add life and color to the exhibit and the professional poultry raiser and city man with just a few "biddies" in his back-yard ranch will find much of interest and profit in the exhibition. Farm Advisor Henry Washburn of Santa Cruz county and Professor J. E. Dougherty, chief of the poultry division of the U. C. Farm School at Davis, visited the fair grounds Tuesday and made arrangements for the details of the exhibit.

GOOD STOCK A NECESSITY.

The first fundamental of successful farm poultry keeping is good stock. of course, it is well known that farmers may at times get fairly good results from ordinary stock, but at the same time it must be remembered that with the same care and attention better results will be obtained from good stock. By good stock is not necessarily meant stock which has been bred for exhibition purposes. It means standardbred stock, which by virtue of its pure breeding has been systematically developed and which is better fitted therefore to give the results expected of it and to yield a more uniform and more desirable product.

On the average farm the poultry flock is expected to furnish eggs and poultry for the farmer's table as well as to produce a surplus for sale. For that reason the so-called general-purpose breeds, such as the Plymouth Rock, Wyandotte, and Rhode Island Red, which are good layers and at the same time make excellent carcasses for the table, are recommended by poultry specialists

Poultry Breeders' Directory

Rate 3½ cents per word each issue.

BARRED PLYMOUTH ROCKS —"Nothing Better in Poultry." Wonderful layers. Choice hens and pullets for sale; also fine cockerels that will improve your flock. Now booking orders for hatching eggs. I have made a specialty of Barred Rocks for over twenty-two years. That's why our birds win at all the leading shows. Catalog free. Chas. H. Vodden, Box 3, Los Gatos, Calif.

SANTA CRUZ CHICKS are in demand. Our hatchery will run full blast this fall, supplying Leghorns, Anconas, Minorcas, Rocks, Reds, and Orpingtons. We also offer W. L. Hyde's cockerels from Pen 1, with trapnest record 236-284 at $5.00. Write for folder with chick price list. B. W. Archibald, Soquel, Santa Cruz Co., Calif.

BABY CHIX—Order now for September delivery from our selected, bred-to-lay Hoganized White Leghorns, Barred Rocks, R. I. Reds. Maxwell Hatchery, Madera, Cal.

GOLDCROFT BUFF ORPINGTONS, Columbian Wyandottes and White Leghorns. Heavy laying strains. Breeders and young stock. Samuel Abrams, Box 13, Los Altos.

CHICKENS, DUCKS, GEESE, GUINEAS, Pea Fowl, Pigeons. Wm. A. French, 545 W. Park St., Stockton, California. Stamps.

ATKINSON'S PEERLESS ANCONAS lay more and eat less than other breeds. 50 big husky cockerels, $5 and up; 200 pullets, trios, and pens for sale. Hatching eggs. Catalogue free. J. W. Atkinson, Box B, 150 Willard St., San Jose, Cal.

WHITE LEGHORN BABY CHIX from heavy-laying Hoganized Stock. Safe arrival of full count, live, strong chix guaranteed. Price list and interesting literature on application. The Pioneer Hatchery, 408 Sixth St., Petaluma, Cal.

RAISE FALL CHICKS—We will have them every week. R. I. Reds, Barred Rocks, White Leghorns. Write for special circular. See why they pay. Stubbe Poultry Ranch and Hatchery, P. O. Box 67, Palo Alto.

BARRED ROCK, White Orpington, hatching eggs, now $1.75 and $3.50. Breeding Cocks, Cockerels, Hens, Pens. R. P. Lutzi, 1217 20th Ave., S. F. Yards at Los Altos

JUBILEE INDOOR BROODERS—One four-section, $18.00; 2 two-section, $12.00 each Perfect condition; used one year. Samuel Abrams, Los Altos.

BUFF ORPINGTONS, BUFF DUCKS, BOURbon Red Turkeys, White Guineas. The Ferris Ranch, R. 2, 144 D. Pomona, Calif.

BABY CHICKS from selected S. C. White Leghorn hens. Write for prices. Tupman Poultry Farm, Box 7A, Ceres, Calif.

FOR SALE—S. C. W. Leghorn baby chix from selected mature hens. H. W. Fitting, Livermore, Calif.

TRAPNESTED WHITE LEGHORNS, White Orpingtons. Mabel Smith, Route 2, Hollister, Cal.

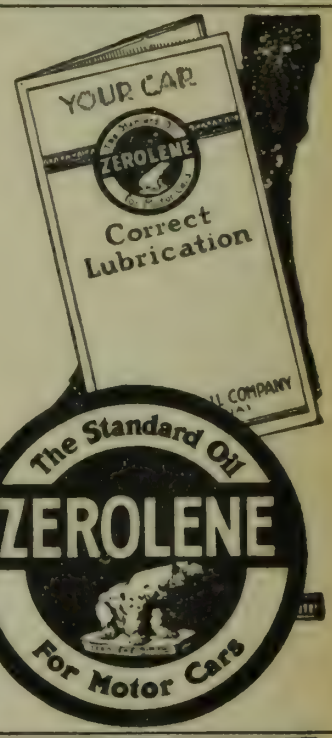
FOR SALE—Kresky Brooder Stove in good condition. H. W. Fitting, Livermore, Cal.

COULSON'S EGG FOOD
FOR GREATER EGG PRODUCTION
FULL PARTICULARS IN OUR FREE BOOK
"CHICKENS FROM SHELL TO MARKET"
Coulson Co.
PETALUMA, CAL.

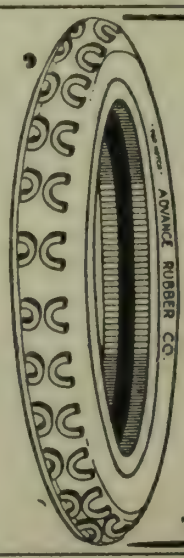
A chart for your car

Our Board of Lubrication Engineers has prepared a Zerolene Correct Lubrication Chart for your car. Get one at your dealer's or our nearest station. Use Zerolene for the Correct Lubrication of your automobile, truck or tractor.

STANDARD OIL COMPANY
(California)



A grade for each type of engine



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Phone 64847
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FEED FOR SWINE, STOCK AND POULTRY
ASK YOUR DEALER

Home Circle Department

THE HUNGRY WOLF.

We heard a knocking loud enough
To wake the whole community.
But mother said: "Don't be alarmed
It may be 'Opportunity.'"

We children ran to greet the guest,
But quick ran back once more.
"O Mother, dear," we cried in fear,
"The wolf is at the door!"

She fetched a gun, for she could meet
All troubles with impunity,
And where we only saw the wolf,
She still saw "Opportunity."

All honor to our Mother dear,
All blessing pour on her
Who quickly changed that hungry wolf
Into a summer Fur!

—Frances Lee Thompson

THE DOGS OF HIGHLAND PARK.

When we rented for the winter a house in Highland Park, we felt we had moved to a colony of dogs. Every house had one dog, some had two, others even three; and so important were the pets that they seemed the masters, the people but their attendants and satellites.

First we met Bobby, the French poodle, who lived across the street. We met,—I cannot say we became acquainted with him, for Bobby had an air of hauteur that discouraged advances. Twice a day he was taken out by the housekeeper for a walk, or, rather,—as Bobby was fat, old, and broad across the back,—we might better say for a waddle. Though he waddled, he waddled with dignity, always a little in advance of his attendant, making no sallies into driveways, and eyeing whomever he met, human or canine, with an air of supercilious reserve. His coat was always so well combed and spotlessly white that he looked as if he had just been taken from a shelf in a toy-shop. He was never allowed out-doors alone. When, after one of his airings, he was lifted across the threshold of his home with solicitous care by the housekeeper, we saw his august presence no more until again he walked in state.

With Peter, the Airedale, our relations were more intimate. He belonged to a young boy who became a friend of our children. Peter quickly learned to know where his master might be found, and made himself as at home in our house as his own. When occasionally his master was out of the village, Peter haunted our home, hunting him. He went from room to room with a puzzled air, whining and looking at us as if to say, "He isn't at my house; he isn't here; where is he?"

Peter knew a few tricks; but he did them under protest. He hadn't Bobby's hauteur; but he was a staid, self-respecting dog, who clearly thought it beneath him to amuse. He was friendly with his master's friends, but not a dog dare to thrust a nose into any inviting hand. Yet there was no surliness in Peter; he never ran from the porch to snap and growl at callers. No; he was intent on his own affairs, his own weighty thoughts.

'Awkins, who lived a block away, might have taken example from Peter. To growl, to bark, and to snap at the heels of passersby,—that he made his business. Children hesitated to pass the house, and even older people breathed more easily when they drew near 'Awkins' home and saw him nowhere in sight.

'Awkins was a Boston terrier, and his expression matched his disposition. Yet he had a brother, Mulvaney, —one infers that their mistress was fond of Kipling,—who was a lamb of gentleness. Mulvaney would walk among his mistress's guests at tea, lay his head on their knees, graciously accept pieces of cake, and be sweeter than a sugar dog. At such times 'Awkins' angry bark could be heard from the stable. At first I was not sure whether his mistress petted Mulvaney because he was amiable, or whether 'Awkins' temper might not have been spoiled by his mistress's evident partiality to his brother. I tried to make friends with the neglected one; but 'Awkins was neither grateful nor responsive, and I now incline to the belief that he was born cross. He was not treacherous, however. He openly avowed that mankind was his enemy. A block away he protested, "Don't come up my street; get out! I hate the sight of you, wow!" And we all meekly turned from Park Avenue to circle about Old Military Road.

Ivan, the Russian wolf-hound, was a picturesque feature of the landscape that winter, posing like a statue white on white snow. In the early morning and by moonlight his tall, thin form seemed but the shadow, the spirit, of a dog. But he was not as spiritual as he appeared. He had a deadly hatred of cats and the appetite of an ostrich. One evening he devoured a dinner-gown left for a few minutes on the bed; and, not satisfied with that, was found smacking his lips over the scarf that went with it!

King was a collie, affectionate as collies are, and the devoted playmate of two small girls. The hours that the children spent in school were the only hours that they were apart. He went with them to the schoolhouse door, and every day as the village clock struck twelve he started to meet them. They taught him to draw their sled, which he did very patiently, but to take his turn in riding he utterly refused. There was some secret ignominy attached to it in his dog's mind. How often have I seen them coaxing him to ride, one trying to hold him on while the other drew the sled; How pleading were his eyes at such times, how drooping his tail! If they did not respond to this mute appeal, he shook himself free from their detaining hands and kept his distance for an hour.

Occasionally the dog-team of Caribou Bill came into Highland Park. Some happy child was to take a ride, and all the neighborhood collected to see. The eight dogs with rough coats and curling tails, the odd sled, the Indian with the whip and the cry, "Mush-on!" made an Alaska out of our Adirondack village.—Juliette Golay.

HINTS FOR HOUSEWIVES.

When going on picnics in a machine where one eats by the roadside or in the car seat, individual paper drinking cups are most satisfactory as containers for salads. The salad may be packed in the individual paper cups and garnished attractively with a sprig of parsley. This makes the serving very easy and eliminates the carrying of dishes.

White shoes are so comfortable and popular, but they do grow very disreputable before the day passes. One woman has solved the problem of keeping them presentable by having a piece of magnesia at hand that can be rubbed over a grass stain or mud splash. This keeps the shoe from looking untidy until the entire shoe can be cleaned at night.

From the warm interior comes the helpful suggestion of having the porch floors waxed for the summer use. First, they must be thoroughly cleaned, then waxed and rubbed just like a hardwood floor. This method preserves the floor and after the porch is treated in this manner, it does not have to have water put on it during the entire season. Have the porch gone over each day with a mop.

In removing spinach from the kettle in which it has been cooked, use a skimmer instead of pouring off the water. In this way any sand that has not been removed in the numerous washings will drop to the bottom of the kettle.

If you have left over syrup from sweet pickled peaches or pears, try with apple sauce instead of sugar. It gives a very different flavor, which is enjoyable.

BREAST FEEDING FOR BABY.

In most cases, mother's milk is the best food for the baby. It is practically always safe and contains the proper elements of food in the right proportion for the growing child.

The baby will have the best chance of living, if he is breast-fed. Ten bottle-fed babies die to one that is fed at the breast. It is seldom that breast-fed babies have bowel trouble, which is so fatal to bottle-fed babies during hot weather.

The average healthy baby, until he is four months old, nurses every three hours. When he is six months old, nurse every four hours.

It is necessary to follow regular hours for nursing. If baby is fed every time he cries, his digestion soon will be upset. If he cries between feedings, give him plain, cooled boiled water. Babies are as likely to cry from overfeeding as from hunger. If the breast milk seems insufficient, do not give up nursing him, but after each feeding, give him what he wants of properly modified milk. Every breast feeding and every ounce of breast milk is just that much gained for your baby.

"This grafting of goat glands is cruel, and must be stopped," declared the anti-vivisection crank.

"Well," observed Senator Hardhead, "did you ever see any grafting done that didn't have a goat connected with it somewhere?"

Select a Piano as You Would Select a Tool

Unlike many pieces of furniture, a Piano is also a Tool. It is a tool as truly as is a mowing machine, a block and tackle, or a paint brush. It has a given task to do, and performs it as well or badly as its inherent materials and craftsmanship will permit.

Practical men detest "cheap" tools, even for temporary use. The tool with a casting that breaks or an edge that turns is never a source of satisfaction. How much more, then, is such a tool to be abhorred if it is expected to serve for a lifetime!

Approach your purchase of a piano with this question in mind: Is this instrument—this tool—going to render good service all the years of my life? Will its tone remain true? Its action pleasing? Will the children, as they grow up, love and revere it and feel proud of it? Will it keep its place as the very center of our home? Or will it be pushed into a corner and left silent and forgotten, like an old mowing machine that broke a casting—like a tool that failed?

An inexpensive piano need not be a "cheap" piano. We have pianos at all prices and will gladly arrange convenient payment terms. But in selling you a piano, it is our steadfast desire to sell you piano *satisfaction.*

Dealers in Steinway and Other Pianos, Pianola and Duo Art Pianos, Aeolian Player Pianos, Player Rolls, Etc.

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Fourteenth and Clay Streets, Oakland.
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Stores also at Vallejo, Portland, Seattle, Tacoma, Spokane.

300 Candle Power

Most Perfect Reading Lamp Known
Safe — Durable — Clean

USED by thousands and without question the finest lamp for home use ever invented. Makes and burns its own gas from common motor gasoline and **lights with ordinary matches.** No alcohol torch needed.

The **Coleman Quick-Lite**

Gives a brilliant white light of 300 candle power —20 oil lamps are not so powerful. No wick. No chimney. No daily or weekly cleaning necessary. Handsome design. Made of brass, heavily nickeled. Will last a lifetime.

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120 So. L. A. St.,
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Calif.

Write for Catalog 54

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ORANGE GROVE NEAR LAKE
Only $1500, Easy Terms;
Close to R.R. town, near city; 7 acres good soil; pretty bungalow, poultry house; view nearby lake; water from drilled wells; 100 orange and grapefruit trees, also guavas; packing house nearby; owner unable care for it. If taken now, only $1500; easy terms. Details page 72, Strout's New Catalogue Orange Groves and other Semi-tropical Farms. Copy free. STROUT FARM AGENCY, 503FA, Wright-Callender Bldg., Los Angeles, Cal.

TWO BLOCKS LAND on railroad where spur track may be used. 3 blocks from S. P. Depot, 3 from street car line and 3 from Santa Clara University. Two-story dwelling, 2 cottages, gas, hot and cold water, 3 large barns, some fruit. $15,000, if sold within a month. Owner, 1385 Grant St., Santa Clara.

FOR SALE—If you want a small forty or eighty acre improved alfalfa ranch, houses, barns and the best of everything, with good income, close to school, town, and railroad, located near Los Angeles, on very easy long-time terms, address, 605 Grosse Building, Los Angeles, Zeph Jones.

FOR SALE—12 H. P. International Engine, Friction clutch, kerosene burner, all bronze bearings, Webster magneto. Almost new; run very little; perfect condition. $350—a snap for some one. A. R. Dysart, R. F. D., No. 2, Merced, Cal.

FOR SALE—5 acres almonds, full bearing, with crop. Water right in Clark Colony Water Company and Greenfield Water Company fully paid up. Price $3,000 if sold at once. Address, F. J. Greer, Owner, Greenfield, Calif.

FOR SALE—40 acres—10-year-old orchard, 4 in apricots, 10 in almonds and balance in summer fallow. Three-fourths mile from highway on the Turlock Main Canal. For particulars, inquire, G. W. Bowles, Hickman, Cal.

FOR SALE—11½ acres right at Sunol, well improved and equipped for 1,000 chickens, 4 acres level; fine pumping plant. $6,500; terms. Swigart, 1715 Telegraph Ave., Oakland, Cal.

FOR SALE OR TRADE for mountain ranch, fully equipped income twenty-acre on highway near market. No commission. What have you? Box 35, Livingston, Cal.

FOR SALE—14 4-5 acres irrigated farm with farm implements, team, heifer, 300 chickens and hay. Jacob Wilbois, Route A, Oakdale, Cal.

MISCELLANEOUS.

WANTED—A number of experienced men to cut grain with old-fashioned cradles. Will pay 75c per hour. Six weeks or 2 months' steady work. Apply C. S. Jurges, Willows.

BEING UNABLE TO CARRY out contemplated plans I will not have use for the Bates Steel Mule Tractor I purchased. It is absolutely new, having never been used. A very liberal discount from the purchase price will be given for immediate sale. Address, 319 13th St., Oakland.

CORN HARVESTER — One-man, one-horse, one-row, self-gathering. Equal to a corn binder. Sold direct to farmers for twenty-three years. Only $28, with fodder binder. Free catalog showing pictures of harvester. Process Corn Harvester Co., Salina, Kan.

REMANUFACTURED PIPE.
All sizes standard pipe and wrought iron screw casing. All kinds of fittings. Guaranteed good as new. Write for prices. Weisbaum Pipe Works, 160 Eleventh street, San Francisco.

WANTED TO RENT—My lease expired, experienced Japanese orchardist with agricultural college training seeks new bearing orchard or vineyard. Will consider partnership. Best of references. Box X, Pacific Rural Press.

WANTED—Carload of wheat straw, and also carload of mixed grain—wheat, milo mire, Egyptian corn, white, etc. Must be reasonable in price. Write all particulars to Hohn & Smaus, Los Gatos, Cal.

SINCE MAY 1ST Ranere Everbearing Raspberries have brought $30 to $45 per chest. Plants for fall delivery—$75 per 1000; 10c each. F. Everton, R. D. A., Box 305, Mountain View, Cal.

RELIABBLE CABBAGE SEEDS—I grow them. You want them. Let's get together. Write for special offer on what you need. Isaac F. Tillinghast, 32 Podel St., Santa Rosa, Calif.

ALL SIZES OF PIPE and screw casing, both new and second-hand, dipped and undipped. Guaranteed. Prices right. Shecter Pipe Works, 304 Howard St., San Francisco.

FOR SALE—Two Monitor Bean Separators, size 5-E; condition as good as new. Call or write, California Almond Growers' Exchange, 18th C Street, Sacramento, Calif.

WANTED — Salesman capable of earning $250 to $350 a month selling groceies wholesale to farmers (commission). Read "Jake's New Job," page

FOR SALE — One sure-pop Reed Almond Huller. The smallest size, practically new. Cheap for cash. Address C. E. Deming, Box 12, Vallejo, Cal.

WANTED—Married dairyman, expert feeder and calf-raiser. Experienced in A. R. O. and fitting for shows. Sunnybrook Ranch, Willits, Cal.

CROLEY'S BALANCED HOG FEED—The cheapest feed to fatten hogs. Write Geo. H. Croley, Townsend St., San Francisco, Calif.

THE MARKET REPORTS

Compiled from Independent Sources.

SAN FRANCISCO

San Francisco, August 11, 1920.

WHEAT.

A duller market was experienced last week than has been felt for some time. Only two samples were on the tables in the exchange room this morning.

Wheat .....$3.50@3.65

OATS.

No activity has been noticed and small prospect of any in the immediate future.

Red Feed, ctl. .....$2.85@3.15

BARLEY.

With a light demand the price gained a little over that of last week. Call board trading has, however, fallen off. The week closed with spot trade very quiet.

Feed Barley .....**$2.40@2.45**

CORN.

The same prices prevail. A sluggish market is expected to continue until the new crop comes in.

Egyptian, white .....**Nominal**
do, brown .....**$3.65@3.75**
California .....**$3.80@$3.85**

FEEDSTUFFS.

The market is very dull. Trading is being done in small amounts only. A slight increase in demand is looked for because of growing scarcity of green feed. With a few deals in futures, hardly any spot trade is reported. Because of the light demand, wheat men are evidencing a desire to make price concessions. Alfalfa molasses and alfalfa meal are promising.

Rolled Barley .....$55.00@56.00
Rolled Oats .....$62.00@63.00
Alfalfa Products .....$45.00@52.00
Cracked Corn .....$80.00@81.00

HAY.

Greatly overstocked, prices tumbled on the San Francisco hay market during the past week. A large percentage of farmers seemed anxious to ship their hay at any terms, while a few shipped on a consignment basis when no satisfactory direct offers were made. The week's receipts were 3,344 tons. Receipts for the previous week amounted to 3,568 tons, while only a light demand is forecast, a fairly good-sized crop is being harvested all over the State, so that lower figures are expected as the season progresses. Heavy and probably increasing arrivals are looked for from week to week, as the hay will be clogged on the fields. Consumers are buying very little at present, waiting for the expected decline in prices.

Old Hay .....Nominal
Wheat Hay, new .....$27.00@29.00
Tame Oat Hay, new .....$24.00@26.00
Wild Oat Hay, new .....$18.00@20.00
Barley Hay, new .....$18.00@21.00
Alfalfa, new .....$18.00@23.00
do, 2nd cutting .....$22.00@26.00
Stock Hay .....Nominal
Barley Straw, bale .....Nominal

FRESH FRUIT.

(Wholesale prices paid by commission houses.)

There is a good demand for apples. They may flood the market this week and cause a further drop in prices. Plums are not moving fast. Cherries are all gone. The berry market is fair, with a moderate demand. No Honeydews are on the market; there is a demand, but at such low prices that growers do not wish to ship. There is a continued good demand in the local market for cantaloupes, but as the supply greatly exceeds the demand the melons are worth more at San Joaquin Valley points than in San Francisco.

Apples, Gravenstein .....$1.50@2.25
do, Alexanders $1.50
do, Red Astrakhan .....Nominal
Plums .....$1.25@2.00
Apricots, lb. .....5@7c
do, box .....$1.25@1.50
Peaches, 4 baskets $1.25
Pears .....$2.00@4.00
Figs, box, 1 layer .....$1.00@1.25
Strawberries, 6 12-oz. boxes .....75@85c
do, 6 8-oz. boxes, drawer .....50@65c
Blackberries, drawer, 12-oz. drawers..35@45c
Raspberries, drawer .....75c@$1.00
Loganberries, drawer, 12-oz. boxes..75@85c
do, 8-oz. boxes .....50@60c
Cantaloupes, Standard .....$1.50@2.00
do, Ponies .....$1.25@1.50
do, flats .....65@75c
Watermelon, lb .....1½@2c

DRIED FRUITS.

Apricots, choice, lb. .....24½@25c
do, fancy, lb. .....28½@29½c
Peaches, blue ribbon, 60 11-oz. case.. $9.00

See page 200 for additional quotations.

POTATOES, ONIONS, ETC.

(Wholesale prices paid by commission houses.)

When large supplies from Idaho, Washington and Oregon arrived on the local market, prices tumbled during the past week. The supply exceeds the demand by a large volume and indications are that prices will drop still further. Garnets are gone. Bermuda onions are out of the market. The whole onion market is considered weak.

Peas, Bay, lb. .....6@7c
Beans, wax, lb. .....5@6c
do, green, lb. .....5@6c
Carrots, per sack .....$2.00@2.25
Green Corn, each .....$2.50@3.50
Lettuce, local, dozen .....30@35c
Cucumbers, Alameda, lug box .....50@75c
Tomatoes, River, large box ....$1.00@1.25
do, Merced .....50@75c
Rhubarb, Strawberry, box 40 lbs..... $1.50
Summer Squash, box, 35-40 lbs. ...50@75c
Egg Plant, box .....25c@1.00
Potatoes, New River, cwt. .....$1.75@2.50
Onions, Yellow, sack .....85c@$1.50
do, Red .....75c@85c
Green Onions, box, 25 lbs.....$1.25@1.50

BEANS

The market is quiet. There is a poor market for Garbanzos. The new crop is looking fair in general.

Bayos .....$12.50@14.00
Blackeyes .....$ 7.50@ 8.00
Cranberry .....$ 6.75@ 7.00
Pinks .....$6.40@ 6.60
Red Mexican .....$7.50@7.75
Garbanzos .....$ 7.75@ 9.00
Large Whites .....$ 6.00@ 6.15
Small Whites .....$ 5.90@ 6.10
Limas, Ass'n prices, South $11.42
do, Baby, Ass'n prices, South $11.42
Limas, S. F. prices .....$10.90@11.40
do, Baby, S. F. prices ....$10.90@11.40

POULTRY.

(Wholesale prices paid by commission houses.)

The market is firm with light receipts. Scarcity of friers brought the price up a little.

Broilers .....38@40c
Hens, mixed color .....34@38c
do, Leghorns .....22@28c
Roosters, young .....42@45c
do, old .....17@20c
Friers .....38@40c
Squabs .....55@60c
Geese .....22@26c
Ducks .....22@25c
do, old 18c
Belgian Hare, live .....18@20c
do, dressed .....22@25c
Jack Rabbits .....Nominal

BUTTER.

High score grades firmed up during the week under a slight buying pressure, chiefly for local demand, the market advancing one and a half cents for the week.

	Thu.	Fri.	Sat	Mon.	Tu.	Wed.
Extra	55½	57	57	57½	57½	58
Prime firsts	54½	..	..	..	..	..

EGGS.

Extras moved slowly and suffered a recession under a sluggish market closing steady. Two or three cars are reported as having been shipped to New York during the past week. Withdrawals from storage continue in a moderate way.

	Thu.	Fri.	Sat.	Mon.	Tu.	Wed.
Extra	56	54	54½	54	54	
Ex. Pullets	..	44½	45	47½	47½	46½
Dirties	50	50	50	50	50	49
Undersized	33	33	34½	34	34	34

OPENING PRICES DRIED FIGS

The opening prices for the 1920 crop of dried figs has been placed by the fig association as follows: White Adriatic: 12 10-ounces, $1.25; fancy, $1.30; 12 8-ounces, $2.00; fancy, $2.05; 50 6-ounces, $3.10; fancy, $3.20; 70 4-ounces, $3.30; fancy, $3.40.

Layers—Four row, extra fancy, $1.70. Five-row, fancy, $1.60.

Bulk—Standard, 50-pound boxes, per pound, 9 cents; choice, 50-pound boxes, per pound, 11 cents; fancy, 50-pound boxes, per pound, 13 cents; extra fancy, 50-pound boxes, per pound, 15 cents.

Bulk, Mission Figs. — Standard, 50-pound boxes, per pound, 7 cents; choice 50-pound boxes, per pound, 10 cents; fancy, 50-pound boxes, per pound, 12 cents; extra fancy, 50-pound boxes, per pound, 14 cents.

Prices are regular f. o. b. Fresno, for September, October, November delivery. Prices of Calimyrna varieties will be announced in a few days by the Association.

1920 PRUNE PRICES.

New prune prices are ½ to 1½ cents a pound higher than last year's, according to the 1920 schedule issued Wednesday of this week by the California Prune and Apricot Growers. The 1920 California prune crop totals from 180,000,000 to 200,000,000 pounds, according to estimates carefully made. The 1920 price list is as follows:

SUNSWEET QUALITY.

	Cents per lb. flat bulk basis.
20-30s	25
30-40s	**17**
40-50s	15½
50-60s	13
60-70s	11½
70-80s	10½
80-90s	**9½**
90-100s	9½

Growers' quality ½ cent less per pound than Sunsweet on sizes 30-40s to 90-100s, inclusive.

SPECIAL DECIDUOUS REPORT.

The bottom rail is on top; the vine fruits have the tree fruits on the run. A sale of five cars of tree fruits from five different districts, sold in five different cities on August 9, averaged $2,175, while five cars of vine fruit from as many districts, sold in as many cities on the same date, averaging $4,221 per car. Of the tree fruits Bartletts sold from $3.05 to $5; Elbertas, $1.30 to $1.55; Grand Duke plums, $2.70 to $3.35; Giant, $1.50 to $3.60; Wickson, $2.30 to $2.70; Diamond, $2.15 to $2.75 per crate. Of the vine fruits, Thompson Seedless sold from $3.00 to $5.58 per crate; Malagas averaged $4.88 per crate—one car.

Special Livestock Market Report

San Francisco, August 11, 1920.

CATTLE—Cattle are arriving on this market in numbers to about supply the demand. Prime cattle of all weights are scarce and are commanding top prices. In Eastern markets there is a wide spread between the better and the medium grades—the widest for years, it is said. Nominally there is no change in local quotations. The calf market is very strong and higher.

Steers, No. 1, 1000-1200 lbs.....	9½	@	10c
do, 1200-1400	9	@	9½c
do, 2nd quality	7	@	8c
do, thin	6	@	7c
Cows and Heifers, No. 1	8	@	8½c
do, 2nd quality	6	@	7c
do, thin	2	@	4c
Bulls and Stags, good	4	@	5c
do, fair	3	@	3½c
Calves, lightweight	10	@	10½c
do, medium	8	@	9 c
do, heavy	7	@	8c

HOGS—There is a scarcity of live hogs on this market, and lack of desirable finish among those arriving. As a consequence of the scarcity there is an advance of ½c on all grades. In Eastern markets hogs show weakness.

Hard, fat, grain-fed, 100-150 lbs.....			16½c
do, 150-225 lbs.			17c
do, 225-300 lbs.			16½c
do, 300-400 lbs.			15½c

SHEEP—There is a stronger demand for milk lambs, and quotations have advanced on that grade. Otherwise there is no change. The market continues slumpy in the East, with a prospect of returning strength.

Lambs, milk	9½	@	10c
do, yearling	7½	@	8c
Sheep, wethers	7	@	7½c
do, ewes	5½	@	6c

FOR SALE—3 John Deere Corn Binders, with truck attachment and one Husker and Shredder. Webber Bros., Byron.

WANTED IMMEDIATELY — Experienced budders and tiers. Address or phone, Kirkman Nurseries, Fresno.

PUMPKIN SEED — Mixed pumpkin seed. Good germination, 25c per lb. Aurora Seed Will Stockton.

Los Angeles, August 10, 1920.

CATTLE—The beef cattle market the past week was quiet, but offerings were liberal, both of steers and cows. The tone of this market is weaker, killers only buying moderately and being able to get what they wanted inside quotations. Prices show no changes.

Per cwt. f. o. b. Los Angeles:

Beef steers, 1000@1100 lbs. ....$8.50@10.50
Prime cows and heifers .....$8.00@ 8.50
Good cows and heifers .....$7.00@ 7.50
Canners .....$4.50@ 5.00

HOGS—Coming in more freely now and market is hardly so firm, though unchanged. There is a fair demand reported. While prices show no change today from those of a week ago, the general tone in this market indicates a weakness.

Heavy, averag'g 275@350 lbs. $12.00@12.50
do, 225@275 lbs. .....$14.00@14.50
Light .....$15.50@16.50
Rough docked 20 lbs. piggy sows 40 lbs. and stags, 40 per cent.

SHEEP—Receipts good in this market and demand equally so, especially for lambs and ewes. There is little call for wethers. Prices unchanged from last week.

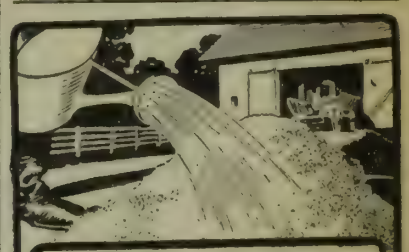
Prime wethers .....$7.00@10.00
Yearlings .....$ 6.00@10.00
Prime ewes .....$ 8.00@ 9.00
Lambs .....$10.00@12.00
Spring lambs .....$10.00@12.00

Portland, August 10, 1920.

CATTLE—Steady; receipts, 331; choice grass steers, $9.50@10; good to choice, $9@9.50; medium to good, $8@9; fair to good, $7@8; common to fair, $6@7; choice cows and heifers, $7@7.50; good to choice cows and heifers, $6.50@7; medium to good, $5.50@6.50; fair to medium, $4.50@5.50; canners, $2.50@4; bulls, $5@6; choice dairy calves, $13@15.50; prime light, $11.50@13; medium, $9@11; heavy, $7@9; best feeders, $7@7.50; fair to good, $6@7.

HOGS — Steady; receipts, 248. Prime mixed, $18@18.50; medium, $17.50@18; smooth heavy, $14.50@16.50; rough, $12@14.50; pigs, $13.50@16.50.

SHEEP—Steady; receipts 2,150. East of mountain lambs, $9.50@10; valley, $9@10; culls, $6@8; ewes, $2.25@6; yearlings, $6@7.25; wethers, $6@6.50.



Treat All Seeds

Take no chances. Smut is a common disease which usually decreases the yield of grain as much as 20%. *Formaldehyde* is endorsed by the U. S. Department of Agriculture as the standard treatment of seed grain, to prevent smuts, fungus growth, potato scab and black-leg.

FORMALDEHYDE
The Farmer's Friend

Insures a full yield because it destroys all forms of smuts and checks all plant diseases known to affect grain crops. Can be used also on the soil. One pint bottle of *Formaldehyde*—from the Laboratories of the Perth Amboy Chemical Works—treats 40 bushels of seed. New hand-book just issued free.

Perth Amboy Chemical Works
709-717 SIXTH AVENUE NEW YORK

LOS ANGELES

Los Angeles, August 10, 1920.

BUTTER.

Distributors of butter report good consumptive demand all during the week. Prices are unchanged. Receipts, while under last week's, are still good. These prices are paid the producer of butter

California, Extra Creamery	58c
do. Prime first	56c
do. first	55c

EGGS.

Receipts, while light, are a trifle over last week's. Dealers report a good demand from the consuming trade. Eggs are higher this week. Dealers report a good demand from the producer.

Fresh ranch, extra	54c
do. case count	51c
do. pullets	47c

POULTRY.

Market is steady, with all prices unchanged. The demand is good for broilers and heavy hens, while light hens are dull—the result of too many coming in, it is said.

Broilers, 1 to 1¼ lbs.	24c
do. 1½ to 1¾ lbs.	28c
Friers, 2 to 3 lbs.	32c
Hens	20@32c
Roosters (soft bone), 3 lbs. and up	38c
Ducks	17@20c
Turkeys	40@44c
Geese	25c

MELONS.

Melons receipts continue to be heavy and prices to decline. The market this week is lower. The demand is good at the decline.

We quote from the grower.

Home-grown, Tip-top, standard	$1.25@1.50
do. Pineapple, standard	$1.00@1.10
do. Rocky Ford, standard	$1.25@1.50
do. Paul Rose, standard	$1.50@1.75
Honey Dew Melons, standard	$1.50@1.75
Casabas, lb.	½@1c
Watermelons, lb.	¾@1c

BERRIES.

Sales are somewhat slow in this market today. Blackberries and raspberries are lower. Strawberries light in supply and the market is steady with fair demand reported.

Blackberries, 30-basket crate	$4.00@4.50
Raspberries, 30-basket crate	$4.50@4.75
Strawberries, 30-basket crate	$5.00@5.25
do. poor to choice, crate	$4.50@5.00

FRUITS.

In this market the demand is very good for all fresh choice and fancy fruits at today's quotations. All poor and off stocks are hard to sell at any price. Receipts good in most everything.

Plums, Santa Rosa, lb.	8@9c
do. Satsuma	7@8c
do. Kelsey, lb.	8@10c
do. Burbank, lb.	5@6c
Peaches, Freestones, lb.	4@5c
do. Clings, lb.	4@6c
Figs, black, lb.	10@12c
Crabapples, lb.	4@5c
Grapes, lb.	7@12c
do. Thompson Seedless, lb.	6@7c
Apples, Red & Wh Astrakhan, bx	$2.25@2.50
Pears Northern, lb.	4@9c
do. local, lb.	4@5c

VEGETABLES.

We quote from growers.

Potatoes, local, cwt	$2.50@2.75
do Northern, cwt.	$2.75@3.00
Onions, Stockton, yellow, cwt.	$1.25@1.35
do. local, crate	40@50c
Cabbage, per 100 lbs.	$1.50@2.00
Lettuce, crate	90@$1.00
Rhubarb, per 30-lb. box	50c@$1.00
Peas, lb.	9@11c
Carrots, doz. bunches	30@35c
Summer Squash, local lug	25@40c
String beans, green, lb.	3@4c
do. wax, lb.	3@4c
do. Kentucky, lb.	5@7c
Cucumbers, lug	40@50c
Tomatoes, home-grown, No. 1 lug	50@60c
do. No. 2	25@35c
Bell peppers, lb.	6@7c
do. Chile, lb.	4@5c

BEANS.

This market is still quiet. Prices, however, hold up and are unchanged. There was little movement in anything reported to the exchange.

Limas, per cwt	$10.00
Large white, per cwt	$5.25@5.50
Small white, per cwt	$5.25@5.50
Blackeyes, per cwt.	$6.50@7.00
Tepary, per cwt.	$3.00@3.25
Pink, cwt.	$6.75

HAY.

Hay receipts are good, but the market reports indicate a dull and weak tone. Only enough is being taken by buyers to supply their wants from day to day. Prices unchanged.

Barley hay, ton	$23.00@25.00
Oat hay, ton	$25.00@28.00
Alfalfa, Northern, ton	$30.00@32.00
do. local, per ton	$28.00@33.00
Straw	$14.00@16.00

ALFALFA.

Northern Prices.

No. 1 Dairy Alfalfa	$32.00
Standard Dairy	$29.00
Stock Alfalfa	$26.00

Southern Prices.

Choice Alfalfa	$40.00
No. 1 Dairy	$34.00
Standard Dairy	$31.00
Stock Alfalfa	$26.00

SPECIAL CITRUS REPORT.

Los Angeles, August 11, 1920.

During the past week the orange market has shown marked improvement.

New York, August 9.—Valencias sold from $4.60 to $7.90. One car rotten sold at $1.50 per box. One car in bad order sold at $2.75. Majority of sales ranged from $6.50 to $7.50. Very few sales below $5. Lemon market strong. Sales averaged $4.85.

Boston: Valencias sold $4.60 to $7.80. One car in bad order sold at $3.80 per box. Majority of sales ranged from $4.50 to $6.25.

Lemon market much improved, ranging from $3.25 to $4.10 per box. One car bad order sold $1.55 per box. One car rotten sold at 80 cents per box.

Sonoma County Fair

SANTA ROSA, AUGUST 23 to 29

ONE BIG WEEK

Complete Live Stock Show; $10,000 in premiums.
Two Days' Rodeo Carnival.
Four Days' Running and Harness Races.
50 Mile A. A. A. Auto Race for $2500.00 purse.
High Class Dog Show, $1,000.00 in cash and trophies.
Night Horse Show, unrivalled by any in the State.

Show opens Monday, August 23rd with the million-dollar parade, the greatest Stock parade ever attempted in California.

Come, bring your friends

H. J. WATERS, Sec'y, Santa Rosa, Cal.

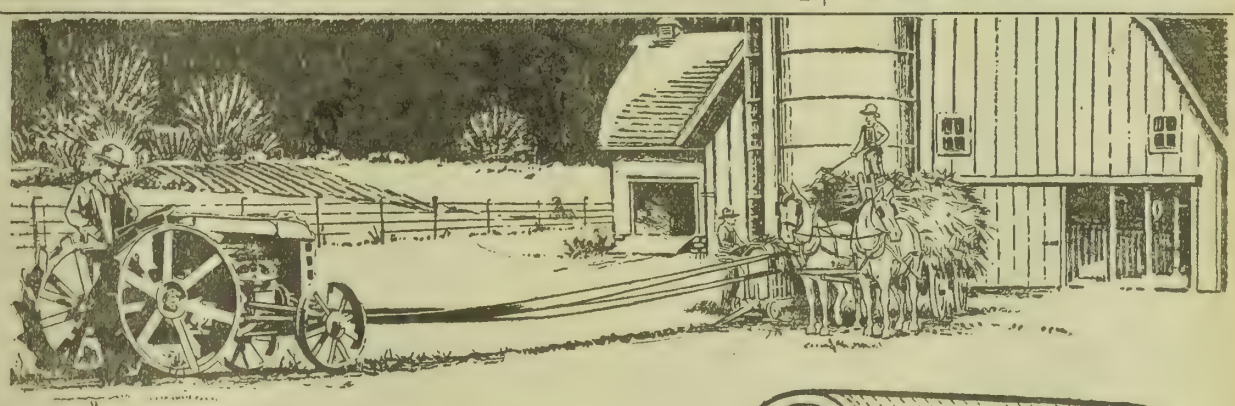
Dog Show entries close August 19th. Send entries to John Bradshaw, 528 Market Street, San Francisco

FOR RENT OR SALE

All or part of 2500 acres improved land near Pixley, Tulare County, Calif., fenced, with twenty wells and four Artesian wells — electrically equipped — pumping from 35 to 150 inches each. Reservoirs, buildings, barns, etc., suitable for grains, alfalfa, cotton, fruits, etc. About one-half of this land is proven Rice land, many thousand sacks having been produced several years ago, and was awarded a Gold Medal at the late San Diego Exposition.

Complete equipment of large Holt and two Best Tractors, Plows, Discs, Levelers, Ditchers, Grain Drills, Mowers and other tools, also live stock if desired. This is an exceptional opportunity. Possession given at once. Rental to begin with 1921. Only responsible parties, able to finance themselves, considered.

Address: Dr. R. Schiffmann
Chamber of Commerce Building,
Pasadena, Cal.



More Profits with Silage-

Use a Fordson Tractor and a Little Giant Belt

Not only does the making of ensilage furnish a supply of exceptionally good, economical feed for live stock but it clears the corn field for an early start the next season. It's another step toward more efficient, more profitable farming.

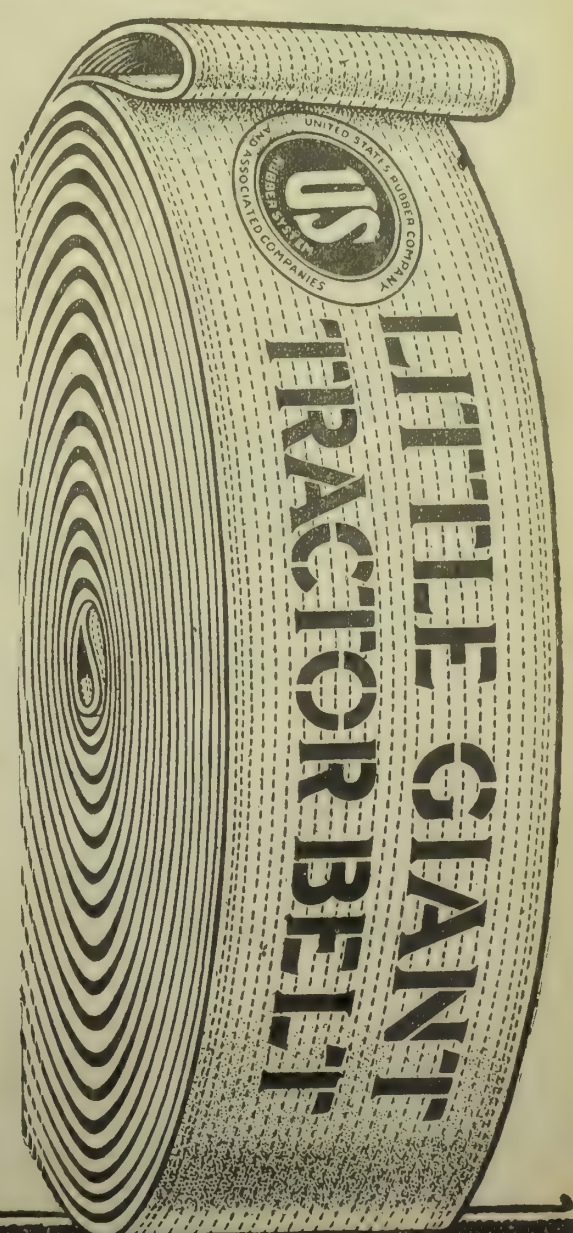
And when you belt your Fordson to your ensilage cutter, be sure it's a Little Giant tractor belt that transmits the power. Little Giant belts are specially designed for exclusive use with the Fordson and combine the features that enable the tractor to develop a steady, even flow of unfailing power through its belt pulley.

The Little Giant grips the pulley like the clutch of a giant hand. There is no slippage and wastage of power even when the ensilage cutter is overloaded. The Little Giant is an endless belt so there is no pulling out of belt ends and no delays for relacing. The Little Giant is a special treated, canvas belt and is unaffected by the moisture, heat and exposure a belt must meet in farm work. An exclusive feature is the extra stitching which resists the effects of edge wear and greatly lengthens the life of the belt.

You can buy a Little Giant from your local Fordson dealer—save the expense and delay of sending away for a belt. Ask your Fordson dealer to show you a Little Giant belt, or write us direct for complete information.

United States Rubber Company
Mechanical Goods Division
Distributed by

WM. L. HUGHSON CO., San Francisco, Calif.



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CALIFORNIA STATE LIBRARY

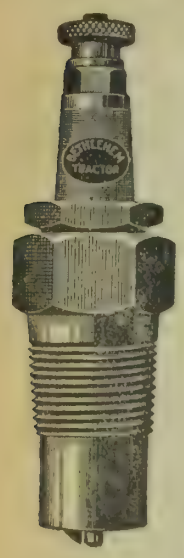
VOL. C—No. 8 Fiftieth Year

THE PACIFIC RURAL PRESS

SAN FRANCISCO AUGUST 21, 1920 LOS ANGELES

California State Lib. 1-1-22

WHEN RICE is worth seven cents per pound and one-seventh of it is lost by ordinary methods of harvesting, and it yields 3500 pounds per acre, a man loses about $35 per acre at a time when he and the world both suffer from the waste. The California rice crop in 1920 will be around 423,000,000 pounds, as estimated in August by J. E. Rickards and E. E. Kaufman of the U. S. Bureau of Crop Estimates. If this represents six-sevenths of the total rice produced in the fields, and if we have an ordinarily wet harvest season, the producers and the State may lose 70,500,000 pounds of rice, irretrievably tramped and rolled in the mud, except what hogs and turkeys can recover. At seven cents per pound this lost rice would be worth $4,935,000. This is a high figure, which explains the persistence displayed in widespread efforts to devise a "push binder" that will precede the draft stock or tractor and save the rice. The waste is due to the necessity of cutting one round inside each of the irregular rice checks, thus rolling and tramping an estimated seventh of the total crop in the mud. The chief hindrance to development of push binders is the mud due to draining flood irrigation water from fields in non-drying weather shortly before harvest begins. The levees between checks are extra high and steep and there is usually a trench alongside from which the dirt was scraped. Several tractors have been equipped with binders to precede their wheels or tracks and have been more or less successful in the past three seasons.



Spark Plugs and Silo-Filling

WHEN you've got your tractor hitched up to the silage-cutter, you don't want any shutdowns on account of poor spark plugs. *Therefore*—use Bethlehems!

Bethlehem Spark Plugs don't go dead like ordinary tractor plugs. The mica in the Bethlehem de Luxe Tractor Plug is wrapped around a center spindle, then reinforced in little mica washers, compressed into a granite-like whole. Built for hard service.

The great International Harvester Company, after exhaustive tests, has adopted Bethlehem Spark Plugs as standard equipment.

Bethlehem Automobile and Truck Plugs are as dependable as the famous Tractor Plugs. Studebaker, Marmon and 48 other manufacturers equip with Bethlehem Plugs. Write for your free copy of "Hit or Miss?", which tells you what you want to know about spark plugs.

BETHLEHEM SPARK PLUG CORPORATION
E. H. Schwab, *President*
Bethlehem, Pa.

Bethlehem SPARK PLUGS

"They Pull You Through"

The '49er says= "the genuine GIANT dates back to 1866"

"I remember well when we used black powder for stump blasting and mining. Just after the Civil War the first Giant Powder ever made in the United States was manufactured in a little laboratory in what is now Golden Gate park.

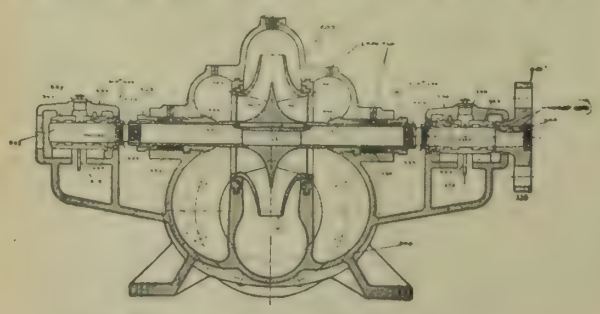
"Out of that beginning has grown The Giant Powder Co., Con., with its chain of great plants and magazine stocks throughout the entire West. And the Giant Farm Powders are being used for stump blasting, boulder blasting, tree planting, etc., by thousands of Western land owners. Giant Powders have always been so popular that some people have thought any ordinary dynamite was Giant Powder, but that is wrong. The only way to get Giant economy and efficiency is to get the genuine Giant Powders made by the originators of the name."

Just tell us "send me your book," and we will mail you our valuable guide to blasting, "Better Farming with Giant Farm Powders."

THE GIANT POWDER CO., CON.
"Everything for Blasting"
216 First National Bank Bldg. San Francisco. Branch Offices: Butte, Denver, Los Angeles, Portland, Salt Lake City, Seattle, Spokane

STUMPING GIANT FARM POWDERS EUREKA

DE LAVAL IRRIGATION PUMPS



High Efficiency Saves Power

The above illustration shows a cross section of the De Laval double suction single stage irrigation pump. Each separate part bears a symbol or number. These numbers are stamped on at factory.

All parts are interchangeable and bothersome misfits are eliminated. In ordering parts for a De Laval all that is necessary is the part's symbol.

This is another of the many points of De Laval efficiency.

This is one of a series of advertisements explaining the different parts of the De Laval Irrigation Pump.

Write us and learn what can be saved with High Efficiency Pumps.

HERZOG ELECTRIC & ENGINEERING CO.
179 STEUART STREET, SAN FRANCISCO

The highest price ever paid for Thompson and Muscat grapes has been received by T. Buttlers of Parlier, Fresno county. He sold 80 tons at the rate of $122 per ton. This fruit is produced on 20 acres.

Cover Crops

Melilotus Indica
Common Vetch (vicia sativa)
Canada Field Peas

Our stocks of these are of the best quality obtainable. Our Melilotus is thoroughly scarified, insuring high germination.

Engage your requirements of the above now. Write for prices.

We Pay the Freight

Valley Seed Company

1309-1315 Front Street, Sacramento, Cal.

AGRICUTURAL NOTES.

Hop-picking began at Wheatland this week.

The Los Angeles and Orange county sugar beet crop began to move last week.

The Riverbank, Yolo county, district estimates the rice crop for this season at a valuation of $300,000.

On August 16 there were 39 cars of potatoes and 5 cars of onions shipped from loading points in California.

It is estimated that there are 15,000 persons employed in the thousands of acres of hops. Sanitary conditions are reported good in California.

J. A. & W. D. Larew, who grow Klondike and Monte Cristo watermelons in Los Angeles county, find that the latter do better.

A sugar-beet crop that will yield over 30 tons per acre is growing on part of the ranch of Geo. C. Buehn of Los Angeles county.

W. J. Woodward reports the beet sugar mill at Manteca will open the fall campaign next week. The beet crop there is fair only.

The greatest wheat crop in the history of Nevada will be harvested this season. More than 10,000 tons will be harvested in the Reno district.

Beans in the Ojai and Simi Valleys of Ventura county are badly fired, due to the hot spell of last week. In places the crop is reported a total loss.

The South San Joaquin Irrigation district will receive another run of water this season, which was unexpected and will be one more than given last year.

Prolific white dent corn is pleasing Walter Greening of the Rock Springs land and Cattle Co. of Los Angeles county. This variety is not widely known yet.

Hay in the hills back of Benicia in good years has given two tons per acre, according to W. Banfield, but this year, with only nine inches of rain, the crop was over ¾ ton.

Bean growers in the upper San Fernando Valley have been refused water more often than once a month by the City of Los Angeles. Some plantings are beginning to suffer.

It is estimated there are 50,000 bales of hops or 10,000 pounds in Yolo and vicinity. It will cost $600,000 to harvest this bumper crop, most of which goes to England and Canada for brew.

A remarkable French prune crop, of which better than 80 per cent will be 50s in size, and many of which will run 30s and 40s, is predicted as the prune crop of Butte county this year.

There are about 500 wagon scales in Fresno county, each of which has a written record of condition and testing on the card index file of County Sealer of Weights and Measures F. B. Johnson.

Mexican labor for hoeing sugar beets twice and thinning them cost Louis Krukenberg of Los Angeles county $11 per acre this year as against $9 last year. Some people paid $12 to $13.

Vigorous action is being taken against weed pest in Orange county. E. Johnson of the California Department of Agriculture, is assisting County Horticultural Commissioner Earl Morris in the work.

The California Vegetable Union has been shipping 15 to 20 carloads of cantaloupes from the Sutter Basin daily for some weeks past. They will begin shipment of the splendid crop of brown Australian onions this week.

According to an offical report ending August 31, 1919, Florida, in a vigorous campaign against the citrus canker has destroyed 234,998 full grown trees and 2,613,000 nursery trees, valued at upwards of $5,000,000.

California growers of rice and brokers who deal in rice believe that the threatened loss of several million dollars through the repudiation of purchase contracts by dealers in Cuba will be obviated by action of the State Department.

A threshing outfit of Darling Bros., San Luis Rey, California, has just finished threshing 363 sacks of Mariout barley from 10 acres, and another patch ran 20 sacks to the acre, while the common barley runs about 16 sacks to the acre.

The Farm Bureau Exchange opened an intensive drive for membership this week at Livingston, to be followed with Delhi and Waterford on August 12, and from there to other points in Stanislaus, Merced and Madera counties.

The Holland district near Clarkesburg, Yolo county, suffered a serious loss by fire last week. Fourteen thousand five hundred sacks of barley were destroyed. The grain was valued at $35,000 and insured for 3 cents per pound.

A Fallon, Nevada, alfalfa grower recently said it was costing over $17 per ton to produce alfalfa loose on the ranch, where land cost nothing and water rights cost $60 per acre. How much more does it cost where land is valued at $300?

The long-drawn-out, muchly discussed Brown State Market Bill has gone to its eternal rest, by its failure to secure the necessary 75,000 names whereby it might appear among the list of eligibles on the ballot at the coming election.

J. S. Quinn, in charge of the local branch of the State Labor Employment Bureau, states that there are more men than jobs in the Marysville district. This is considerable relief from the farm labor shortage of several months ago.

An auto truck in passing over the Magalia Ridge near Paradise, Butte county, set fire to pasture lands, and before it was under control, 15,000 acres were burned over, which means a serious loss to the cattle and stock men of that section.

The potato acreage of the State is about 9,000 acres in excess of 1919—the total acreage of the State being 97,000 and the condition of the crop August 1 being 85 per cent of normal. The forecast is for 12,610,000 for California, and 1,135,000 bushels of sweet potatoes.

The Northern California Rice Company, principal place of business, Marysville, have incorporated for the purpose of growing and marketing rice. Thirteen incorporators are named, of which 12 are Japanese and one white man. The amount of stock subscribed was $63,806.

Whether to make more rigid the quarantine against cotton seed, machinery, and lint from other States, will be discussed at a meeting to be held in the Union League Building, Los Angeles, August 20, at 10 a. m., under the direction of the State Director of Agriculture.

Last year there was a small acreage of cotton in the vicinity of Tulare. This year John I. Sheets of the Tulare Board of Trade has listed 3,300 acres in that vicinity, including 800 acres on the Tagus ranch. The cotton has made a "crackerjack" stand and all conditions now are favorable.

Klondike watermelons are best for home use, as stated by W. H. Porter of Los Angeles county, who annually grows several acres of them and sells them on the Los Angeles markets. They are also fine for shipping, as evidenced by the fact that this is the chief variety grown in Imperial Valley for distant markets.

The celebrated Veith winery purchased by Robert Romer Campany of San Francisco is to be opened for the manufacture of 400,000 gallons of grape juice, dry and sweet wines under government regulations. Wine will be sold only to people who furnish a bond to the government that it is to be used for either religious or medicinal purposes.

HORTICULTURAL JOTTINGS.

The Robert Harbach ranch near Porterville produced 50 tons of Cling peaches on 15 acres.

It is estimated that 22 home driers will be constructed this season in the San Joaquin Valley.

The latest in wine grape circles is that $150 per ton has been paid for grapes of extra quality.

Mr. Karamoto of Carlsbad, between July 25 and August 4, shipped $550 worth of watermelons per day.

Italy is devising means to alleviate the beet sugar shortage by putting more bees at work producing honey.

Gravenstein apples of the Sebastopol district now moving are of excellent quality and promise well for a good season.

The Madera peach growers are well satisfied with prices obtained for their Elbertas, averaging about $120 per ton.

On August 16 there was 127 cars of grapes, 71 cars of pears, 48 cars of peaches, 33 cars of apples, 10 cars of plums shipped from California.

More than 400 citrus growers attended the third annual Citrus Fumigation and Spraying School held at Pomona the first week in August.

Much interest is being shown in the peach contest in Sutter county. It is reported that there are 51 entries recorded and many more are expected.

The navel orange crop in the Pomona Valley this year averages between 95 and 105 per cent. This is a 50 per cent better set than in 1919.

Five large fruit-packing concerns are operating on full time at Clotho, Fresno county. The Pioneer Fruit Company's house is averaging two cars per day.

The California Wine Association has leased its pioneer winery property at Livermore to a company that will install a plant there for the dehydrating of grapes.

Placerville, El Dorado county, has a fruit-packing school that began August 3. It will be conducted by the Pomology Division of the College of Agriculture.

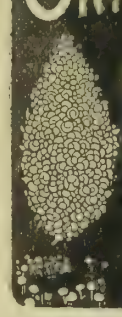
The local packing houses at Cutler, Tulare county, are now working full time packing grapes. Indications are for a heavy crop, and good prices are expected.

It is estimated that there will be a shortage of half a million bushels of apples in California this season over that of last year. This year's crop is estimated at 6,185,000 bushels.

The contestants for the peach prize cups in the Sutter county peach contest are sure of the goods as the cups are now on display in the windows of the First National Bank of Yuba City.

Chicago, second largest city in the United States, unloads annually 24,000 cars of apples, peaches, cantaloupes, strawberries, cabbage, white potatoes, tomatoes and onions. All of this is exclusive of home-stock hauled to market by boat, truck and wagon. If these cars alone were coupled together they would make a train 180 miles long.

ORNAMENTALS



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Big Money Boring Wells

One Man One Team

Have water on your own farm. In spare time make wells for your neighbors. It means $1000 extra in ordinary years, double that in dry years. No risk—no experience needed.

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LISTER MFG. COMPANY
Box 712 Clarinda, Iowa

Fruit Trees That Produce

Your profits—the whole success of your orchard depends upon the kind of trees you set out. You can't get big crops of good fruit from poor stock. The trees we send you are all budded from parent stock of

PROVEN PRODUCTIVENESS.

We can point you to successful orchards all over this State that have been established through the original planting of stock from this nursery. Write for Price List.

Elmer Bros. Nursery

"The Nursery That Helped to make Santa Clara Valley Famous."

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EDITORIAL

"A MAN WITHOUT A COUNTRY."

WE DO NOT enjoy controversy with those who do us the honor of reading our reflections upon current events and tendencies. We like to think that we have shoulder-touch with them in an advance toward better things which we all ardently desire and strive for. We preach the doctrine of the goodness of a good fight on all public questions, but we feel neither joy nor hope in turning to strike those whom we prefer to regard as ranksmen and comrades with us in a compact group of human beings supporting causes which commend themselves to all who constitute such a group. We confess that we enjoy what we conceive to be a dutiful condemnation of views which seem to us morally or economically unrighteous, but there is no pleasure to us in meeting an outcropping of such views among our own people. We record, therefore, the following declaration in the spirit in which it is written to us:

"In sorrow rather than in anger," I wish to take exception to your editorial position on certain fundamental matters. Your editorial of July 31st ends as follows:

"By such national enactment we can dispose of the Japanese and all other such problems, and have our own way, as we are unquestionably entitled to have, about who shall have domicile and the right to pursue industrial callings in this country."

This I deny! Those enjoying the privilege of the franchise did not create this country! All men born on this earth are citizens of the same universe and by might, not by right, are the meek denied their inheritance!

This is virtually a repudiation of love of country, which has from prehistoric times proved a most potent emotion in actuating the advancement of mankind. We need not undertake defense of it. Like hope, it "springs eternal in the human breast"; it is so pervadingly powerful and universally cherished that a thought of its absence is the supreme demonstration of its presence. Such was the conception of Sir Walter Scott when he wrote:

Breathes there a man with soul so dead,
Who never to himself hath said:
This is my own, my native land!
Whose heart hath ne'er within him burn'd,
As home his footsteps he hath turn'd
From wandering on a foreign strand!

"A CITIZEN OF THE UNIVERSE."

And for this love of native land, which is itself, at the same time, the sublime product of family love and parent love, and the best safeguard of the purity and volume of the outpouring of personal love from which it springs, our recalcitrant reader would substitute a vague vision of world citizenship! If he follows his dream to its logical interpretation he would people the world with unparented children—the product of irresponsible fathers and universalized mothers—father-love, mother-love and child-love would be uprooted from the human heart and the home, most sacred thing on earth, would be replaced by factories for indiscrimination and incubation! "Citizens of the universe" indeed; even the beasts of the field have not wholly fallen to such disgrace. Sir Walter Scott foresaw the ultimate result of losing love of country when he wrote the anathema which followed his indignant inquiry, which we have just quoted:

If such there breathe, go, mark him well
For him no minstrel raptures swell;
High though his titles, proud his name,
Boundless his wealth as wish can claim,
Despite these titles, power and pelf,
The wretch, concentered all in self,
Living, shall forfeit fair renown
And, doubly dying, shall go down
To the vile dust from which he sprung
Unwept, unhonored and unsung.

DESTRUCTIVE INTERNATIONALISM.

Perhaps the reader, who rebukes us in sadness and not in anger for our insistence upon the preservation of love and independence of country, which have made this nation great and determined the character of its citizenship, may complain that we are reading into his communication things which he did not say and for which he will not stand. We hope that is true and that he has only caught on to the near-end of a seductive theory of social order, the extension of which he has not thought out. If so, it is still possible for him to turn from it. It is, however, no time to indulge in theories of which, in their extensions, the end is death to everything which mankind has held to be most holy in earthly life and conduct and in the relations of individuals to each other. Such indulgence in vagaries of world-citizenship is more dangerous now than ever, because such vagaries, born in the darkest days of human depravity and animalism, were never so widely and disgracefully put forth as they are now being proclaimed and insisted upon. Civilization has never faced such a menace before so widely spread and so loudly vaunted. Last week President Wilson told the world what the United States thinks of in these words:

Facts which none disputes have convinced the Government of the United States, against its will, that the existing regime in Russia is based upon the negation of every principle of honor and good faith, and every usage and convention underlying the whole structure of international law; the negation, in short, of every principle upon which it is possible to base harmonious and trustful relations, whether of nations or of individuals.

In the view of this Government, there cannot be any common ground upon which it can stand with a power whose conceptions of international relations are so entirely alien to its own, so utterly repugnant to its moral sense.

The Bolshevist regime [must be] compelled to meet the inevitable challenge of reason and self-respect which the Russian people, secure from invasion and territorial violation, are sure to address to a social philosophy that degrades them and a tyranny that oppresses them.

THE MENACE TO AMERICAN CITIZENSHIP.

Such is the social abomination with which our reader is unwittingly trifling, or intentionally promoting, when he proclaims himself a "citizen of the universe." If he does not know it, he should find it out; if he does know it, others should find it out. The outrageous doctrines of Bolshevism are abroad in this country and the plunder of the Russian state is being shipped to this country to serve in their propagation. President Wilson also says:

It is within the knowledge of the Government of the United States that the Bolshevist government is itself subject to the control of a political faction with extensive international ramifications through the Third Internationale, and that this body, which is heavily subsidized by the Bolshevist government from the public revenues of Russia, has for its openly avowed aim the promotion of Bolshevist revolutions throughout the world.

And so our misguided, or misguiding, reader is contributing to the demoralization of the world by announcement of his "citizenship of the universe." He desires to exchange his birthright to love some country (this or some other, we know not which) for a mess of Bolshevistic pottage, which will sicken the world of the sublime emotion of patriotism and the individual of all personal love and cherishment, which countless generations of men and women have held to be sacred rights, priceless privileges and the greatest of earthly joys. It is the greatest evil which has arisen in the course of history. It is the "abomination of desolation." To every one who loves his country and his family, and who respects himself, there comes from of old this injunction: "Avoid it; pass not by it; turn from it and pass away."

WHAT A CITIZEN OF THE UNIVERSE BELIEVES.

And our tender-hearted reader (whose kindly sadness at feeling impelled to criticise us, we fully reciprocate as we apply the process to him) proceeds, from his declaration of citizenship in the universe, to jot down a few things about which he hopes we will change our minds. This is his schedule:

I find that the name Henry George means "chief husbandman," and believing, as I do, that he made no idle boast when he declared, "I am for men!" and as mankind seems to me to be the most important crop on the face of the earth, I believe that measures advocated by him—the single tax, free trade, and public ownership of public utilities—are needed reforms and that the honest adoption and application of these measures would fulfill the prophecy, "The meek shall inherit the earth." Does not the Pacific Rural Press owe it to its own good name to re-consider its position very carefully?

Certainly; we are always ready to reconsider our positions; in fact, that keeps us busier than any other single thing we do. One thing, however, seems quite fixed in our experience, and that is whenever we start to read a letter from a reader who has designs on the universe, we soon encounter the late lamented Henry George. Mr. George does seem to give his disciples immense breadth of view. They get so far-sighted that they cannot discern the things which are near by and the doing of which has made us a prosperous people. They overlook, for instance, that a man gets ahead by working, saving and owning, and is entitled to what he works for, saves and owns, and that, in this blessed country, a man who does that has the pleasures, duties and responsibilities of a sovereign, and helps to make the country he loves and fights for. And, not being able to see these little, near-by things, most of the Henry Georgians try to go skating around the rim of the universe without thinking how infernally dark and cold it is out there. Of course, it is not a bad pastime to sit in the earth's sunshine, and think it might be clearer and warmer in the illimitable ether, but all we know about it is that no one dares to go a few hundred feet above this cosy earth in an air-plane without putting on his winter clothing. It is much that way with Mr. George's doctrines. No one really knows whether they are self-heaters and self-lighters and no one gets a chance to try them, because they are so busy working, earning, saving and owning, and enjoying the fruits thereof withal, that they will not follow Mr. George into the domain of pure reason for fear they will lose the things they have earned and the fun they get out of them. There is another thing that many Georgian's forget, viz., that if there is anything in Mr. George's doctrines that is worth having, one does not need to become a citizen of the universe to get it. The constitution and laws of this country can be bound in "georgette," as closely as our ladies now enfold themselves in it, and all you have to do is to get votes enough to do it. Minority revolutions are as unnecessary in this country as they are impossible. One does not need to become a citizen of the universe to get public ownership of public utilities. We have a lot of it now and are getting more of it as fast as we can handle it; private owners of public utilities are watching their chance to sell out their properties, and we do not have to forfeit patriotism to get them. Single tax does not go so fast; in fact, so many people do not like it that fewer of them vote for it at each succeeding election, and therefore it is reasonable to think that the voters will hit it harder next November than they did at the four earlier chances they have had at it. State Controller John S. Chambers writes: "Under far better times than now exist demoralization would follow the single tax; under the stress of the greatest unrest the world has ever known, the result would be appalling—a tragedy, a catastrophe." In fact, for all we know, it might be so bad that it would upset a citizen of the universe! As for free trade, we have no idea of being so meek that we will ruin American industries to build up the same products abroad and probably we shall get out from under the danger of it at the next election.

We have no objection to changing our positions on these questions whenever we can see that we are wrong, and, as our critic suggests, we shall surely watch out carefully. We are thinking more about them than the comments in these columns indicate, and we do not invite discussion of them because it is our chief duty to furnish readers other lines of information and discussion. As for the meek inheriting the earth we hardly see what good it will do them if meekness is measured by support of single tax, which is largely advocated to abolish private ownership of land,—so even the meek could not collect what is coming to them. Besides, what does a citizen of the universe need to care what becomes of such a little mud-ball as the earth, while he is surging around in the illimitable?

QUERIES AND REPLIES

By the Editor.

Inquirers Must Give Full Name and Address. Answered questions also on other pages.

Getting Strength into Body of Tree.

To the Editor: We have a few trees on very rich soil which have had plenty of water and have made a great growth this summer. Would it be best to cut the trees back severely now, or wait till next winter? They have made such a vigorous growth that it would seem to me that they should be cut back and the strength thrown into the body of the tree.—H. W. Z., Menlo Park.

Your idea is exactly opposite to that which the tree has—if a man is able to understand the actions of a tree, which are revelators of its thoughts. The tree receives during the earlier parts of its period of verdure contributions from the roots and from the light and the air, which compose the substance of the leaves and the contents of the cells thereof and during the latter part of its period of verdure it returns all that the root has invested in it and all the interest on it which light and air have paid in, to the body of the tree and to the roots. As your trees, having had good soil and plenty of moisture, are now covered with leaves which are coming due to pay in all they have collected during the summer you will rob the body and roots of the tree by cutting back the new growth and removing the foliage and will not add strength to the body, but deny it the strength which it has earned and which now becomes payable. Pruning while the leaves are still active weakens the tree, and though summer pruning is sometimes desirable to check growth and advance fruiting, summer pruning is exactly the thing not to do to accomplish the purpose you have in mind. Your purpose demands that you shall not cut back while the leaves are green. It is also clear from what you say that you do not need to cut back next winter to increase vigor because the trees will not need increase of vegetative vigor which that operation will impart. If you cut back next winter it should be for other reasons, such as reducing undue extension of branches, inducing growth at desirable points, removing growth where not desirable, reducing height, regulating spread, etc., all being matters of your convenience and not interests of the tree itself. Absolutely, so far as the tree itself is concerned, we know no reason why a strong tree should be pruned at all. But of course we are not growing fruit trees for the interests of the trees but for our own—and yet we should always prune with due consideration of the natural actions of the tree.

Trees Over Soil Cavities.

To the Editor: I started an apricot orchard last March. The ground was moist but not very wet and afterwards came some rains. All trees started well and in May they looked fine. Since then the growth seemed to be checked, although the ground was moist and loose. In June I started watering the trees, giving to each from five to seven gallons. After pouring water I noticed under almost ever tree the water disappeared through a hole. The local orchardists thought that there were gopher holes and suggested I plug the hole and pour more water, which I did. The local horticultural inspector suggested the same. No gopher hills appeared afterwards. In July I started the second watering. After having watered more than a half of the orchard I made occasionally deeper basins and found that water rushed down through several holes. Plugging these holes I found that around the tree was an empty space probably due to bad planting. While water was still in this hole, I plugged tightly all around the empty space and added more water. Maybe I saved a part of my trees by doing so. Now I will start watering the orchard again. Kindly suggest what I should do. About sixty per cent of the trees look very bad, although some small new shoots appeared. Should I replace these or will they do well next spring if I plug the empty spaces?—C. J. M., Santa Barbara.

It looks as though you had planted your trees over a lot of catacombs. We do not see how they could have occurred naturally, but they could have been created in two ways: first by digging too large holes, which were insufficiently filled and packed below, when the trees were planted; second, by soil-blasting followed by insufficient rainfall or irrigation to settle the subsoil. The right treatment is that which you have already applied to some of the trees, viz.: basining and using a lot of water—exploring below with a bar or rod and supplying all the fine dirt the water will carry down until all cavities are filled. Do not plug the holes but open them so they can be completely filled. Such treatment will save practically all the trees which have made any growth, for better performance next year. Those which make no growth should be replaced with new trees this winter.

De-Barking for Pear Blight.

To the Editor: There was an item in your issue of July 24 about a "new system of control of pear blight by cutting away the bark of the tree over the affected part, down to the cambium layer, but this is not destroyed." We have never had any pear blight on our property, but we may at any time be vividly interested in any means of cure or prevention. I am writing to ask if we may not have a fuller exposition of this line of treatment.—J. E. C., San Dimas.

The de-barking method is being tried by pear-growers in the Sacramento Valley quite largely and is being watched by the pear-blight scientists carefully, and we shall have ere long a full exposition of fact and philosophy in connection with it. The method consists in removing outer bark, showing pear blight extension not down to the cambium exactly, but down to green bark and into it, but not down to the exposure of "white bark." This practice seems to dry the exposed green bark sufficiently to check the advance of the blight, but not to kill it down to the wood and thus expose the cambium to dying and drying. It seems to be artificially inducing in infested parts of the bark the condition of dormancy, which is known to check the blight when the sap is reduced by natural conditions so that growth is stopped. We shall know later what it amounts to.

Over-Pruned Fig Tree.

To the Editor: I have a fig tree whose trunk is 7 inches in diameter. Four branches, 32 inches from the ground and 3½ inches in diameter, extend upward four feet. They have secondary branches (3 or 4 each) from 3 to 4 feet long and 1½ and 2½ inches in diameter. All other branches were pruned out last winter. The tree has put out a very vigorous growth of new wood from the secondary branches of from 2 to 4 feet, and nearly every branch is set full of fruit. It is a white fig of some kind. A Fresno man tells me some growers there pinch off the ends of the branches. Is that a wise thing to do?—J. H., San Jose.

Your excess of new shoots was induced by the excess pruning which was done last winer. Pinching new shoots is for the purpose of inducing branching. If you have certain shoots of which you desire to stop extension and induce branching for a local purpose which you can explain to yourself, it is all right to pinch them, but your chief danger seems to be of having too many new shoots which will have no space to expand their leaves next summer, and the cure for that will be to wholly remove many of the shoots and proper spacing of a reasonable number which you retain. Shoots fruiting as you describe are not likely to run out too far.

Walnuts and Prunes.

To the Editor: I wish to set out land in Marin county to English walnuts and prunes, planting the prunes between the walnuts. What is the proper distance to put the walnuts? Is it a good plan to blast for the trees.—F. M., Novato.

Plant the walnuts at sixty feet—alternating the prunes both ways. Be sure, however, that both fruits are doing well, as shown by old-bearing trees in similar local soils and situations. It is an expensive job to plant fruits largely where suitability and profit have not been reasonably demonstrated. It is also a dangerous proposition to alternate where both are not demonstrated. It would be all right to alternate if the walnuts made good, but if not, the old prunes would be too far apart and not easy to start new trees between them. It is a good idea to blast if the subsoil needs it; but the more it needs blasting the less it is suitable for fruits—except where impervious layers lie between free soil above and below.

WANT WORK AT GOOD PAY?

We are going to add more men to our circulation force. They need not have experience or capital, but must be red-blooded, dead-in-earnest fellows, who enjoy interviewing people and are not afraid of hard work.

If you have an automobile, are free to travel, believe in the Rural Press, and would like to present it to others, perhaps you can qualify for the position. It pays a straight salary and is permanent.

If you think you are the man we are looking for, tell us why. Convince us that you should have the position and we will make you an attractive offer.

Home-Made Presidential Tickets!

To the Editor: After the Tennessee legislature records itself on woman suffrage, please discuss in your valuable paper a Hoover and Coolidge ticket—one the women and farmers can vote. Is there any illegality in writing in Hoover's name if it is not on the ballot?—H. E. M., El Cajon.

We hope the anti-suffragists in Tennessee will not see your letter before the vote is taken; they might take unfair advantage of it. Presidents are not elected by direct vote and there will not be any candidates' names on the tickets, nor places to write in candidates' names, but only names of "electors," who will cast the votes for candidates in Sacramento next January. There may be a place for you to write your choice for electors if printed names do not suit you, and there might be an agreement among voters as to writing in electors' names, but there is no chance of getting votes enough that way to amount to anything. You had better vote for the bunch of electors who come nearest to representing your views, or else you will give those you do not like at all a better chance of being elected.

Prunes Going Wrong.

To the Editor: Why do the prunes ripen and drop a month or six weeks ahead of time, from four-year-old French trees on myrobalan? The soil is said to be ideal prune land. Do you think the hot spell of a few weeks back was the cause? The prunes look sunburned.—Subscriber, Laton.

It is probably the effect of the hot spell—superinduced, as the doctors say, by insufficient soil moisture for the myrobalan root. This root will endure a good deal of drouth in a heavy soil, but it sometimes cannot get enough of the same percentage of moisture in a light soil to serve its purposes. In a light soil it is not as good a sucker as the almond or the peach. When the foliage is not what it should be, either from lack of soil moisture or too much red spider, the fruit is apt to burn and ripen prematurely.

The Melon Aphis.

To the Editor: I send a watermelon leaf. What are the lice and what will kill them? One vine is covered with the insects and the ground has a damp appearance under the vine. No other plants are affected. I will take up the vine and burn.—C. C., Simi

About all there is to do is to burn the vine where it stands with a bunch of straw and not to carry it around to spread the insects. Although the insect (commonly called the melon aphis) is easily killed with a soap and tobacco spray, it costs too much to spray enough to get all of them. The damp appearance of the ground is due to showering with exudations by the insects. The main point is to watch early and burn as soon as you see a plant infested.

CALIFORNIA WEATHER RECORD

The following rainfall and temperature record is furnished the Pacific Rural Press by the United States Department of Agriculture Weather Bureau at San Francisco for the week ending August 16, 1920.

Stations—	Rainfall Past Week	Rainfall Seasonal To Date	Rainfall Normal To Date	Temperature Highest	Temperature Lowest
Eureka	.00	.12	.14	64	48
Red Bluff	.00	.01	.00	110	72
Sacramento	.00	.01	.00	108	66
San Francisco	.00	.00	.01	71	50
San Jose	.00	.00	.01	92	54
Fresno	.00	.00	.00	116	70
San Luis Obispo	.00	.00	.03	92	48
Los Angeles	.00	.00	.00	92	63
San Diego	.00	.00	.00	82	67
Winnemucca	.00	.00	.27	100	52
Reno	.00	.00	.25	102	52
Tonopah	.00	.92	.47	94	60

Placer's Pre-eminence in Fruit Production

Written for Pacific Rural Press by W. S. Killingsworth.

Recently the writer visited that wonderful fruit-producing section more commonly spoken of as "On the hill." In the shadow of a memory almost faded we saw Rocklin, Loomis, Penryn, Newcastle and Auburn — the sleepy little loading stations of the long ago, now to find them transformed into veritable human beehives, grading, packing and loading fruits that have made Placer county famous the length and breadth of two continents. This fruit-producing area is confined to little more than 100 square miles. However, notwithstanding the comparative smallness of the district, and but a small portion is set to orchard and vineyard, it produces a very large portion of the deciduous tree fruits shipped from California. Until within comparatively recent years the early fruit-producing sections of the State viewed with but little concern Placer county as a prospective competitor. Always a great commercial peach-shipping section, little did the banner cherry- and plum-growing sections dream of the the time that Placer county would show the world a commercial product that has stood the test. No longer is it considered a mid-season shipper, but is at the "scratch" on opening day, all of which may be attributed to the environments. The warm foot-hills of the Sierra Nevadas, sloping to the West, attract and imprison a temperature that makes such locations an ideal spot for early ripening, all of which make it attractive to the established producer as well as the prospective purchaser.

One of the Oldest Fruit-Growing Districts.

Through our previous connection with the fruit industry we learned that the earliest achievements of man in the West largely centered in what is now Placer county, because the pioneers found there a country possessing every natural resource necessary for their requirements—a kindly climate, fertile soil, abundant water supply, splendid feed for their stock, lumber in abundance and a wide range of minerals, showing a few of the many native and natural resources to be found in that territory. From points of prominence as we traveled over the foothills, we viewed with astonishment thousands of acres of the most flourishing orchards it has been our pleasure to witness for many moons. It seemed as though every available foot of land had been planted to some variety of deciduous fruits. However, our particular attention was called to the dark green luxuriant growth the trees maintained during the present unprecedented dry season, and not until we landed at Newcastle did we learn why the trees growing upon these hill-sides, many of which are so steep that the orchardist is favored by being able to plant both sides of his land, continued their growth and maintained their color.

A Transformation.

When we alighted from the train we soon learned that it was not the Newcastle of more than a quarter of a century ago, when but a small portion of those hills were under cultivation, as we remembered. The string of small loading sheds long since reduced to ashes, have been replaced by spacious buildings equipped with modern conveniences facilitating the rapid handling of fruit from team and truck to car. Newcastle was not a municipality when Rome boasted of her "seven hills," else Rome's reputation for such would never have been known, for Newcastle could give her a handicap of several more and then have some left. The Southern Pacific will substantiate that comparison, for it was up to them to transfer several of the hills in order to extend their tracks and arrange a foundation for those platforms, loading sheds and warehouses, in which eleven fruit-shipping concerns are substantially and conveniently located, and through these houses there will be approximately 2,500 cars of fruit handled and loaded for eastern shipment, during the season of 1920.

Sabbath Observed.

It was the fault of the schedule that made our arrival at Newcastle at least one hour prior to much action in and around the loading sheds. However, it being Sunday we expected such. We were told that very little loading of cars had been done during the season on Sunday, as a full supply of cars at all times had enabled them to load the fruit in such a manner that they were not forced to break the Sabbath. While waiting for some one to show up from whom we could extract a few thoughts upon which to frame a story of the wonderful resources of this deciduous metropolis, we strolled down the line from shed to shed and from house to house, to be convinced that in the reconstruction of these building the shipping concerns realized the extent to which the business would expand when the thousands of acres then just approaching the productive stage reached maturity. As the hours passed the trucks and teams, loaded to the limit, put in their appearance. Standing near when a six-horse team drove up with a load of 140 boxes of Bartlett pears, we were told that that load of pears was part of three carloads sold to a dealer in a Middle Western city for $3.60 per box, f. o. b. cars, Newcastle.

"Auld Acquaintance" Renewed.

In passing the Pioneer Fruit Company's warehouse we called in to pay our respects and renew an old acquaintanceship. There we found George W. Bisbee, vice-president of the company, and one of the pioneers of the fruit industry of Placer county, from whom we knew we could get facts and figures. At the time he was superintending the loading of several cars, which had accumulated from a temporary shortage of cars. However, the fruit was in splendid "physical" condition and Mr. Bisbee was not alarmed over the temporary delay. When the rush was over we sat in his office and discussed old times, following up the numerous changes and progressive attitude of the greatest industry of modern times. The orchard scenes of the early morning were still fresh in our mind, and we immediately put the question to Mr. Bisbee, as to the cause of the trees holding their foliage as well as perfect color; his quick response was, "Water. We have an unlimited supply that is constantly flowing through the orchards. This water is conserved in many large reservoirs in the foothills, and in the canyons and forests of the high mountains snow lies deep until late summer, therefore, such a thing as drought with us is unknown. From the Bear, American and Yuba rivers, ditches 50 miles and more in length convey this water to all parts of this country where it is needed for irrigation as well for domestic and fire purposes. We also have a normal rainfall of 35 inches that falls from September until May. In addition to the abundant supply of water we have the soil. In the foothills it is a gravelly red loam with a sandstone subsoil which assists greatly in holding the moisture and adds to the production and quality of the fruit. The orchard region of Placer county includes the valley and foothills lands from the western boundary to an elevation above Colfax.

A Great Deciduous Fruit Center.

Newcastle is at present the largest deciduous tree fruit shipping-point in the State and the tonnage is annually increasing. The prices the growers have received during the seasons of 1919-20 have so stimulated the industry that every available acre of land will in time be planted to fruit."

We examined carefully many varieties of plums that were being loaded, to find in all of our experience, nothing better, and we wish to make special mention of the Giant prune that we examined that packed 4x4, which is 16 prunes on the face of a five-pound basket. We also saw the President plum that packed 3x4, making 12 to the top layer. Newcastle is not alone in the shipment of such excellent fruit. Auburn, Loomis, Penryn and Colfax have made an equal showing. Not until recent years has Auburn taken an active part in the shipment of deciduous fruits, but now the district is advancing rapidly. Almost from the beginning of the fruit industry in California, Colfax has been interested in the growing and shipping of Bartlett pears. The soil and climatic conditions at that altitude puts a blush on the cheek of the Colfax Bartlett that has made it famous wherever California fruits are known. Of the plum varieties, the Grand Duke, Gros and Kelsey, thrive to perfection. The Tokay grape grown on that red decomposed granite soil colors beyond anything we have ever witnessed. At a glance, the soil would not impress one as having a superabundance of fertility; however, there is something to it, that when [illegible] the climate, the sunshiny [illegible] cool nights the effect is [illegible] the thriving little towns of [illegible] Penryn, nothing that we [illegible] would strengthen their popu[illegible] add to their reputation, as [illegible] has long since been established. Following in the footsteps of Newcastle, the hills and valleys of these localities abound in fruit, equal in quality and productiveness to any locality of Placer county—and we will take a chance in saying the State. We know the quality is there, but as to production there are other sections where the trees are much larger, giving those particular localities the advantage, in tonnage only.

Apples of Finest Quality.

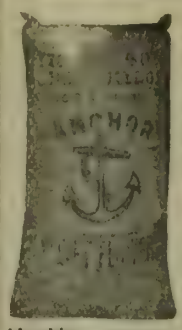
At the town of Alta, near Colfax, there are many splendid apple orchards producing fruit of the finest quality. The apples attain a crispness unsurpassed by anything produced on the Pacific Coast. This is due to the altitude and climate. Near by, at Forest Hill Divide, there is an apple tree sixty years old and still produces splendid crops. So well adapted to the culture of figs is the Loomis district that the government established an experimental station at that point and from there the Capri fig fertilization is shipped to all parts of the coast.

A Famous Nursery.

Not only does Placer county rank high in the production of fruit, but equally as high in the production of trees that produce the fruit. In recent years the Silva-Bergtholdt Company of Newcastle have made not only themselves famous, but Placer county as well, by their production of nursery stock. They have nurseries at Auburn, Newcastle, Penryn, Loomis and Lincoln, and from these nurseries are annually shipped hundreds of thousands of trees and vines to all parts of this western country. Starting on a small scale they have industrially and systematically placed the nursery business on a high plane, ranking among the leading nurseries of the West. Mr. Bergtholdt was one of the prime movers in organizing the Nurserymen's Bud Selection Association of California.

Surprised at Changes Noted.

We are glad that it was possible that we were enabled to visit our old stamping ground of the long ago. No words or picture could have convinced us of the actual changes that have taken place. With but very few exceptions the change of faces has been equally as great, but it is pleasing to note and gratifying to state that those who have taken up the line of thought and work, so industriously and successfully conducted by their predecessors, are men who are making history for the fruit industry of California. The limited description of the natural advantages surrounding the fruit growers of Placer county should not act as a damper over those less fortunate. Placer county has no better soil than many other districts, but with soil of normal fertility aided by an abundant supply of water, great achievements have been wrought, but not greater than those that would come to the district that will develop a like supply of water. Such can be done and such must be done, in the fruit-producing sections of California, if the producers expect the same results.



Sulphur

It has been proven and so recommended by the University of California that if you sulphur your grape vines and orchards 6 times they will not be affected by MILDEW or RED SPIDERS.

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Large yields; quick growth; early maturity; more drouth resistant than other varieties known to us.

There is in California a very limited quantity of choice wheat and barley seed of these varieties. All our seed grown on new soils, one irrigation only. All water from deep wells; no Bermuda, Johnson or Morning Glory. Orders booked as received, shipments following consecutively.

We also have limited quantities Early Baart, Sonora, Diener's Hybrid-Baart and Diener's Hybrid Sonora Seed Wheats. This is our first year with last two varieties and data not yet sufficient to permit our making definite conclusions or recommendations. Both tiller well, permitting light planting, and neither shatters so badly as Sonora.

In our judgment Bunyip, Bayah and Dart Imperial wheats and Mariout and Beldi barleys yield more or less soil moisture and shatter less in wind than any grains we have grown.

We are also now booking cotton seed orders for late fall and winter delivery. Pure strains, Durango and Mebane, grown by us in selected, hand-rogued fields. We do our own ginning, carefully avoiding seed mixing. We invite trial of our seeds for results with less moisture.

Write for prices, stating quantity desired.

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Post-office, Telegraph, Express and Freight Address:
WESTHAVEN, FRESNO COUNTY, CALIFORNIA.

Blue-Ribbon Orchard in Madera County

Written for Pacific Rural Press by R. E. Hodges.

One of the first carloads of fresh fruit ever shipped east from Madera county was a carload of plums grown this season by D. B. Harris on a 140-acre orchard tucked away back of town, where most travelers do not dream of looking for fruit. This carload sold for $2,800.

"Come over to the packing-house and see some of Harris' plums. He just about finished cleaning up his trees today," suggested Horticultural Commissioner George Marchbank, an enthusiast on good fruit, good orchards, and good orchardists. He was the fourth man who had that day boosted and boasted of the remarkable yields and prices being obtained from this new industry in a rapidly developing county.

"There they were in the packing-house—magnificent Santa Rosas, big as apples, red enough to pull money from anyone's pocket, some of them packed only two deep and alternately two and three in the rows across ordinary five-pound plum shipping-baskets.

Averaging Twelve Tons per Acre.

There also was Mr. Harris. He took us out to the orchard—we feel fairly safe in saying it is the finest orchard we have seen in California, and we have seen most of them. The bearing trees are seven and eight years old, peaches, apricots, and plums predominating, and mostly of varieties primarily adapted to shipment fresh. At one time last summer there were seven kinds of fruit ripe on the trees at once. Two Lovell trees produced 13 lug boxes of fruit apiece in 1919 at seven years old and many of them produced eight boxes each. A lot of well-colored Elbertas were shipped in Los Angeles lug boxes, half of them going two layers per box, 24 peaches per layer, and averaging considerably over half a pound each. The rest went in three layers, but required cleats. Orders for six carloads of fresh free-stone peaches were on file when the writer called in July.

This year, the orchard is averaging about twelve tons of fruit per acre—rather startling to hear and equally startling to see on the trees. Over $3,000 were spent thinning the fruit last spring.

The apricots were sold July 8 at 25 cents per pound dried orchard run, and the limbs on many trees we saw were like ropes of big fruit.

Dynamiting Repays 100% Per Year.

The outstanding success of this young orchard is due to Mr. Harris' treatment since he bought it as a grain field in 1890. For twenty years it produced alfalfa, which was pastured after water gave out each season. The soil is mostly sandy, loamy sediment at least seven feet deep, with no hardpan within eighteen feet, if at all. Nevertheless, in preparing for the orchard eight or nine years ago, the land was subsoiled eighteen inches deep while it was dry in the fall. Then it was cultivated dry all summer with a weed cutter to kill Johnson grass. Then it was staked for trees and a stick of dynamite was shot for each tree at a depth of three feet. This loosened the soil without throwing it out. Then furrows were plowed connecting all holes for irrigation to settle the dirt in them and fill any cavities. This dynamiting cost twelve cents per hole and Mr. Harris believes that he will get this money back every year the trees live on account of their better growth. He learned, however, that the dirt must be well settled before planting the trees. Some few cavities didn't fill. The trees settled as much as eighteen inches in some cases and a few of them died.

Six Main Branches per Tree.

At planting, all the trees were cut back to encourage low branching, and the next winter they were cut back to where the most main limbs would be available in a well-spread circle. Some varieties, as the Tragedy plums, did not branch so much as others, but probably the trees today average six main branches. One peach has ten main branches in a beautiful bowl shape, and all as thrifty as could be desired. This tree at seven years old, has a thirty-foot spread. The peaches were planted 24 feet apart and are now almost touching each other across the rows. At three years, some of the apricot trees could be pulled together across their 24-foot centers. All trees have wires encircling their upper branches high enough to prevent their breaking over. Men were roping the trees lower down last July, and many props were doing yeoman service.

Good Care Pays Dividends.

The place has always grown a heavy natural cover crop. Recently a mixture of melilotus and vetch proved much better. Melilotus three feet deep was rolled down and turned under by tractor last spring, having been sown in November or December. Bordeaux is sprayed on the trees in autumn and lime-sulphur in spring, so shothole, worms, and curl-leaf do no damage. Elbertas curl whenever the spray misses a leaf, so this variety gets full attention just when the leaf buds begin to open. The spring spray this year amounted to 20 barrels of commercial concentrated lime-sulphur.

The irrigation system is busy practically all of the time. Two pumping plants, with a total capacity of 1700 gallons per minute lift the water about 33 feet in mid-summer. It is distributed through cement underground pipes to four orchard furrows per row of trees, where water can be held on forty acres at once. It has been run through furrows half a mile long, but this proved too slow. The trees are remembered with an irrigation after their fruit is off in order to strengthen them and their buds for another year of heavy bearing.

THE BANNER PLUM TREE OF CALIFORNIA.

TWENTY-NINE TONS OF BIG PLUMS per acre would be the crop if every tree bore as one Santa Rosa plum tree did this season for D. B. Harris. This tree last July ripened twenty-three picking boxes of fruit, averaging about 35 pounds net. That fruit packed 38 crates averaging close to 20 pounds each. About 760 pounds of plums went to market from this tree. It has always been the banner tree of the orchard since it began bearing at two years old. Its branches are spread out to the sun so the center was all filled with plums, its branches were ropes of plums, and fruit spurs decorated the big limbs and trunk with big fruit, the lowest of which was only two inches from the ground. A wire or rope encircled the upper branches early last spring, or they would have long been prostrate. This tree is being used by the Nurserymen's Bud Selection Association as a source of buds for nursery stock.

Red Kidney Beans Becoming Popular

(Written for Pacific Rural Press by R. E. Hodges.)

While our white-bean markets are suffering from cheap importations of Asiatics, a new variety to California is rapidly gaining favor in San Bernardino and Los Angeles counties. Red Kidneys have been grown to a limited extent in the Delta, but were unknown in Southern California when A. W. La Forge of western San Bernardino county planted 24 rows in sandy soil across ten acres of young walnut trees in 1918. Blackeyes were planted beside the kidneys; and ten rows of brown pintos were tried out at the same time. All varieties grew fine. The blackeyes and kidneys matured their crops and the pintos were maturing when a week of foggy weather rusted all of the latter without injuring the former. A few small whites scattered among the red kidneys also rusted badly. The blackeyes dragged at a five-cent price while the surplus red kidneys were sold for seed. Mr. La Forge planted 33 acres of them in 1919 and sold the surplus at 10½ cents. They retailed at 14 and 15 cents per pound for seed. They got wet in early fall rains which ruined blackeyes; but the rain made no difference in marketing the reds. A few red Mexicans among them also did well. A can full of the kidneys has been saved to see if they would develop weevils with which blackeyes are heavily afflicted. None were in evidence last July. Some of the beans sent to the University were pronounced superior to the few grown in the Delta, as mentioned by C. E. Jackson, who cares for the crop under Mr. La Forge's direction. A cannery man in Los Angeles said the only place where red kidneys are canned in the United States is in Michigan; but that a local cannery could make money buying them at seven cents. Eleven cents has been offered for the 1920 crop.

With a 60 per cent stand last year the yield averaged 12½ sacks and made 1950 pounds on one good acre. One vine carried 109 pods. The pods average five beans each; and all of the beans are plump because the ground is kept moist until they ripen. The vines shed their big leaves about 90 days after planting and mature the pods regardless of soil moisture conditions. The pods hang vertically, clear from the ground on big bushes, which have no tendency to vine. They were cut exactly 90 days after planting last year. The straw, after dropping its leaves, was sold to a citrus grower at $15 per ton, having produced about three-fourths ton per acre.

Surplus beans kept for seed to plant the 33 acres now growing were handpicked to remove all whites and other red varieties; so the crop now is pure red kidneys. There are about 300 acres in the Chino valley, seed for all of which were produced by Mr. La Forge. They are planted on a great variety of soils and all are doing well.

IRRIGATING LIMA BEANS.

Lima Beans may be irrigated any time so far as the setting of pods is concerned, according to Wm. Specht of Los Angeles county. But if irrigated late, they will start new growth and set a second crop, which will not ripen until the first crop has shattered out. They need irrigation before starting to bloom, so a cultivation afterward will not injure runners. A four-acre field planted by Mr. Specht about June 20 and irrigated about July 12 already had some runners intertwined across the rows so they will get no cultivation. They were cultivated last year under similar conditions, but the damage was too great.

The Whittier-Fullerton orange crop averages 85 to 95 per cent this year.

Strongest, smoothest and most practical construction possible. When it comes to surface pipe, there's nothing better.

—Lock Seamed by powerful machinery—a good wide seam that holds.

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Long life and low upkeep expense are two outstanding features of the Rumely OilPull.

A 30-60 OilPull near Bakersfield, Calif., purchased in 1914, has covered over 10,000 acres in drawbar work, and has worked in the belt over 300 days. And, up to date, less than $400 has been expended for repairs.

The OilPull is built in four sizes—12-20, 16-30, 20-40 and 30-60 H. P. Send for catalog.

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TREE PROTECTOR

PRICE LIST PER 1000

Protectors F. O. B. San Francisco

9 inch long	$11.00
10 inch "	11.75
12 inch "	12.75
14 inch "	14.50
16 inch "	15.75
18 inch "	16.75
20 inch "	17.50
24 inch "	20.50
30 inch "	23.75
36 inch "	29.50

Place your orders early

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398 Bay Street
San Francisco, Calif.

Timely Work in the Orchard

(Written for Pacific Rural Press by W. S. Killingsworth.)

Stopping the Leaks.

There is no denying the fact that there are many "leaks" about the orchard, the packing shed and the dry yard that might be averted, if a system was adopted whereby there would be a saving in the handling of fruits from orchard to sheds, and from sheds to market. Economy is the profit in these times of high cost of material and labor, therefore all labor-saving devices that may be worked to advantage should be installed on every ranch and in every packing shed and on every dry yard. The practice of allowing dried fruits that are in condition for market to remain in an unprotected shed should be abolished —primarily to escape loss by fire, next loss in weight and decline in market, and last, interest on money invested. In this day and time of ready markets, good roads and rapid transit by motor trucks, the orchardist who allows his fruit to run the gauntlet of the evils we have mentioned is not only deceiving but cheating himself. A slight advance in the market will not offset the losses, the inconveniences and the wear and tear of mind and body, to justify a "watchful waiting" attitude. Our observation has been that the best time to dispose of any commodity, is when the other fellow wants it at a legitimate price, with a substantial profit to the producer.

How to Control Plant Lice.

It has been many moons since we have witnessed as many plant insects as there are the present season. As a rule, many insects are particular about the plant they attempt to destroy, but that custom seems to have been abandoned. It is now a case of "first come first served," and they go right down the line. Trees and plants heretofore infested by certain kinds of insects are now acting as a meal ticket for all that ever spread a wing or crawled aboard a tree or plant. Now there is an effective remedy for the heading off of such depredations if systematically applied in the form of a tobacco extract. This may be prepared by steeping tobacco leaves or stems in warm water. It may also be purchased at drug stores as "black leaf 40," or 40 per cent nicotine sulphate, in which case these materials must be diluted with 800 to 1000 parts of water before using. Apply with a good spray outfit.

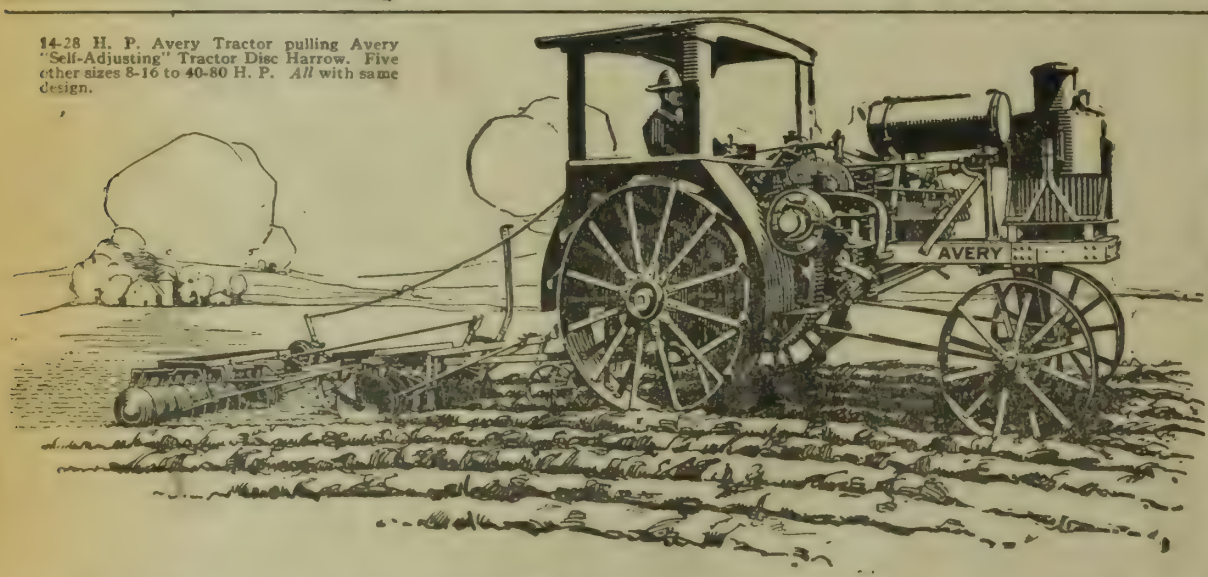
Kill Strawberry Weevil by Dusting.

The New Jersey experiment station says the strawberry weevil can be fought off by dusting the plants as the buds appear. The dust is composed of one part dry arsenate of lead and five parts powdered sulphur. This does not completely exterminate the entire tribe, but drives the major portion of them away. Dust guns are used in applying the dust. These guns may be purchased at any of the well-established seed supply houses or hardware establishments. Now that this pest is making inroads in the strawberry fields of California, it would be wise to give this formula a trial. However, as many experiments have already been tried, this might have been among the lot.

Buy Orchard Fertilizers Early.

The orchardist, and we might add the farmer who contemplates using commercial fertilizer this fall had better place his order at the earliest possible moment. The general demoralization of transportation following the war makes it important that fertilizers for fall use be ordered early. Reports reach us that there are indications of an actual shortage of fertilizer material because of the transportation difficulties. Fertilizer companies are having difficulty assembling raw material at manufacturing points.

14-28 H. P. Avery Tractor pulling Avery "Self-Adjusting" Tractor Disc Harrow. Five other sizes 8-16 to 40-80 H. P. *All* with same design.



Get Your Avery Now When You Need It Most

Fall time is indeed *tractor* time—the time when the advantages of power farming are many—the time when an Avery will mean most to you in getting your work done in the right way. With an Avery *now*, you can get your fall plowing, discing, harrowing, seeding all finished double quick—also have your own power for threshing, silo filling, shelling corn, grinding feed, road work and other power jobs.

You may have said, "Some day I will have an Avery." Why wait till "someday" when having an Avery *right now* would mean so much to you in speeding up your work, getting it done in the right way, and insuring a big next year's crop.

A Size for Any Farm

You can get an Avery in just the right size to fit your needs best. Also "Power-Lift" Moldboard or Disc Plows to fit any size Avery Tractor and "Self-Adjusting" Tractor Disc Harrows and "Power-Lift" Tractor Grain Drills. All these tools are operated from the tractor platform—real *one-man* outfits.

When you get an Avery you put speed and certainty into your farm work. Five sizes of Avery Tractors from the 8-16 to 40-80 H. P. have the low speed, heavy-duty **"Draft-Horse" Motor**—the motor that gives years of service with minimum upkeep cost. Has Renewable Inner Cylinder Walls, Adjustable Crankshaft Boxes, Valves in Head, Centrifugal Gasifiers that burn *all* the kerosene, and many other exclusive features.

The power is delivered through the **"Direct-Drive" Transmission** with only three shafts and straight spur gears between the motor and the drawbar. Belt pulley is mounted *direct* on the crankshaft—you get all the power of the motor in the belt. That's why the Avery is the real puller in the belt and at the drawbar.

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Get your Avery now when you need its service most in getting a good crop started for next year. See your local Avery dealer or write us for catalog showing complete Avery line of Tractors, Tractor Drawn or Tractor Driven Machinery.

Avery Six-Cylinder Model "C". A small tractor making a big hit. The Avery 5-10 H. P. is similar to this model but smaller.

Avery Motor Cultivator Harvesting—one of the most useful power machines ever built for farm work. One and two row sizes.

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PEACH GROWERS NAME 1920 PRICE.

The California Peach Growers' Association have set the price on the 1920 $12,000,000 peach crop—estimated.

Prices announced are as follows: Yellows, Standard, 15½ cents per pound; fancy, 17½ cents; extra fancy, 18½ cents; slabs, 15 cents. Muirs: Standard, 15¾ cents; fancy, 18¼ cents; extra fancy, 19½ cents. For "Practically Peeled," add 2½ cents per pound—any grade. These prices are bulk basis.

For packing in 50 pound or 25 kilo boxes add 1¼ cents per pound; 25 pounds, or 12½ kilo boxes, add 1½ cents per pound; 10-pound boxes add 2¾ cents per pound.

Blue Ribbon peaches, packed, 11-ounce cartons, 60 per case, $9.00; 2-pound cartons, 24 per case, $10.20; 5-pound cartons, 10 per case, $10.50.

Baker's Special, practically peeled—18½ cents, bulk basis, f. o. b. California common shipping points.

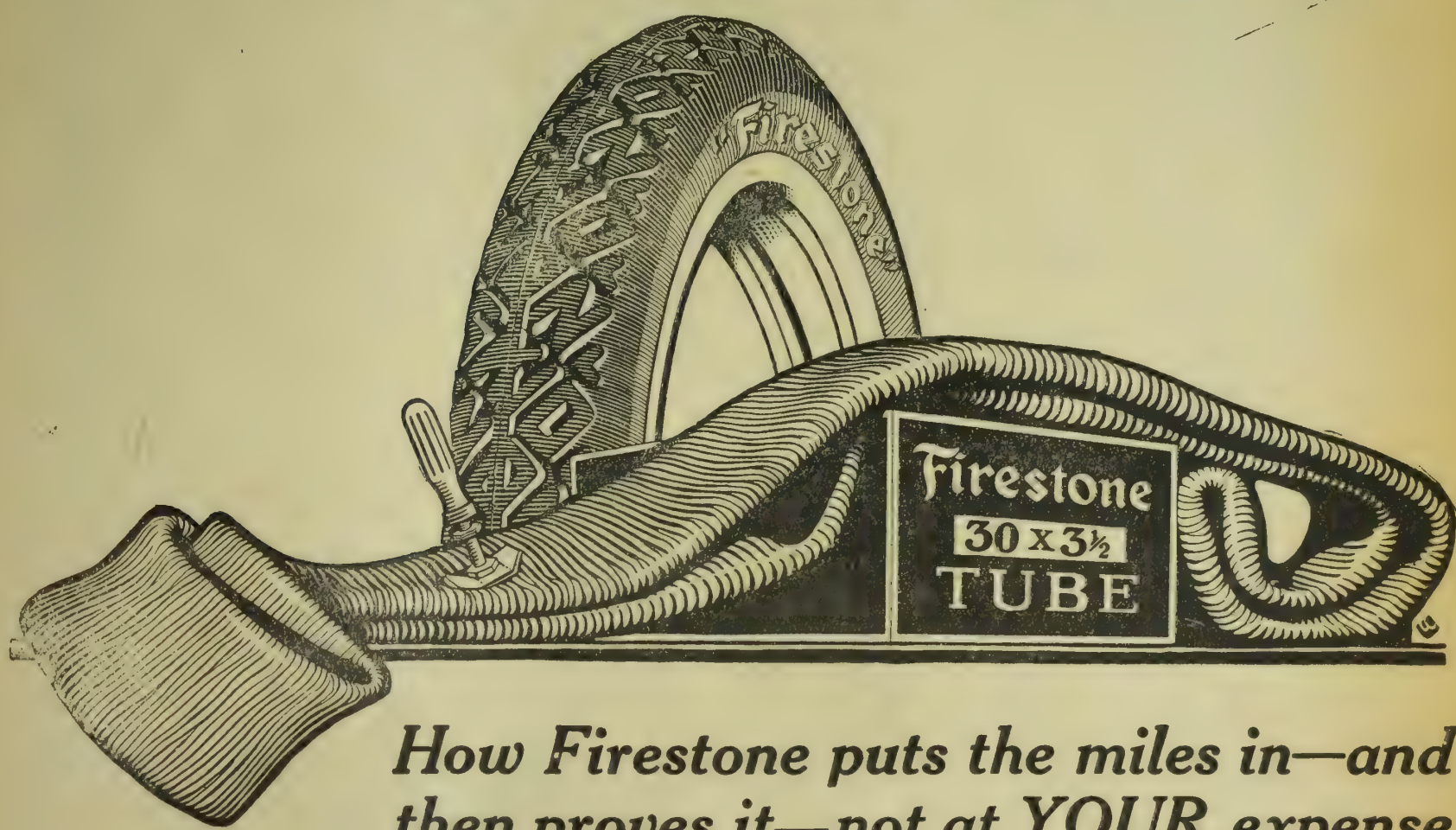
Shipment: September, October, November—seller's option.

The above prices are guaranteed against the association's own decline until January 1, 1921. Terms are as per dried fruit contract adopted by the National Wholesale Grocers' Association and the Dried Fruit Association of California, April 23, 1919. All orders are subject to the association's confirmation and approval of buyers' names. This is in accordance with the association policy to eliminate speculation. At this time only a limited quantity will be sold to any one buyer.

SAVE LATE CABBAGE FROM WORMS.

Speaking from personal experience, the green cabbage worm is unusually abundant this summer, and the late crop of cabbage will suffer if the pest is not controlled. Where only a few plants are to be protected in the home garden secure a small quantity of arsenate of lead and dust a little over the infested plants. To make it go further, it may be mixed with equal parts of air-slaked lime. To protect cabbage, where grown commercially, spray or dust with poison once each week or ten days. One pound of powdered arsenate to 50 gallons of water, to which enough soap is added to make a weak suds, should be used as a spray.

A big-scale road test on 3,200 tubes



How Firestone puts the miles in—and then proves it—not at YOUR expense

No other tubes in the world are road tested on so big a scale as Firestones. The Yellow Cab Company of Chicago uses Firestone Tubes exclusively on its 800 taxicabs. The service of these tubes is checked constantly —improvements and developments are arrived at.

By close watching of a large number of tubes in service—not confined to isolated instances—the conclusions are accurate and definite.

Firestone puts the best in materials into tubes by establishing purchasing experts at Singapore, center of the world's rubber market. Firestone puts the best in workmanship into tubes by organizing the crack manufacturing organization of the industry on a profit-sharing basis

And then subjects the finished product to this big-scale road test—in order to get you more for your tube money and most miles out of your tires.

Firestone Tubes resist heat—which everyone knows is the tubes' worst enemy. Their laminated construction, ply on ply of thin rubber sheets laid crosswise and perfectly vulcanized, gives the stoutest tube wall. Their larger sectional size means less stretch to fill the casing. Ask your dealer for Firestone Tubes. They cost no more than the ordinary kind.

30x3½ Red, $4.50; Gray, $3.75
Other sizes in proportion

Firestone

Here and There in the Fruit Business

Little Change in Crop Report.

The monthly crop report issued by the Department of Agriculture shows but few changes in condition of the various fruit crops. As a matter of fact the report is very favorable, considering the lack of moisture and excessive heat that has prevailed in all fruit-growing districts for the past month. The peach situation remains practically the same as previously reported, estimated production 397,000 tons. About 90 per cent of the total peach crop is canned, dried and shipped out of the State as fresh fruit, the balance being consumed within the State as fresh fruit, canned and dried for use in the homes. Pears show improvement, however. This is due to the Sacramento river district. After picking began it developed that there was a better crop than was first estimated. Apples show 72 per cent of a normal crop compared to 89 one year ago. There will probably be less dried apples on account of the heavy holdover from last season. Apricots are practically over. Some late districts are in the last drying stages. Plums are practically on their last lap. The "hill district" will continue shipments through the month of August. The report on prunes shows but slight change—74 per cent of a normal crop compared with 100 per cent a year ago. Since this report was issued all prune sections of the State have experienced terrific heat, which will no doubt check the growth materially, which would reduce the tonnage somewhat, from present estimate, 95,000 to 100,000 tons, while in 1919 the crop amounted to 150,000 tons. Grapes remain about the same, but as this report was issued prior to the heated spell the effect may be the same as that predicted on the prune crop. Walnuts are estimated same as last year—75 per cent of normal with total production about 24,000 tons. Almonds slight improvement, showing 62 per cent of normal compared with 76 per cent August. 1919.

Prune Harvest Now On.

Harvesting of the great prune crop of the State is now under full headway. Growers are not liable to be caught "napping," as they profited by the 1918 disaster, when thousands of tons of prunes were a total loss from rain damage. All help that can be had is now at work picking and processing the crop that means millions of dollars to the State. From Santa Clara county comes the report that, regardless of the dry season, prunes are of splendid size. Napa and Sonoma counties are encouraged over the prospect of a satisfactory harvest. Solano county seems to have suffered materially from dry season, thrips and red spider. Prunes throughout the San Joaquin Valley, where irrigation was not practised, are small, and the recent heated spell has not improved the situation. However, with the maintenance of splendid prices, as fixed by the association, the growers will "cut a big melon."

America Buying Foreign Currants.

American Consul G. K. Stiles at Patros, Greece, in his commercial report to the United States Department of Commerce, states that the American demand for Zante currants, while only slightly developed as to actual purchasing, is showing considerable strength as to futures. Options and demands are very much in evidence from all parts of the United States. There is considerable buying at this time for as far west as the Pacific Coast, is a significant feature of recent developments in the currant market of Greece. Such being the case, is it surprising that the unusual price was paid for 149 carloads of loose Muscatels sold recently at auction in New York? If those grapes are to be used in the manufacture of "conversation water," as has been predicted, it stands to reason that the pie counter and cake plate will not go unprovided for. Hence the importation of Zante currants.

Pear Association Makes a Record.

Frank T. Swett, president of the California Pear Growers' Association, feels elated over the splendid showing being made by the association in the matter of quick returns to the growers. Checks amounting to $375,000 had been mailed to growers prior to August 14. This is what may be termed service; especially so when we learn that the first delivery of pears to the canneries was on July 17. Mr. Swett is also pleased to announce that deliveries have been good. There have been but few complaints from the canners; however, in such cases, amicable adjustments have been made. The season is practically over and total deliveries will amount to something like 15,000 tons.

The old Veith winery near Fresno is to be operated for the manufacture of 400,000 gallons of grape juice, dry and sweet wines, under government regulations. Wine will be sold only to people who furnish a bond to the Government that it is to be used for either religious or medicinal purposes.

1920 PRUNE PRICES FIXED.

(Written for Pacific Rural Press by W. S. Killingsworth.)

Now that the California Prune and Apricot Growers, Inc., have fixed prices for the 1920 prune crop, speculation is at ease on that point, as not only the producer but the trade were on the anxious seat to know what the decision would be. However, there was no doubt in the mind of either the producer or dealer but that the price fixed would be in accord with conditions, as the management of the association is in direct touch with the foreign and domestic situation at all times, as was evidenced by General Manager Coykendall's statement, wherein he said in part: "Millions of pounds of prunes which were exported to Europe last fall are being shipped back to this country and thrown on the domestic market. Yet, in spite of these conditions the association has been able to name prices to growers higher than last year. Even in the districts where only the lower-priced prunes are grown, today's prices insure the growers in these sections a return equal to that which will be received by the growers who produce the larger sizes. This is because the growers of the lower-priced fruit produce a much larger tonnage per acre than the growers who raise the larger and higher-priced sizes." While these prices are somewhat higher than those of 1919, we learn that some of the trade are surprised that the prices for this year are not higher, basing their calculations on figures set on peaches and prunes, both of which are far in excess of the prices set on prunes. This confirms our statement that the directors of the association are onto their job, and it was not their intention to kill the goose, etc. There are many angles to the marketing of 175,000 to 200,000 tons of a semi-perishable commodity with a heavy holdover of a previous year's crop.

H. C. Dunlap, secretary of the association, aptly puts it: "Holdover stocks have in all previous seasons served to break markets and reduce prices by at least 50 per cent. This has seldom been justified, but invariably a natural result in a speculative market. Such a condition has been averted in the association's maintenance of market, and our merchandising of holdover has been appreciated, not only by the growers but by the trade. The price schedule is based on intelligent conclusions drawn from the lesson brought home to us in the past year's sales efforts."

WANTS 100 ACRES OF 'COTS!

To the Editor: After considering the soil, water and drainage conditions in the extreme eastern portion of Stanislaus county, I have decided to plant about 100 acres of apricots. Which varieties are best for shipping, canning and drying—that is, which one for each of the three purposes? The elevation is 350 feet and the soil is of a heavy, reddish loam, well manured from the grazing of cattle, and it grows an abundance of bur clover without irrigation, but during the summer is dry and hard. At present there is no system of irrigation, but water development is practical at a small cost.—R. C., Tuolumne.

There are two other things to consider in connection with growing apricots, which are more important than soil and water. One is the situation with reference to spring frosts and the other is an available labor supply to handle the crop. If the place is frosty you are not likely to get fruit enough to make you much trouble; if it is not frosty you are likely to get more fruit than you can handle unless you are near a town where you can get an army of fruit cutters on a few days' notice. Because of freakness in bearing of varieties, which give some time between their ripening, there are only about two varieties which are now commended for planting—the Blenheim and the Tilton. They are the varieties which are best for shipping, drying and canning. The Royal is largely grown, but it is much like Blenheim and the two have been so intermingled in propagation that they are now being considered as identical or indistinguishable. The two have separate histories, both abroad and in California, but they have apparently merged their individualities in this State, so that no careful pomological study of trees planted more than twenty-five years ago can determine their identity or difference. Apart from this question, which does not help in the matter of ripening (for the Royal and Blenheim are about alike in that), there is only a week or ten days between the ripening of all the apricots, which are reasonably reliable in bearing a crop and a man who has a hundred acres of them in the extreme end of any county will think he is up against a hundred acres of yellow jackets. Besides, we do not believe in planting a hundred acres of any kind of fruit in the foothills on the basis of the "practicability of water development." We should require a wetter deal than that!

WINE GRAPE REFUSES TO BE SIDETRACKED.

(Written for Pacific Rural Press.)

If all reports regarding the many uses the wine grape may be put to are true, constitutional prohibition will be a blessing in disguise, instead of the calamity predicted at the outset, and the growers may yet increase their acreage of wine grapes. We have already learned that in some cases where growers anticipated the enactment of the Volstead act, they had interplanted their wine grape vineyards with tree fruits, but since a silver lining has appeared on the cloud that had darkened future prospects of the industry some of the interplanted tree fruits have been taken out, and the vines given additional encouragement. Seemingly, the most logical use to which the product of the wine grape may be put to is in the manufacture of grape syrup.

Experiments thus far point to encouraging results, as under the present high prices of sugar, a syrup that may be manufactured at a much less cost than sugar, as is predicted by the syrup makers, will be extensively used. Especially would it be the case should the ruling price of sugar continue as at the present time. Some are pessimistic and are slow to credit the present high prices of wine grapes to anything but speculation, with the view of evading the Volstead act. Doubtless there is a feeling on the part of some that they may successfully escape the clutches of the law, the chances of doing the gum-shoe and boot-leg act, when we are told that all that is necessary to generate a "kick" in a bottle or vessel of grape syrup would be to add a portion of water and await results? If this is true, who is there that can predict the extent to which the manufacture of grape syrup will be carried and the price that wine grapes may reach?

Some have been so optimistic as to predict $150 per ton. As developments are recorded that price may be only a starter. Some of us, though aged, may live to see the proven wine grape soils abounding in flourishing vineyards, every wine cellar a syrup emporium, every decanter a distillery.

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A four plow tractor especially suited to California conditions.

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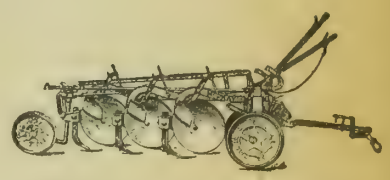

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Not only do we handle the usual line of plows, cultivators, etc. but in addition carry such implements as the MCKAY, combined power lift disc plow and sub-soiler, etc.

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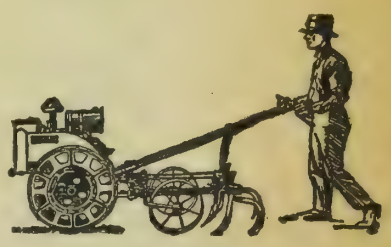
Spraying equipment is necessary to every orchardist. To supply you with the best available—we carry the HARDIE. Make known your requirements



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No matter what your needs in farm implements and equipment—make them known to us and we'll take care of you. Our experts will gladly advise with you—and refer you to your local dealer handling these lines where possible.

You'll see us at the STATE FAIR—*but in the meantime write us about your requirements.*

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RHUBARB Wagner's GIANT

PLANT NOW—August is a good month to plant. Growers who planted last July and August have already harvested over 15 tons per acre, netting $1,000 eleven months from planting. For further information, write J. B. WAGNER, Rhubarb Specialist.

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Farmers, Miners, Builders—people in every kind of business are saving money buying used or renewed pipe from us. We sell every kind of pipe. Send in a list of your requirements today and get our prices. We have saved hundreds of people 33 1-3 to 50 per cent on their pipe bills. Here's a partial list of some of the miles of pipe we have in stock for immediate delivery.

8,000 ft.	6 in.	Riveted	16	gauge
700 ft.	8 in.	"	16	"
5,000 ft.	12 in.	"	12	"
1,000 ft.	18 in.	"	12	"
800 ft.	22 in.	"	14	"
300 ft.	24 in.	"	14	"
500 ft.	36 in.	"	12	"

10,000 feet light wrought iron 8-inch pipe with cast-iron collars.

All above pipe thoroughly overhauled and inspected and ready for immediate use.

We also have large quantity standard pipe and screw casing, pressure tested and guaranteed.

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The Apiary Department, which is in charge of experienced Bee-keepers, is one of the largest of its kind in the United States, and maintains a constant excellence of product and unsurpassed service.

Write for catalogue and if a beginner for Cottage Bee-Keeping, which will be promptly mailed free.

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Significant Agricultural Pointers

Don't Scare at Potato Prices.

Lowered potato prices are reflected in decreased shipments of potatoes all over the United States, as reported August 9 by the U. S. Bureau of Markets. On that day a total of 365 carloads were shipped to market; on August 9, 1919, 562 carloads were shipped. California is no exception, with 28 carloads shipped August 9, 1920, as against 39 on the same date last year. That this is a decrease is indicated by the fact that seasonal shipments have been a great deal heavier than they were last year, the figures for the United States being 36,116, as compared with 30,010 last year to date. These are all early varieties, and the price of $2.25 to $2.50 per cental for White Rose and British Queens at Los Angeles does not prove anything with regard to prices for main-crop potatoes. The August report of the California office of the U. S. Bureau of Crop Estimates would indicate that the total California crop for 1920 will be about 11 per cent greater than last year, and the U. S. production will be increased about 12 per cent. Considering, however, the chance for reduction yet this season and the fact that a great deal of the increase is on early varieties, one might guess that the main crop in 1920 will not greatly exceed that of 1919.

Biggest Water Storage in North.

The biggest water storage project perhaps in the entire State is proposed in an application filed July 30 with the State Water Commission by the Glenn-Colusa Irrigation district. A million acre-feet of storage in the Pit River basin, for use on 500,000 acres westerly and southwesterly from the Glenn-Colusa district was asked by the latter on behalf of a general Valley water users' association which is hoped for as an outgrowth of the Association of Northern California Irrigation Districts which fostered the recent application. The estimated cost is $6,300,000. The dam is to be 125 feet high, 1,500 feet long, 100 feet wide at the bottom, and 25 feet wide on top. Construction would begin next month and be completed by 1925. Water would be completely applied to its proposed use by 1930.

Hay Crop and Pastures Short.

Less hay will be produced this year than last, both in California and in the United States, as indicated by August reports of the local and national offices of the U. S. Bureau of Crop Estimates. For the United States, 1919 production was 108,666,000 tons and the estimated 1920 production is 107,260,000 tons. For California, 1919 production was 4,257,000 tons, while the 1920 estimate is 4,039,200 tons. If there was a shortage last year, there will surely be a greater shortage this year unless too many dairy cows have been killed. California alfalfa condition is the lowest in ten years. Less wild hay has been cut, but more gra n hay is on hand than last year. Pasture conditions are nine points below a ten-year average and much of the range feed is unused because drinking water for the stock is dried up more generally than usual. Pasture condition is estimated at 74 this year, a significant comparison with a condition of 89 a year ago. Cattle have been taken from dry ranges and will probably have to be fed more than last year unless early rains make the present waterless ranges available. Everything points to a strong demand for hay this season.

Small Wheat Surplus.

There is enough wheat in the world and a comfortable surplus from the 1918-19 crop, as figured by the International Institute of Agriculture, April 1, 1920. There were still 105,000,000 centals of wheat and rye available for shipment from exporting countries; while the probable demand from importing countries until harvest time was 81,000,000 centals. Regarding the new crop acreage the Institute does not say enough to justify an opinion as to prices, though India seems likely to resume exports. Roumania cannot, Russia is an unknown quantity, Canada is unknown, and the United States has less acreage than last year. The surplus of 24,000,000 centals is only a drop in the bucket and its effect on new crop prices will hardly be noticeable.

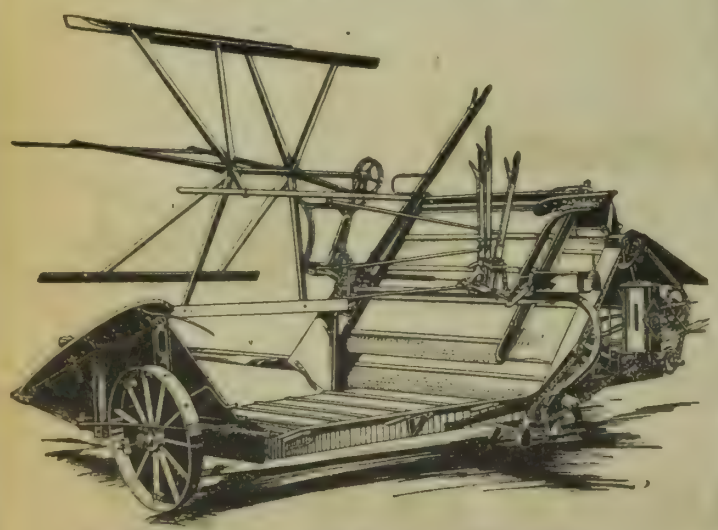
Orange County Cabbage Short.

The Orange county cabbage shipping season recently closed. Prices started at $90 per ton and descended to $15.40 to the growers in various pools of the Orange County Produce Growers' Association, per Manager J. W. Wallop. The association packed in its shipping shed and shipped 174 carloads to nearly every State in the Union except the Southern States. Shipments should have been around 600 cars if the crop had been normal. But a long cold dry spell kept the cabbage standing still and then many of them went to seed. The aim is to get the crop off by June 1, as heads left after the second or third cutting are likely to get wormy, and there are then too few to pay for spraying.

Wheat Crop Short.

The quality of winter wheat in the United States is considerably better than last year, the yield per acre being about 8 per cent greater, but only 34,000,000 acres will have been harvested as against 50,000,000 acres last year. In California the quality is poorer, the yield less per acre, and the acreage was a third less than last year. Then why have wheat prices dropped so much when European wheat countries are embroiled? Is the wheat market stampede artificial? If so, the price must come back. United States estimates are for 532,641,000 bushels, as against 731,636,000 bushels produced last year.

They Harvest the Rice—
and Ride the Mud



A SEA of mud; standing acres of uncut rice — tons of life-sustaining food waiting to be harvested. Wanted: a fast-working binder that will ride the mud and harvest the rice. Requirements: mud traction, ability to stay on top of the ground and — harvesting efficiency.

McCORMICK AND DEERING RICE BINDERS meet all these requirements. The main wheel as well as the grain wheel has a galvanized side to keep wheels from becoming filled with mud. Especially designed deep spade lugs are provided for the main wheel to insure good traction in soft ground. A broad face keeps the main wheel from miring — permits the binder successfully to ride the mud. And as for harvesting efficiency —

The names McCORMICK and DEERING are well-known as guarantees of satisfactory performance even where harvesting conditions are the most severe. McCormick and Deering rice binders are twin brothers of the grain binders bearing the same names — made in the same factories and of the same high-grade materials.

Your full-line International dealer sells these efficient, dependable rice-harvesting machines. See him. A post-card to the nearest branch will bring you descriptive catalog.

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EVERY ACRE of waste land made useful is as truly an addition to the farm as is new land acquired by purchase.

The "Caterpillar" Land Leveler makes unproductive land profitable. Farm values can be increased by filling up low spots, cutting down ridges, and perfecting drainage, thereby making cultivation easier, less expensive, better.

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You'll find the "Caterpillar" Land Leveler in use for small leveling operations on individual farms as well as for the biggest reclamation projects. In many cases its use has been adopted after unsatisfactory attempts to do the work with other equipment.

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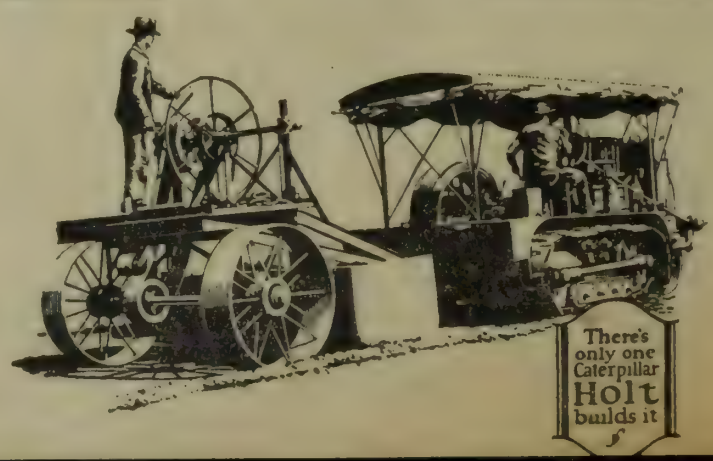


TESTED NEW BARLEY AND WHEAT.

Mariout barley has thoroughly demonstrated its superiority over the common variety in the dry farming sections of the Salinas valley, Monterey county.

In the summer and fall of 1919, Farm Advisor T. C. Mayhew conducted a campaign to introduce new varieties of cereals into Monterey county. Because of the high price asked for seed, farmers would not take any great amount, but preferred to try out a few sacks the first year. Special emphasis was placed on Mariout barley and Bunyip wheat.

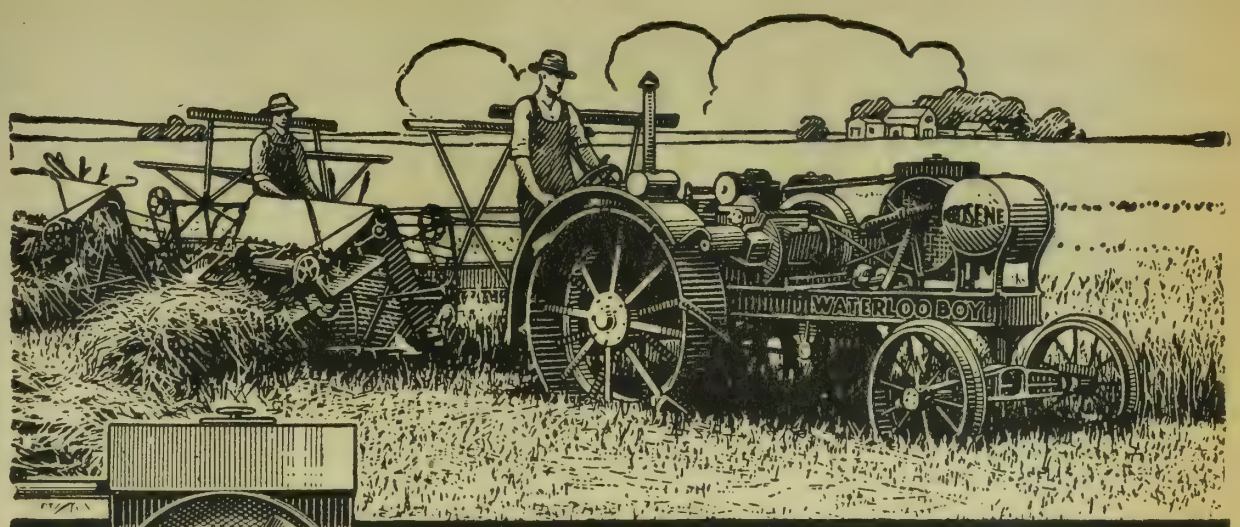
A good comparison between common and Mariout barley on an extensive scale was had on the Trescony ranch at San Lucas. Julius Trescony planted 70 acres to Mariout, but sowed common barley around the edge or on the hay land. The two varieties were sown the same day and the conditions were identical. The Mariout came up first and maintained a substantial lead over the common barley in height until it headed. After the Mariout headed, the common barley continued to grow to straw, until, when it headed out, it was a foot to a foot and a half higher than the Mariout. The Mariout appeared to be two to three weeks earlier in maturing than the common.

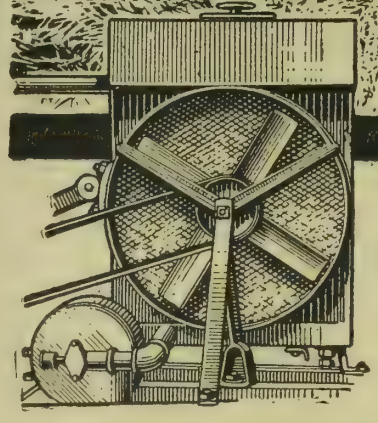
In harvesting, the common barley was cut separate, the area measured and the sacks counted. Then a like area of the Mariout was cut and the sacks counted. The common yielded at the rate of 22.7 sacks per acre, and the Mariout at the rate of 45.4 sacks per acre, or just double the yield of common. After the 70 acres of Mariout had been harvested, it was found that there were 2,785 sacks, which would make the average yield just under 40 sacks to the acre. The best yield of common barley in the vicinity was 23 sacks. The seed in both cases was sown dry on summer fallow before December 1 and had only 8.04 inches of rain.

The Bunyip wheat has also shown a decided advantage over the varieties commonly grown in Monterey county. It has yielded at the rate of 17½ sacks per acre where other varieties have yielded 9 and 10 sacks per acre. Mr. Trescony and Henry Martinus of Lockwood are the largest planters this year, but there will be a large acreage of Bunyip grown next year.

U. S. BARLEY CROP INCREASED.

The U. S. Bureau of Crop Estimates expects 30,000,000 bushels more of barley in the United States this year than last. California's production is estimated at 29,425,000 bushels, which is 575,000 less than last year's final estimate. Only 1½ per cent of last year's crop remained in hands of growers of U. S. August 1, 1920.





A centrifugal pump, four-blade fan, and large size, honey-comb type radiator insure positive cooling on the Waterloo Boy.

Uniform Cooling Keeps The Engine on the Job

THE cooling system of a tractor gets its real test during the heat of harvest and early fall plowing. It is then that you can rely upon the Waterloo Boy—the pump, fan and radiator system of cooling always keeps the engine on the job.

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BURNS KEROSENE COMPLETELY

To secure uniform power you must have uniform cooling. The pump, fan and radiator system used on the Waterloo Boy positively assures uniformity in circulating cooling water.

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You get a big radiator on the Waterloo Boy. It holds thirteen gallons. You won't find it necessary to stop in the field every few hours on a hot day and fill it.

The cooling system is but one of the Waterloo Boy's superior features. Its simplicity and accessibility, its powerful 12-25 H. P. engine, its ability to burn kerosene and burn it right, its Hyatt roller bearings that eliminate friction, and a drawbar shift lever that gives you the correct line of draft on all tools, all contribute to make it a real farm tractor.

John Deere Implements, Waterloo Boy Tractors and Kerosene Engines are distributed from all important Trading Centers. Sold by John Deere Dealers everywhere.

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Have a few hundred sacks of good clean seed left. Order early.

Julius Trescony, - San Lucas.

Your Soil Needs Humus and Nitrogen Bacteria

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Now is the time to plant it. Buy only seed that has a quality test tag on every sack. It protects you against seed of low germination.
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Look for the Tag LOS ANGELES, CAL.

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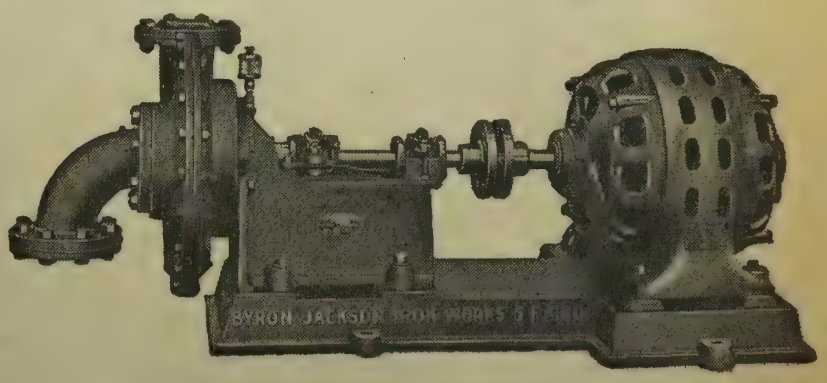
Is your soil producing the maximum?
"BYRON JACKSON" PUMPS are built to meet every condition of "supply and demand" on your ranch.



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The utmost power value

Pure throughout, dependable always, Red Crown gasoline gives the utmost power-value. It is made to meet the requirements of your engine. Look for the "Red Crown" sign before you fill.

STANDARD OIL COMPANY
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Iceless Summer Cooler-House.

I want a small building above ground that will take the place of a cellar in which butter and milk for family use can be kept cool in a climate where 100 degrees is not unusual I also want to store canned fruit and a pork barrel. I do not want a "drip safe" or a milk house such as dairymen use. Such a place can be built, but how is the coolness produced?—C. E. F., El Dorado county.

Coolness in such a building is obtained either by running a cool mountain stream through it or by arranging the "drip" system to which you object, or by simply opening the place at night and excluding the daytime heat. To do the latter, build it in the shade. Hollow cement blocks laid to secure a maximum absolutely dead-air chamber in walls and some sort of tight double-roof will hold the coolness of night throughout most of the day. A double wooden wall packed with sawdust accomplishes a similar result. Avoid all ventilation you can during the daytime; but have a screen door and window, so you can cool it out thoroughly each night without exposing the contents to cats.

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Get Rid of Them Now With CRESOLITE

A few ounces applied now in the hot weather to a stump will paralyze and kill it in a week. Sample can of 13 lbs. $2.15. Money back if it fails. Bbl. lots at 12c per lb.

LOUIS BAHRS, LOOMIS, CAL.

Prolific Winter Rhubarb.

The finest rhubarb we saw in a recent trip is an acre of Wagner's Amber or Mammoth Winter Strawberry, located near Norwalk in Los Angeles county. It had been planted a year ago last June, two feet apart in rows five feet apart. At a year of age, it was a dense mass of big green leaves and stalks twenty to thirty per hill, many of the stems being longer than a yardstick and almost an inch square, even to the base of leaves. Some seed-stalks, allowed to grow on account of the press of other work, were fully 5½ feet tall and nearly as big as your wrist. All of the patch had been pulled once, and part was pulled twice this season. The latter part was knee-high in July. This variety is chiefly valuable, however, because it grows well in winter when demand is strongest. The entire crop was sold on the place to private parties and to hucksters, a great deal at five cents per pound. The land was well fertilized before planting, but not since. It was irrigated after each crop was pulled, with a cultivation preceding and following each irrigation. It was aimed to break off all seed stalks so soon as they appear for they do not add to the reserve force, which is gained by giving the rhubarb a rest through the summer.

Velvet Beans Failed.

Velvet beans were tried last year at several points in Southern California and were frequently if not generally found wanting. It may be that proper cultural methods are yet to be practiced; but O. K. Kelsey of Riverside county, who used to grow them in the Southern States and failed with them in California, suggests that their success in the humid South is no guarantee of success in the arid climate of a California summer even though irrigation be supplied. Aphids prevented his velvet beans from doing anything. G. A. Pettit of Los Angeles county planted velvet beans about July 1, among corn knee-high planted thick for silage. They made a poor stand and those that grew did nothing of value. He admits that this didn't give the beans a chance. Perhaps others had better success. If so, our readers would like to know how it was done.

British Queen Potato Preferred.

Britsh Queen potatoes are pushing the White Rose variety off from many Southern California ranches. P. Giraud of Los Angeles county, who grew about fifteen acres this season among his walnut trees, was digging in mid-July. The British Queen were yielding more, but perhaps they should do so, considering that it took about twelve sacks of seed per acre, and they ripened at the same time as White Rose planted two weeks later.

Chickens Kill Morning-Glory.

To the Editor: Some of your readers will be glad to know that chickens will kill morning glory if confined on it when growing. We have tried it and it works fine.—C. Graham, Lake county.

The Chinese ringneck pheasant is also fond of grasshoppers' eggs, and is especially a destroyer of the locust, which deposits its eggs on the earth in dry places, as well as on the larvae of any insect which may be found there. There is much interest shown in Dakota's experiment in distributing pheasants among the horticulturists and agriculturists of that State.

How 100,000 Farmers Plow

The Fordson Tractor - The Oliver Plow

A well plowed field is the first requirement for a perfect seedbed. It is absolutely essential for a maximum harvest.

Throughout the world progressive farmers are doing their plowing in the newer, better way. With reliable Fordson power they are using specially built Oliver Plows to turn a uniformly good furrow.

Special Oliver Plows, in types to meet any soil conditions, are designed and built to work with the Fordson. That is why the work measures up so fully to what a good plowing job should be. Oliver Plows will do for you what they have done for 100,000 Fordson farmers in America—make your plowing easier and better.

To fully prepare your seedbed you also will want to use the Roderick Lean Automatic Disc Harrow which was designed especially for the Fordson. With the ground prepared, the Amsco Drill and the Fordson Tractor make certain proper seeding. All of these implements are automatic in action, being controlled by the operator from the tractor seat.

Farming the Fordson way with special Fordson tools is the sure road to complete satisfaction. See the Fordson Dealer in your town.

DISTRIBUTORS OF THESE IMPLEMENTS

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Authorized Sales and Service - Since 1903.

San Francisco, Oakland, Los Angeles and San Diego, Cal.

POWER FARMING BRINGS THE GREATEST PROFIT

EDEN TOWNSHIP LAND SHOW.

(Written for Pacific Rural Press.)

Hayward, the heart of the modern Garden of Eden of Alameda county, held a most creditable land show during the past week. The amount of exhibit space was practically double that of last year. Community exhibits were offered by fifteen community districts of Hayward and the surrounding country. Oro Loma community, that boasts of a cherry tree over fifty years old, the tallest bay tree in the State and a rose bush 38 inches in circumference captured first prize for farm products and fruits in the fresh, dried and canned state. Mount Eden community took second prize. The exhibit consisted of farm products and fruits. San Lorenzo made the best showing on fruits. As a matter of fact, all communities are worthy of commendation in the selection and installation of their products. Fred Suelberger, horticultural commissioner of Alameda county, was there with the evidence of false packing and misrepresentation of the fruit standardization act. There was on exhibition at the horticultural booth a score or more of jars of embalmed fruits. Each jar represented a fine of $50. A. H. Myura, Yolo county, in attempting to prove an alibi, was fined $50 for violating the fruit standardization law, and $50 for violating the law of truth. When Y. Oaki carefully wrapped and packed Bartlett pears in standard boxes that revealed 100 per cent worms, the court thought that a fine of $1.00 per cent would be in keeping. Mr. Oaki plead guilty and took his medicine.

A booth worthy of praise was that of the housewives' general exhibit of jams, jellies, preserves and canned fruits and vegetables. The farm implement and tractor exhibits were exceptionally good. There was also a creditable automobile exhibit. The poultry, pigeon and rabbit department was an attractive feature as Eden township is noted for its fine specimens of all such, especially on pigeons, as the largest loft in the United States is located at Hayward.

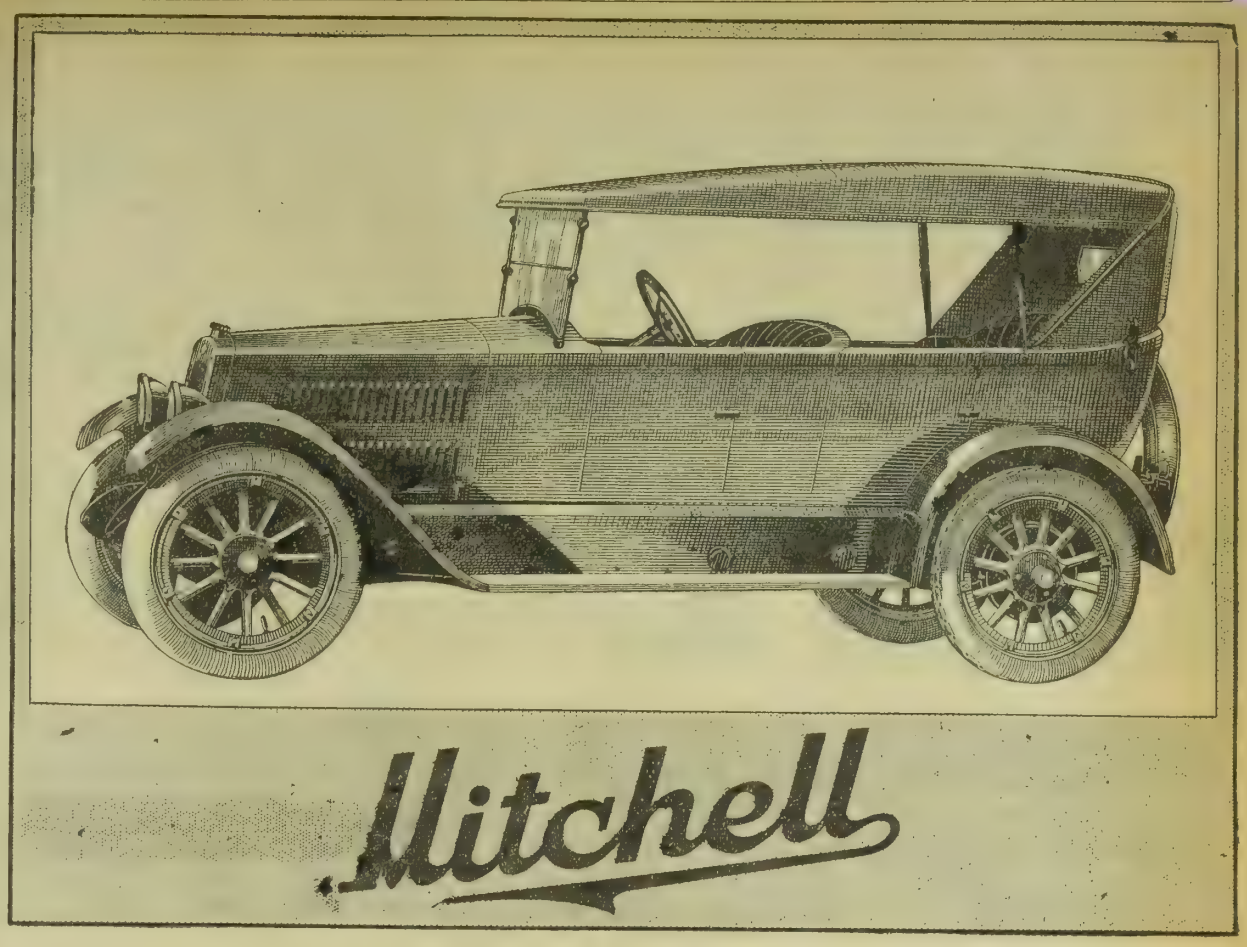
MOLES DO EAT SEEDS.

To the Editor: I have often read that moles eat nothing but worms and insect life. On the 8th of this month I was at my son's place near Ukiah. Needing a barley sack he went to an outbuilding with a dirt floor and raised up a sack that contained what is called "scratch feed" for chickens. There was a mole under the sack. He grabbed the mole, slammed it on the ground and killed it. Seeing several small holes in the bottom of the sack we thought the mole had made them with his nose. I picked the mole up, opened its mouth and found one grain of Egyptian corn and two pieces of Indian corn and other small pieces of something that was in the scratch feed in its mouth. This was positive proof that moles do eat other things than insects. The mole was not driven by hunger to eat these grains as there was a garden close by that was moist from irrigation that was an ideal place for the mole to get insect life to eat. Having been a farmer all my life, I have thought many times that moles had eaten seeds and now I am sure that they do. —A. E. Burnham, Healdsburg.

WHERE "SHIP BY TRUCK" FAILS.

The "Ship by Truck" motto that we frequently see about the country only arouses the indignation of a certain large alfalfa shipper, who told us recently why he does not ship by truck. The rates quoted to him for shipment by truck were $2 per ton for the first five miles and 25 cents per ton for each additional mile up to 20 miles, and 20 cents per ton per mile for all distances beyond. This figured up to $7.75 per ton for hauling 30 miles! Who would "ship by truck" for the pleasure of enduring such robbery? Yet a whole association of draymen were said to have adopted this rate. This man was in Northern California. In the southern part of the State it seems different; for we saw one truck with a trailer carrying a total load of 16 tons baled alfalfa at once from a ranch in Los Angeles county. Where motor truck rates descend out of the profiteering class, shipping by truck becomes really economical.

Chickens will not give adequate returns in eggs or growth when kept under unsanitary conditions.



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Save first on first-cost. The New Mitchell should be compared to cars costing $500 to $1000 more. Nowhere will you find such a fine car, combining new-day style with dependable performance, at such a low figure.

Save in the future. The New Mitchell affords a car of lasting newness, one that is stronger, more durable, and better built. It brings new accuracies in manufacture, finer materials, and sturdier assemblage.

It is built complete, including the bodies, at the highly efficient Mitchell plant.

The New Mitchell brings not only these savings, but a future-style car, one with new lines and refinements. It brings a roomier, more comfortable body. And a careful attention to details of finish found only on costlier cars.

We suggest, as a precaution, that you see the New Mitchell before you buy. Examine it. Then make comparisons.

A Mitchell dealer will be glad to assist you by showing the New Mitchell's superiority and giving you the points by which to judge.

Four Models
5-Passenger Touring Car
3-Passenger Roadster
5-Passenger Sedan
4-Passenger Coupe

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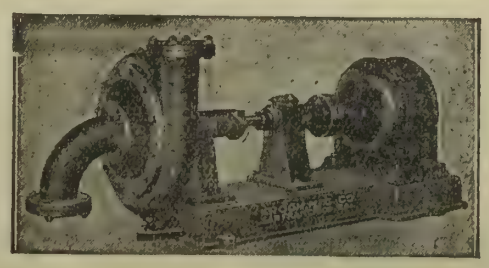
AWARDED PANAMA PACIFIC INTERNATIONAL EXPOSITION GOLD MEDAL AWARD SIGNIFICANT GOLD MEDAL MACHINERY AWARD GIVEN



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KROGH PUMPS absolutely hydraulically and automatically water balanced. No end thrust whatsoever.
Also DEEP WELL TURBINE PUMPS for bored wells 10-inch diameter and up.
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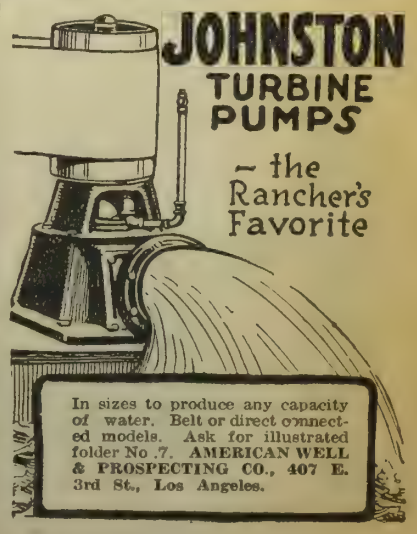

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Not an hour without p

DELCO-LIG

Farm life in this country is bright and independent as never before. Electricity for every farm has struck off the shackles of drudgery.

DELCO-LIGHT is acknowledged as the most helpful single factor in establishing better living conditions in rural homes. It takes the darkness out of night-time—fills every hour with power.

So DELCO-LIGHT, through its widespread distribution of economical and dependable light and power, has become a national farm institution.

More than 100,000 farmer users of DELCO-LIGHT to-day enjoy the advantages of an individually-owned and mechanically complete electric light and power plant.

Three thousand DELCO-LIGHT plants are installed on the Pacific Coast alone. They are furnishing a constant and economical light and power supply to their delighted owners.

Why not put a DELCO-LIGHT plant in YOUR home this fall? Let us prove to you how it will pay for itself in safety from fire hazards—in essential conveniences—in labor saved.

You owe it to yourself to study the message proclaimed by more than 100,000 satisfied users of DELCO-LIGHT. "YOU, too,"—so the message runs—"should enjoy the advantages of DELCO-LIGHT."

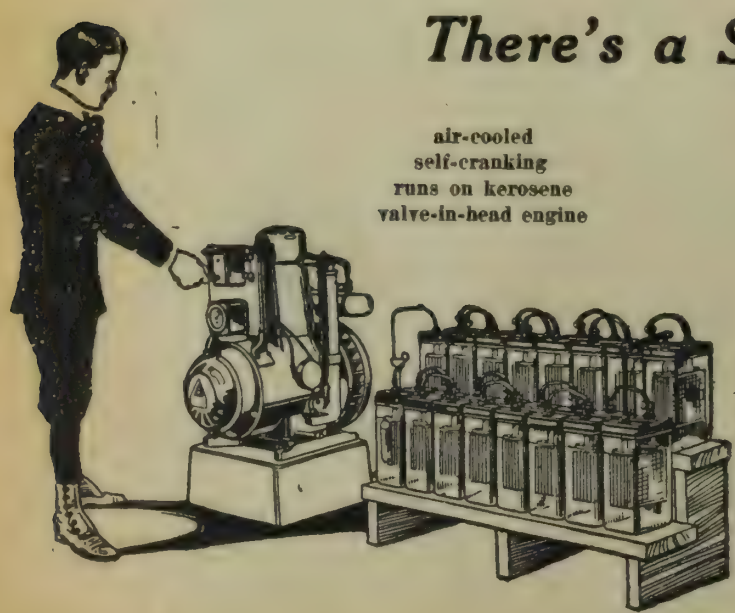
As they have proved for themselves, so can you—before you buy—demonstrate that DELCO-LIGHT operates best on kerosene at a cost of a few cents a day—and kerosene is the cheapest fuel on the market.

You, too, can watch any member of your household pull the starting lever on the air-cooled engine and see real service begin. Because of its fool-proof features, DELCO-LIGHT will continue its dependable service for a life time.

DELCO-LIGHT is an invaluable helper in both man's and woman's work. Besides, it fills the farmhouse and outbuildings at all times with brilliant but cheaply-produced light.

There's no knocking off of chores because of darkness if your farm is DELCO-lighted. High wages for farm help drag less heavily on DELCO-LIGHT owners. The hired man works cheerfully and longer under DELCO-LIGHT.

There's a Satisfied User Near You



DELCO-LIGHT plants are made in sizes to meet your every need. Whatever the light and power requirements of your house and outbuildings, there's a DELCO-LIGHT unit of just the right size to deliver most economical and dependable service.

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DELCO-LIGHT is sold on your own choice of terms. Our money-back guarantee attends a 30-day test on YOUR FARM. Order to-day and secure immediate delivery.

Make a part payment and balance in six months. Or, three payments—on the third, sixth and ninth month. Or, cash on delivery. DELCO-LIGHT is easily installed and requires little space.

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I have a house of ..... rooms,

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Prove to me how DELCO-LIGHT on my farm will pay for itself.

Name .....

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Latest Power Farming Machinery Shown

(Written for Pacific Rural Press.)

GUY H. HALL,
Manager of the First National Tractor and Implement Show of the West, to be held near Glendale, Cal., September 20 to 26.

It took courage to propose the spending of more than $100,000 for a tractor and implement show in California after the farmers of this State had twice signified their general unwillingness to attend tractor field demonstrations—once at Sacramento and once at Los Angeles. Yet it was not the courage of foolhardiness; for those who proposed the National tractor and Implement Show to be held at Glendale near Los Angeles, September 20 to 26, had behind their idea the experience of five annual National tractor and implement shows at Kansas City, the latest of which was held February 16-21, 1920. Farmers of the Middle West had also unmistakably signified in the last year or two that they would not chase tractors over acres of rough or dusty hot fields to see a demonstration of plowing, and they would not even take a moderate auto ride to come to it. At the same time, they also demonstrated by the thousands that they would come to study in a comfortable, leisurely way an attractive exhibit of tractors and implements, even when they had to pay admission fees. At the third National show at Kansas City, the exhibitors determined to find out whether it was really a National show. One of them who kept a register of visitors to his exhibit found at the end of the show that people from forty States and some foreign countries had seen his tractors and implements there. These folks had come purely for business reasons, as there were no sideshows or other feature attraction. Thenceforward, the manufacturers did not wait to be solicited to exhibit at the two shows held in 1919 and 1920. They went to the manager early to secure space. At last sprng's show a great many reservations were made for the 1921 show without knowing the date or place it would be held.

Still Exhibits Attracted Farmers.

These manufacturers are not exhibiting for the pleasure they get out of it. They pay out lots of good money, and they are eager to do it because they have found that a still show attracts farmers' interest in power machinery and furnishes the cheapest, most effective way of really doing business with real power users. Farmers attended in unexpectable numbers, because they recognized that here was their least expensive opportunity to see the latest improvements and get the widest expression of opinion regarding the weaknesses and advantages of various tractor features. Dealers were convinced in no uncertain way that farmers generally are eager to buy and use the best mechanical power and that the only question in the minds of probably 99 per cent of farmers is which is the best machine or which is the best kind of a clutch, carburetor, magneto, transmission, etc.

All Together for Inspection.

To answer the chief power farming question in farmers' minds, the logical method is to get all manufacturers or dealers together, with their machines, and then comfortably make them talk and show their machines. Thus the courage of the Tractor and Implement Dealers' Association of Southern California in undertaking a National Tractor and Implement Show was justified by the experience of the Kansas City show.

National Manager for Our Show.

Only one thing was lacking—experience. Members of the Association are mostly dealers who know more about tractors and implements than about show management. So they did the best thing that could have been done, regardless of cost. They employed as manager the man who had built up the five National shows at Kansas City and had made each of them more of a success than the last. His name is Guy H. Hall. Mr. Hall is applying the same methods to the Los Angeles National that have made the Kansas City Nationals so successful, both from standpoint of attendance and exhibits. He has undertaken a different course of action than is ordinarily followed by show managements. Even before the manufacturers and dealers had actually deposited money to secure their exhibit space, he had instituted an advertising campaign, designed to attract attendance. Throughout the great farming country of the Mississippi Valley he has spread broadcast all kinds of advertising to show the magnificent opportunities in California, not only for settlers from the East, but also for those who want a vacation trip to the "Land of Gold." Results of that advertising are already apparent. Advertising for the same result has been started in California and in international export papers. Already Mr. Hall has received notice of visitors who intend to come from many parts of Mexico, South America, and the Orient, as well as from the States.

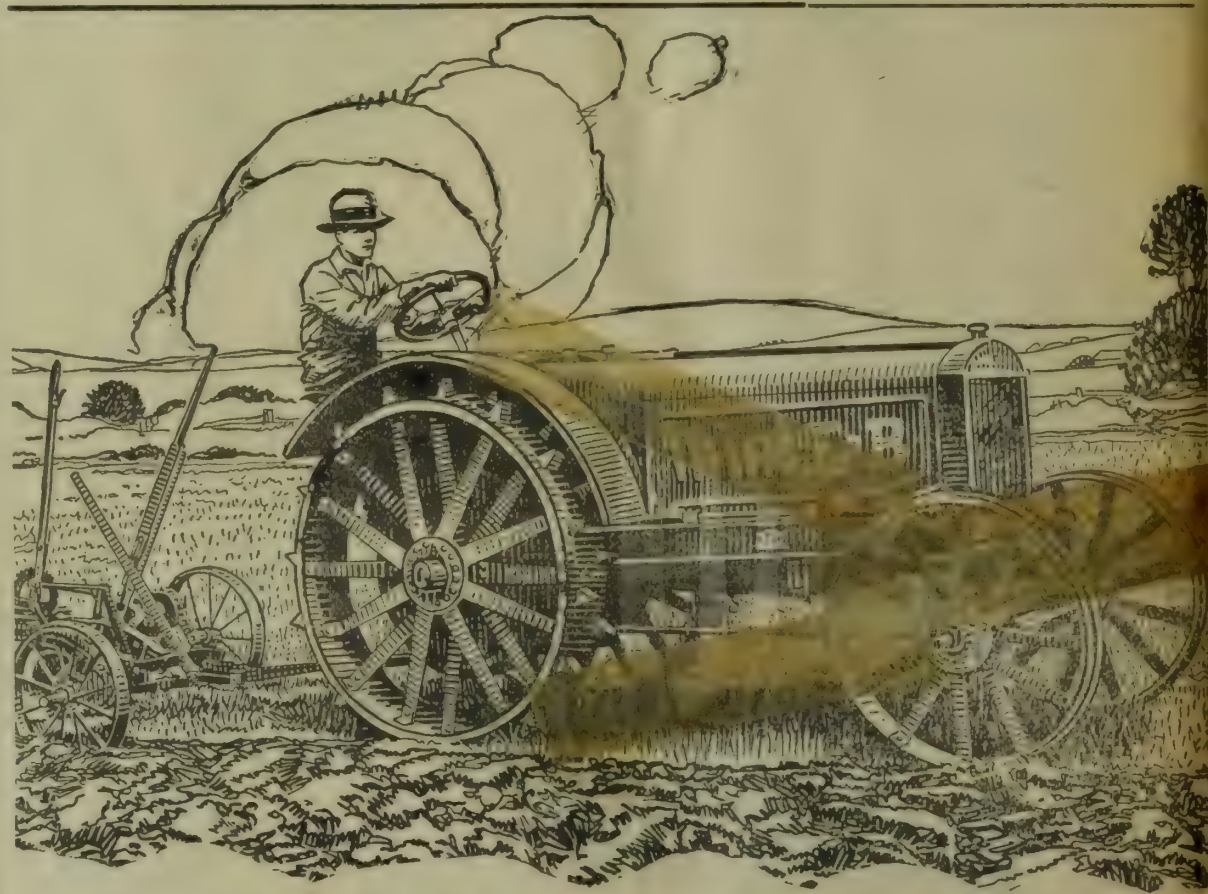
Really an International Show.

It will not only be a National show; it will be International. With these facts to present to manufacturers they readily see the advantage of a comprehensive, well-planned exhibit; and that is why they are universally signifying their plants to exhibit there. This includes the fourteen California manufactureres (who were the latest to be approached by Mr. Hall), as well as those of the East. There are many of the latter who have never offered their machines for sale in California. They will be at Los Angeles, because of the National character of the show. And the new models of equipment on tractors and all kinds of farm machinery, including motor trucks and trailers, will enable the investigating visitor to say after it is over, "I am thoroughly posted on the most up-to-date ideas in power farming."

Mariout Barley

HIGHEST QUALITY GOOD CLEAN SEED FROM TESTED, HEAVY YIELDING STOCK.

H. G. STEVENSON, JR. WINTERS, CAL.



A Real Kerosene Engine in a Real Tractor

The engine in the E-B 12-20 tractor burns kerosene as clean as you could wish. For this engine is not a mere adaptation of a good gasoline model—it is designed for the special requirements of kerosene.

As an example, consider the way in which this engine vaporizes the fuel mixture. The kerosene is mixed with a water jet as it enters the enclosed intake manifold. Then whatever portion of it is still in the form of fine spray falls on the horizontal bottom of this manifold and is instantly vaporized.

This is one feature of the E-B engine design. Many such features give it the great surplus power and economy that have made it famous both in the field and in competitions.

And the tractor as a whole measures up to the engine. Gears are drop forged, steel cut and heat treated. All gears are enclosed. The best anti-friction bearings money can buy for every important bearing surface. Building a machine dust proof insures the life of this machine better than a life insurance policy.

Let your dealer tell you the many other points of advanced design and manufacturing integrity.

EMERSON BRANTINGHAM THE E-B LINE FARM MACHINERY

Emerson-Brantingham Implement Co.

Established 1852 Rockford, Illinois
Texas Branches: Dallas and Amarillo

A complete line of farm machinery manufactured and guaranteed by one company

Do We Want Legislation on Tuberculosis?

Written for Pacific Rural Press by Thos. F. McConnell.

Those who ought to know have intimated that some legislation will be proposed at the next session of the State Legislature looking toward the eradication of tuberculosis in farm animals. Some such laws may be passed, and they may be of great benefit to dairymen or they may give us an awful jolt. It would depend on what they were.

Certain it is that, as we are the ones most deeply concerned, we ought to be the deciding factor. We will not be, however, unless we know what we want or do not want. If we really know what legislation to support and what to fight, the chances are good that with the Farmers' Legislative Committee on the job, no legislation will get past that will not be for the best interest of the industry.

Do Dairymen Know What They Want?

If the dairymen could have passed any law they desired on the subject, what would it be? Do they, as dairymen, know what they would propose? Have they ever thought of the subject from that angle? Most of us know what tuberculosis is. Most of us are now familiar with the tuberculin test, though many of us are not as cock-sure about its actual merit as some seem to be. Most of us understand that the loss caused by the disease is one of our heavy losses, though hard to express in dollars and cents. But when these points are passed most of us are either a cipher or a question mark.

Should every reactor be condemned out of hand as a tuberculous animal? Can we ever clean up our State by insisting on the tuberculin test for all imported animals, while no native herd need be tested unless the milk therefrom is to be sold "raw"?

What Will We Do with Reactors?

Would it be wise to make the tuberculin test compulsory for all herds? If so, how shall reactors be disposed of? Would anybody advise the drastic action of slaughtering all reactors as soon as found. If so, who should foot the bill? If the state stands it, who will pay the bill ultimately? The dairyman couldn't stand the loss, could he? Wouldn't that kind of elimination eliminate the dairy industry? And if it were done, what would happen to the milk supply? Could some practical scheme be worked out for the compulsory segregation of reactors, removing the calves from them when born, but letting them live on till their profitableness ended? How many inspectors would it take to enforce such a law?

Doesn't it cost more to clean up a herd and keep it clean that it does to weed out from an untested herd any animals that show signs of "breaking down"? And after all, isn't this the heart of the problem? Society has protected itself by insisting on a rigid tuberculin test in dairies selling raw milk and pasteurization for milk from untested herds, together with meat inspection and the condemnation of unsafe meat. That is about as far as society ought to go, isn't it? The rest is an economic problem up to owners of livestock. If a way can be found to eradicate tuberculosis that undoubtedly causes us a heavy loss, without entailing a still heavier loss, we would all welcome it, wouldn't we? But has such a way been found? If so, who knows what it is?

Compulsion or Persuasion?

Which is wiser and better at this stage of the game—a dictum or an argument, compulsion or persuasion, legislation or education?

How do you stand on this tuberculosis business anyway? Better find out before the legislature meets, for you may have to stand or be stood upon.

State Dairymen Meet at Modesto.

Written for Pacific Rural Press by Ralph Newman.

The second attempt to get a quorum for a membership meeting of the Central Association at Modesto last Saturday succeeded. A final count showed 456 present in person and 516 by proxy. Technically this was 43 short of a quorum, but as the president stated that the roll could never be kept right up to the minute, the meeting declared a quorum present.

Chairman C. W. Grannis read the call, which stated the purpose of the meeting to be to take action on the idea of co-operative marketing and whether or not the Central Association should retain membership in the State Association. He had hardly finished reading when the oratory began. It was soon decided, however, to let Mr. Watson, president of the Central Association, present the local side of the case, and J. M. Henderson, Jr., president of the State body, that side of the matter. Little that was new was brought out, and as Henderson closed it was apparent that the dairymen knew what they wanted and they began clamoring for a vote. For some time, however, the oratory could not be suppressed, one dairyman after another insisting on being heard and the chairman vainly pounding for order.

A Turbulent Time.

Once, said chairman had things in hand and might have secured an orderly vote, but he "spilled the beans" by giving it as his judgment that more of the directors should be heard. In a regular pandemonium one director launched into a speech bristling with personalities, and all hope of orderly settlement went glimmering. Finally some large-lunged man got a motion before the house to the effect that the Central Association should remain in the State body. The chair ruled that the vote could be only advisory, and therefore it would not be necessary to vote the proxies. The motion was finally put and carried overwhelmingly.

Then somebody else moved that it be the sense of the meeting that the Central Association enter into the State co-operative marketing plan. The chair promptly ruled this out of order, and instantly the whole house was out of order. Somebody moved to elect a new board of directors on the spot, but this was out of order, too. Then the chairman reversed himself to the extent of ruling that the co-operative marketing motion might be put, but that it would require a roll-call and the voting of the proxies. The great mass of earnest, sweating dairymen couldn't see any fairness in this ruling, and protested vigorously and most demonstratively.

In the midst of the protests the secretary, Guy Miller, proposed an amendment to the effect that the Central Association join the co-operative marketing plan when 75 per cent of the product is under control. The floor insisted that the vote be taken as the former one had been, but the chairman stood firm and the meeting began breaking up in disorder.

Another Meeting Called.

At this point H. A. De Cue took charge of things, secured the attention of some 300 members left in the hall and got a motion passed almost unanimously favoring uniting with the State Association for co-operative marketing. A new chairman and secretary were elected, and this insurgent meeting passed a resolution calling for another meeting of the entire membership in five weeks to go over the matter again and secure the rights of the whole membership.

And that is how matters stood when your reporter left Saturday night.

NEVADA NEWS NOTES.

The Nevada Livestock Association has withdrawn from the recently organized Tax Payers' Association.

George Russel, Jr., of Elko was recently elected president of the Nevada Livestock Association, to succeed Jerry Sheehan of Winnemucca. Mr. Sheehan has retired from the stock business.

Indians in Elko county have gathered a number of horses on the ranges and shipped them to California, to be used for chicken feed. This movement is ridding Nevada ranges of a number of worthless horses.

The Government Experiment Farm, located near Fallon, will be temporarily abandoned for lack of funds. Mr. Headly, in charge, will be stationed at Grand Junction, Colorado, for a short while, and from there will be stationed in Washington, D. C., for an indefinite period.

The Department of Animal Husbandry of the University of Nevada has lately sold the Shire stallion colt, Commencement Combination, to the Potter-Huffman Land and Livestock Company of Alturas, Cal. The colt is sired by Salvador Buster and out of Lady Salvador.

Some livestock is being shipped from Nye and other southern and eastern counties to Colorado and Utah for feeding. However, most of the cattle and other stock in the State will be well cared for as the hay crop is excellent in most parts of the State.

There are still 55,000,000 acres of public land unappropriated in Nevada, according to figures given out by the Secretary of the Interior at Washington, D. C. Of this total, only 31,971,560 acres have been surveyed. Most of this land is suitable for grazing during a greater portion of the year.

An organization of water users along the upper Humboldt River has been formed to facilitate the adjustment of the water rights along that river. It is planned to raise $15,000 to carry on the work of the Association. Each member will be assessed about three cents for every acre of irrigated land that he owns.

Elko county announces that $3,000 in premiums will be offered at the County Fair to be held September 16, 17 and 18, at Elko. Over one hundred head of livestock has been entered. Many features, such as a rodeo, Americanization Day under the anspices of the American Legion, and daily horse races will be staged. The Departments of Animal Husbandry and Dairying of the University of Nevada will exhibit two or three cars of livestock.

A few losses of cattle and horses are reported from the Ruby Valley district, due to larkspur, water hemlock and monk's hood poisoning. Salt is now being placed three hundred yards back from the watering places to induce the cattle to graze out of the creek bottoms at an earlier date.

A conference between residents of Lake Tahoe and Fernley ranchers was held at the Reno Chamber of Commerce before Colonel E. E. Winston, to discuss the possibilities of removing a sand bar formed above the gates to the outlet of the lake. It is thought that an agreement will be made whereby immediate relief will be given to Nevada ranchers who face a loss of $150,000 on their hay crops.

Announcement has just been made of the purchase by Russel Jensen of the Humphrey-Moffat interests in the Wheeler Livestock Company. This is one of the largest dealers made in Nevada for some time. Mr. Jensen is now associated with Don C. Wheeler, who remains in management of the business. About 13,000 sheep were involved in the deal. The consolidation of the Jensen and Wheeler interests will make the company one of the largest sheep companies of the State.

The Butte City Ranch sale was largely attended although buyers did not appear in as large numbers as had been hoped. Sheep and Shetland ponies seemed to be the favorites, although some Shorthorn cattle and Berkshire hogs found new homes. About 100 head of Shropshires were sold at fair prices. Ponies sold from $155 for mature animals down to $30 for a sucking colt. A few Berkshires and Shorthorns passed over the block at prices that were not spectacular.

ORMONDALE RANCH SHORTHORNS
REDWOOD CITY, CAL.
HERD SIRES
BOQUHAN GUINEA STAMP, the great imported Young Broadhooks bull.
GOLDEN GOODS JR., sire of LITTLE SWEETHEART, Grand Champion International Show, Chicago, 1919.
Bulls and Heifers for sale.
Duroc-Jersey Hogs for sale.
JAMES McDONNELL, - Supt.

Live Stock Insurance
The fall fair and exhibition season is at hand.
THE HARTFORD LIVE STOCK INSURANCE COMPANY
will insure your show stock (horses, mules, jacks, cattle, registered milch goats, and registered swine) against death from any cause, while at home or on the road, including the hazards of transportation. Policies broad and liberal; rates reasonable—yet adequate to insure prompt settlement of claims. Before shipping see the Hartford Agent in your town, or address
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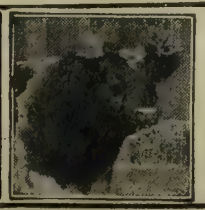
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You want the extra 50 to 200 lbs. weight and you will get it by using a Shorthorn bull. The Shorthorn steer finishes readily for the market at any age from calfhood. He keeps growing without losing his finish. The quiet temperament of the Shorthorn is a valuable asset.
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FOR RENT: Splendid opportunity for cattle or sheep—3800 acres rolling range—480 acres good grain land nearly level. Deep well at headquarters, 180 gals. per minute. Water being provided at central point. Good road five miles to railway station and three-fourths mile to State Highway, located between Dunnigan, Yolo Co., and Rumsey; twenty minutes from Arbuckle. Owners wish to lease till May 15th.
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DIAMOND BAR DUROCS Double Your Dollars

Ace of Pathfinders

This great boar headed the World's Grand Champion Duroc herd at the 1919 National Swine Show; also the first prize get of sire herd. All animals in both herds are owned by us.

He was Grand Champion at the Los Angeles Livestock Show and stood second to the world's grand champion at the National.

He is by Pathfinder, out of Hiawatha, by Crimson Prince, and, besides his show ring record, he is considered one of the greatest sires of the breed.

BUY THESE BREED IMPROVERS

Now that we have decided not to hold a summer sale, we are ready to offer at private sale the greatest array of Duroc breeding and individuality ever put before California buyers. We have culled closer than ever this season, and every animal not fully up to the high Diamond Bar standard has been sent to the fattening pen. And those that remain—say, man, they are real ones!

No matter whether you want a foundation herd, new blood for an established herd, or simply a boar to breed up a grade herd, we can satisfy you from the Coast's largest Duroc herd. While quality is high, our prices are reasonable, and every animal is sold under a guarantee of complete satisfaction.

CALL OR WRITE

DIAMOND BAR RANCH

FRED LEWIS, OWNER AND MANAGER — R. K. WALKER, Hog. Dept.

SPADRA, Los Angeles County, CALIFORNIA

THE MOST PROFITABLE BROOD ANIMAL ON THE FARM

THE OLD RED SOW

She Is No Slacker, but Does Her Bit and Guarantees Returns on the Investment.

SHE IS ALL THIS BECAUSE

The Duroc sow reproduces more rapidly.
The Duroc sow is a good mother.
The Duroc sow is a wonder grazer.
The Duroc sow is a prepotent breeder.
The Duroc sow is an easy feeder.
The Duroc sow is the most popular.

SHE FEEDS THE WORLD, PAYS DEBTS AND MAKES PROSPERITY.

For information relative to DUROC-JERSEY HOGS, write to J. P. WALKER, Secretary-Treasurer

California Duroc-Jersey Breeders' Ass'n

VISALIA, CALIFORNIA

Duroc-Jersey Hogs for Sale

BOARS AND GILTS
BRED SOWS
SOWS WITH LITTERS

DIABLO STOCK FARM,
E. F. PETERSEN, Supt., Danville, Cal.
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They are the large type and the best blood strains to be had anywhere.

HERD BOARS AND SOME OF THE SOWS

Lucy Orion's Model
California's Defender
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Great Wonder I Am Gano
Pathfinder's Queen
Prize of Tulare Belle
Twin Oaks Attraction
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and 50 others

WEANLINGS, $15.00 EACH AT RANCH.—A large number always on hand to choose from. Crates, $2.50 each, refunded when returned prepaid in good condition.

MAIL ORDERS SOLICITED. SATISFACTION OR MONEY BACK.

From Grapes to Berkshires and Walnuts

(Written for Pacific Rural Press.)

Four thousand acres of grapes, four hundred of which are interset with walnuts—that is a beginning of diversification. But that is not all. The writer can remember years ago when the wheat raisers of the Middle West were looking and moving west and further west in search of a grain growers' Utopia, where bumper crops would always prevail and sell at a profitable figure, but no matter where they went the land would wear out, and cinch bugs and other pests appear. They were not all a drifting lot, however; some staid and caused two blades of grass to grow where one grew before."

How did they do it? By diversification, by raising livestock of some kind. It did not make any difference really what kind, so long as it was cared for properly. Cattle, hogs, or sheep, the result was always the same—prosperity followed.

We do not mean to insinuate that the vineyards at Guasti were not yielding as they should, but when any plant growth has been established on land for a term of years, the owners, many times, for some reason, seem naturally to turn to livestock of some kind. The Italian Vineyard Company have selected Berkshire hogs. We won't say that it is the intention to cover the 4,000 acres of vines with hogs, but they have started the diversification with walnuts and hogs.

The Berkshires that compose their foundation herd shows that some one is looking after it with very discriminating judgment. The personal selections certainly are demonstrations of good judgment.

Sows from the Natomario Rancho, owned by W. F. Sandercock of Sacramento and San Francisco, a sow bred at the Oregon Agricultural College, Castleview Ranch, has a representative or two; also sows from the noted Barker herd of Thornton, Indiana.

A very recent addition is Rival's Wonder 48th, purchased at the sale of the Piping Brook Farm, Greenwich, Conn., for $5.75. She is to farrow a litter by Fairview Ruler, grand champion Berkshire at the National Swine Show 1919 and several State fairs.

She boars were in fine breeding condition. Among them is Champion Masterpiece 8th, 2 years old, an excellent type and proven sire, whose dam at 9 years of age farrowed a litter of 8 good pigs; Choice Goods 10th, by Superb Emblem, that stood second in class at the State Fair last year in a strong class; a junior yearling boar by Real Type out of a Baron Duke 170th sow, that is a coming hog. He is long, has the right kind of a high back and strong bone. Looks like both a show boar and a breeder.

The equipment is very convenient and complete, practically all after the plans of the manager, Alex. Wilson. Pens are arranged so hogs can be transferred quickly with minimum of confusion and labor.

We must look upon this herd as in benefit to dairymen or they may give breeding is concerned. No one can in a year or so, more than assemble the foundation for such a business. At Guasti, however, they have made a wonderful beginning and are in a position to begin to work out their ideals and demonstrate the economic and aesthetic value of their chosen breed.

A SALE OF CLEAN DAIRY CATTLE.

Tuberculosis and contagious abortion cause untold losses to the dairymen of the state and nation every year, therefore, when an opportunity occurs for the breeder or dairyman to secure registered dairy animals that are free from these troubles they ought to grasp it. If a man is contemplating starting a herd of registered Holsteins, or wants healthy stock of excellent breeding to enlarge and improve his herd, then the chance will be his at the State Fair Grounds an Thursday, August 26, when 50 head of such Holsteins will be offered.

The Butte County Co-operative Farmers' Union has disbanded.

MORE PORK IN LESS TIME

Duroc-Jersey hogs have a tendency to put on great amounts of pork at an early age. They are easy-feeding animals, and raise large families. These hogs were introduced less than 50 years ago, and yet in 1918, 51% of all the hogs marketed in the country were "Duroc-Jerseys." They are uniformly red in color. Increase your profits by raising Duroc-Jersey hogs.

Write for "DUROC-JERSEY HOGS ARE PROLIFIC AND PROFITABLE"—sent free to hog-raisers by the largest swine record association in the world. Over 12,000 members.

The National Duroc-Jersey Record Association. Dept. 120 Peoria, Ill.

HOME OF $1500 SOW
ORION'S CRIMSON LADY

A-1 Durocs

Best Breeding
Big Type

J. P. WALKER, VISALIA, CALIF.

GUASTI BERKSHIRES

Weaned pigs, both sexes, from sows that farrow large litters and raise them. Priced reasonable—they are money-makers.

ITALIAN VINEYARD COMPANY

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ASK YOUR DEALER FOR

El Dorado Cocoanut Oil Cake

for Milk Cows and Chickens and Young Pigs and Hogs. Cheapest food in the market today. If your dealer doesn't carry it, address

EL DORADO OIL WORKS

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DIGESTER TANKAGE

Send for Sensible Folder on Feeding Hogs

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Animal Food Dept. 704 Townsend St., San Francisco

"HOGGED DOWN."

young breeder of purebred hogs his first public sale a few months in one of the mid-western states. an offering highly creditable to mparatively new man in the trade, obtained the satisfactory average ore than $400. He was induced, ot practically compelled, by sev- fieldmen, representing swine nals, to spend a ridiculously large for advertising, and probably sonal service." Moreover, having into the "game," and being too h of a sportsman to quit before g it through, he employed sev- auctioneers at high fees. The men promised to "make" his sale, the terms which they proposed, hing that they should first of all theirs."

hen, after the auction, he figured he net results, all the profits had taken up by the expense of hold- he sale. It was clear to him that ad been victimized by the field- They had levied upon him and the journals to which they sold dvertising. Like many another e breeder who has had a like ex- nce, he was disappointed and in- nt, and resolved to get out of impressed him as a "hold-up ." He reached this decision af- presenting all the facts to the rs of the swine journals in which d advertised, and asked them to e and denounce the methods pur- by their fieldmen. The editors not comply with his request; swine jouranls were themselves of the same group of parasites. e Gazette previously has re- ed that some of the fieldmen, senting some of the swine jour- are pursuing methods which, if discontinued, will discredit the ree hog business. Farmers are now saying that it is a rich or a gambler's "game," in which ctical farmer cannot afford to e. They read or hear reports les of ordinary boars of "fash- le" blood lines at individual which should found a small of good breeding hogs. Most of tter-informed farmers do not be- that the sensational prices are ntic, and many of those who as- that they are, look askance at siness which makes them pos-

en farmers and others begin to ny branch of purebred stock- g a "game," a "gamble" or a ," it is time for the real friends e industry to indulge in plain ing and prompt and effective ac- A situation which is becoming rable cannot long be ignored sponsible, conscientious swine rs, and by swine journals which worthy of support. A house- ng is necessary. The longer it ayed the more it will cost. hen who "hog down" swine rs, and use swine journals as eders are ready to ship. Off them.—Breeders' Gazette, July

TEN USEFUL MARES.

ten mares have ten mule colts. mares do the work on a 300- rigated farm and raise a colt. year they prepared the land, cultivated and harvested 60 of wheat, 15 acres of oats, 20 of sorghum for hay and 22 acres ar beets; mowed, raked and d the alfalfa on 200 acres three and hauled 300 tons of sugar hree miles and delivered them o dump. They finished haul- e beets about November 15. ere then turned on alfalfa pas- d were not given a single feed bout March 1, when they were up to prepare for the spring They are now ready to begin alfa harvest in fine shape, and e is raising a good mule colt. d rather have these mares than ctor for the use I have for F. G. Smartt, Bent Co., Colo., Breeder's Gazette.

only wool warehouse system Chicago of any magnitude is

Calculate Your Feed On the Hoof

IT isn't what your hogs eat, MR. FARMER—but the feed that sticks to their ribs that builds pork. And you'll find OLYMPIC Hog Feed a pork producer in every sense of the word.

Foremost authorities agree that the best hog ration is a *combination* of various health-giving elements. OLYMPIC Hog Feed is such a combination, containing properly balanced proportions of Flour Middlings, Corn Feed Meal, Linseed Oil Meal, Soy Bean Meal, Ground Barley, Digester Tankage, Salt and last, *but not least*, Dried Buttermilk. It is a blend of nutritious elements not found elsewhere.

Dried Buttermilk is a most important ingredient in this scientifically prepared Hog Feed. While valuable for its own nutrition, its great function is multiplying the nutrition of those other elements by intensifying their digestive and assimilative properties.

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Portland, Oregon

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CONDENSED BUTTERMILK

SOWS AND PIGS
Receive Great Benefit

Both the sow and the pigs receive beneficial return from the feeding of the scientifically prepared **LACTEIN**—both need the tonic and cleansing properties gained through the LACTIC ACID contained to the highest degree in **LACTEIN.** It affords perfect digestion for both the sow and pigs—**LACTEIN** produces MORE milk for the sow, and supplies the animal food necessary to prevent "pig eating" of the sow. Start your sows and pigs on **LACTEIN** TODAY—economy, efficiency and results will make themselves quickly known in the wonderful improvement. When you invest in **LACTEIN** you are investing in pure added profit.

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Duroc-Jerseys.

DUROC-JERSEY SWINE

JUMBO SENSATION

Our new Herd Boar is one of the largest boars in the world for his age. We have some real buys in purebreds.

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TU-TOCK-A-NU-LA- RANCH
Ventura Boulevard and Hazeltine Ave.
Mrs. R. E. Whitley, Mgr.
Phone 160-J Van Nuys, Calif.

FIFTY DUROC-JERSEYS — Mostly bred sows and gilts. Some small pigs. Three service boars and five March boar pigs, grandsons of Mary Jane Pathfinder, the five pigs sired by Lord's Orion Cherry King. One son of Orion Cherry Pathfinder, out of Lamb's Model Lady. Elmer Lamb, Ceres, Calif.

DUROCS—BIG-TYPE—HIGHEST QUALITY—popular blood lines. Herd headed by Johnson's Defender, Jr., and Western Pathfinder. Bred sows and gilts and young boars for sale at moderate prices. Greenwood Farm, Witherow & Stafford, Live Oak, Cal.

BIG-TYPE DUROCS—Herd headed by California Orion King. Am offering excellent young boars at right prices. Inquiries invited. Harvey M. Berglund, Dixon, Calif.

REGISTERED DUROCS—April farrow—one boar, Orion's Monarch, by Borge's Monarch and Orion's Lady; also gilts. Lowell Beaver, R. "C," Box 397, Fresno, Cal.

ROCSTEIN RANCH DUROCS headed by Lord's Orion Cherry King. Breeding stock for sale at all times. W. M. Way & Son, Rt. 1, Box 320, Modesto.

JACK LONDON RANCH, Glen Ellen.—Exceptionally good weanlings. Bred sows and gilts. One good yearling boar and one fall boar. Prices reasonable.

NO PAYMENT DOWN and easy monthly terms, buys a few first-class registered Duroc-Jersey gilts, boars, proven sow and boar. Roy Collins, Corning, Cal.

ROCSTEIN RANCH DUROCS headed by Lord's Orion Cherry King. Breeding stock for sale at all times. W. M. Way & Son, Rt. 1, Box 320, Modesto.

BARGAINS in bred sows and gilts. Pathfinder and Great Wonder I Am blood. Derryfield Farm. Capital National Bank Building, Sacramento, Cal.

DUROC-JERSEYS — Fine big-type gilts, tried sows and boars. Eastern and California bred. H. P. Slocum & Son, Willows, Calif.

WINSOR RANCH DUROCS—Young boars and some top gilts bred to WINSOR'S GIANT ORION—Morris C. Allen, Mgr., Bonita, Cal.

REGISTERED DUROCS — Choice gilts and weanlings, either sex. Breeding and satisfaction guaranteed. H. E. Boudier, Napa.

BIG-TYPE DUROCS — Gilts and boars of Winsor's Giant Orion breeding. Falfadale Farms, Perris, Calif.

DECEMBER AND MARCH DUROC BOARS—Pathfinder breeding. Sterling Smith, Route 1, San Diego.

FOR THE BEST in Durocs, write June Acres Stock Farm, Davis, Cal.

Poland-Chinas.

TOHOQUA POLAND-CHINAS — Big type. A good big tried sow to sell. Has farrowed two litters of ten pigs each. Bred for August farrow. Also a dandy young boar pig from the Grand Champion sow of Glenn Co. Fair. This stuff is good, fully guaranteed and priced to sell. Ferguson and McKaig, Orland, Cal.

ELDERSLEY AND SHADY BROOK Farms big-type Poland-Chinas that make money for the Feeder, the Farmer and the Breeder. Prices reasonable. J. H. Ware, Brown's Valley, Calif.

BRED GILTS for sale. A few choice ones bred for fall farrow, to a good son of F'Big Jones, the Iowa 1920 Grand Champion. N. Hauck, Alton, Humboldt Co., Cal.

J. F. McSWAIN, Breeder of Poland-China hogs. Herd headed by Big Model Fellow. Reserve grand champion 1919 State Fair. Young stock for sale. R. 3, Merced, Cal.

WAUKEEN HERD POLAND-CHINAS — Home of King's Big Bone Leader. A few service boars for sale. Les McCracken, Ripon.

REGISTERED POLAND CHINAS — Large type, 3 to 4 months gilts cheap. Satisfaction guaranteed. J. E. Thomas, Gilroy, Cal.

LAKESIDE STOCK FARM—Large, smooth and big-boned Poland-Chinas. Geo. V. Beckman & Sons, Lodi, California.

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BIG-TYPE POLAND-CHINAS—Good as the best. Always glad to show you. Houck & Lewis, Winton.

REG. BIG-TYPE POLAND-CHINAS—Service boars and weanling pigs. J. H. Cook, R. 4, Chico.

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POLAND-CHINAS—Strictly large type. J. F. Lehman, Lodi, Cal.

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BRED GILTS.

Sired by Mayfield Rookwood 2d, a Grand Champion Boar, out of 600-700 lb. sows, and actually bred to "ACHIEVER," our English

Blood Boar, the Sire that puts more bone and pork-making qualities into his pigs.

Priced reasonably and absolutely guaranteed.
Castleview Ranch, Santa Rosa, Calif.

ANCHORAGE FARM BERKSHIRES
Orland, Calif.

HERD BOARS—STAR LEADER, Junior and Reserve Grand Champion of the World. The Grand Champion carload of barrows, over all breeds, at the San Francisco Live Stock Show, was sired by a son of Star Leader. NATOMAS BARON DUKE, grand champion of California. For sale, bred gilts, open gilts, young boars and weanling pigs. Write for booklet, prices and list of sows.

BEST BERKSHIRE BOARS—Buy one and grow pigs that will mature quickly and make hogs that produce the largest percentage of salable meat. Pigs carry the blood of Ames Royal 70th, Ames Royal 118th, Ideal Royal Lee, Champion Masterpiece 8th, Escalon Majestic and Achiever. The dams are sows of excellent individuality. Females for sale also. Write for prices. Geo. A. Stingle, Lark Meadow Ranch, El Monte, Cal.

The only herd of English Berkshires in the West. Bigger, better, stronger litters. More pounds of meat for less feed. Weanling pig, $35. Satisfaction guaranteed or money refunded at once. Sandercock Land Co., 703 Market St., S. F. In charge Natomas Land Sales.

GRAPE WILD FARMS—Berkshires—Guernseys. Big-type Berkshire Boars of serviceable age, sired by Big Leader—greatest son of Grand Leader 2nd. Panama-Pacific Grand Champion. A. B. Humphrey, Prop., Escalon.

BERKSHIRE BOARS—Real herd sires. We are offering these at sacrifice prices to move them quickly. Write for description and price. R. J. Merrill & Son, Morgan Hill, Cal.

QUALITY BERKSHIRES — Young stock, both sexes. Calac Orchards, Geo. P. Upham, Martinez.

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CHESTER WHITES — E. E. Fulton, Fair Oaks, Cal.

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SMALL FOUNDATION HERDS,
HEIFERS and BULLS
PERFECT IN HEALTH, RIGHT IN
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MILLS BLDG., SAN FRANCISCO
Farms at
BRENTWOOD and LOS ALTOS
350 HEALTHY HOLSTEINS

EIGHT EXCELLENTLY BRED Registered Holstein cows for sale. Tuberculin tested. Just what you want. Terms liberal. Fine bull out of 24-lb. dam and sired by Segis Pontiac De Kol Burke is bred to these females. This bull also for sale. S. J. Strauss, P. O. Box 62. Phone 217, or call at 1016 Eye St., Modesto, Cal.

YOUNG BULL by grandson of Tilly Alcartra, out of dam with good record. His half sister milking 68 lbs. per day as senior yearling. Also bull calves. H. M. Cross, Merced.

OAKDALE HOLSTEIN FARM, Pacheco, Contra Costa Co., J. M. Christen, Prop., Breeder of registered and high-grade Holstein cattle and purebred Hampshire swine.

REGISTERED HOLSTEIN-FRIESIANS — Both sexes choice stock; tuberculin tested. Sunnybrook Ranch, H. H. Sisson, Mgr., Willits, Cal.

THE VICTORY HERD—Registered Holstein cattle and Duroc-Jersey swine. H. E. Spires, Hillcrest Farms, Caruthers, California.

PALO ALTO STOCK FARM, Palo Alto, breeders of registered Holsteins. Heifers and service bulls. Reasonable prices.

CREAMCUP HERD — Registered Holsteins. Pontiac bull calves. M. Holdridge, Rt. A, Box 437, San Jose.

REG. HOLSTEINS, both sexes. World's record backing. Kounias Reg. Stock Farms, Modesto, Cal.

REG. HOLSTEINS—A. W. Morris & Sons Corp., Importers and Breeders, Woodland, Cal.

F. H. STENZEL, SAN LORENZO—Breeder of Registered Holsteins. High test producers.

REGISTERED HOLSTEINS — Best blood lines of the breed. R. L. Holmes, Modesto, Cal.

CHOICE HOLSTEIN bulls for sale. No females. Millbrae Dairy, Millbrae, California.

GOTSHALL & MAGRUDER — Breeders of registered Holstein-Friesians. Ripon, Calif.

EL DORADO HERD OF HOLSTEINS — Alex Whaley, Tulare, California.

Jerseys.

SERVICE JERSEY BULL, bull calves. Financial King blood, Chester White boars, prize winners. Best blood, type, production. N. H. Locke Co., Lockeford, Cal.

SUNSHINE FARM JERSEYS—No females for sale. Bulls from high-testing cows for sale. E. E. Greenough, Merced.

JACK LONDON RANCH, Glen Ellen—Two fine Jersey bulls, one ready for service.

Milking Shorthorns.

REGISTERED MILK AND BEEF SHORThorns, bulls and heifers for sale; catalogue free. Thomas Harrison, Santa Rosa Stock Farm, Santa Rosa, California.

INNISFAIL HERD MILKING SHORThorns—Young stock for sale; both sexes. Owned by Alexander & Kellogg. Leased by J. D. Rowe & Son, Davis, Cal.

BREEDERS OF REGISTERED SHORT-

Livestock and Dairy Notes

The Dairy.

The Stanislaus County Holstein Calf Club will have at least eight calves at the State Fair.

It is announced that the Penn Valley Creamery will be moved to Grass Valley and operated by the Farm Bureau. T. J. Masterson, who is in charge, expects to have the creamery going by September 1st.

S. J. Strauss of Modesto reports some good sales of purebred Holsteins in Stanislaus and adjoining counties recently. Mr. Strauss is doing some good work in assisting owners of grade dairy cattle to dispose of them and replace them with registered stock. Sales of Jerseys and Guernseys are also announced.

The Jersey breeders of Stanislaus have organized an association to include all the breeders of the county and such as are to come in from over the line. The new organization is known as the Stanislaus Jersey Breeders' Association, and if officered by D. F. Conant, president; Guy Miller, secretary; and C. H. Hayworth, W. J. Hackett and J. McComas, directors. Their first piece of constructive work is the organization of a purebred Jersey Calf Club, which starts off with 15 members.

E. Peterposten of Hughson will sell his herd of purebreds under the auspices of the Stanislaus County Holstein Breeders' Association some time this fall. Mr. Peterposten's herd is rated as one of the good ones of the county, and that together with the high regard his fellow breeders in the county have for him will assure a large local attendance at his sale. This in itself will go a long ways towards making his sale a success.

Silver Chimes of S. B., a Jersey bull owned by Del Perkins of Carlton, Oregon, has been awarded gold and silver medals by the A. J. C. C. medals are given to bulls daughters that produce a amount of butterfat in one yea ten Jersey bulls have won th medal and four of them are ov Oregon.

C. S. Rasmussen of Loleta, of Guernseys, writes to say t dam of Proud King of Edgem herd sire, sold for $3,600 at signment sale instead of his it states in the article in the Rural Press of July 17th. The this bull sold for $6,000 in the sale in the East recently.

Professor E. L. Westover Oregon Agricultural College first Guernsey field represent be appointed by the American sey Cattle Club, in accordan the plans outlined at the annu ing of the Club last May. Pr Westover's territory will be Rocky Mountain and Pacific States, but he will lay spec phasis on Guernsey develop the Pacific Northwest territo

Kings County Cow-Testing ciation report shows 34 co ducing 40 pounds and over of fat during the month of Jun top cow was owned by J. A baugh with 65.25 pounds fat credit and an average test of strong effort is being made duce more dairymen to join th ciation and weed out the co are not paying for their boar

Swine and Swinemen.

D. H. Bitner, secretary-man Farm Bureau Hog Marketing tion, with headquarters at Bak is spending part of his vac Berkeley. Mr. Bitner, in spe the amount of business tr since the Farm Bureau co

Ayrshires.

ELKHORN FARM AYRSHIRES — Choice young bulls at reasonable prices. J. H. Meyer, 440 Montgomery St., San Francisco, Calif.

STEYBRAE AYRSHIRES — Registered; all ages. E. B. McFarland, 414 Claus Spreckels Building, San Francisco, Calif.

NORABEL FARM AYRSHIRES—Le Baron Estate Co., Valley Ford, Cal.

BEEF CATTLE.

SHORTHORNS—The foremost beef breed—Have a limited number of stock for sale, both sexes. If you wish to start a small herd I can probably supply your needs. T. T Miller, Hollister, Cal.

ALAMO HERD REGISTERED HEREFORDS (founded by Governor Sparks). Herd and range bulls. Reasonable prices. W. D. Duke, Gazelle, Siskiyou county, California.

RANCHO SAN JULIAN SHORTHORNS—Purebred range bulls, unregistered, for sale. Estate Thos. B. Dibblee, Santa Barbara, or Lompoc, Calif. John Troup, Supt.

HEREFORDS—Sierra Vista Herd, Minturn, California. Over 100 registered animals. Fairfax and Repeater bulls head the herd. On highway.

THE NEVADA HEREFORD RANCH—Jno. H. Cazier & Son Co., Prop., Wells, Nevada. Reg. Hereford cattle. Breeding stock for sale.

JACK LONDON RANCH, Glen Ellen—Shorthorn bull ready for service, and some good bull calves.

WM. BRIGGS & SON, Dixon, Cal. Breeders of Hereford cattle and Rambouillet sheep.

ABERDEEN-ANGUS cattle of quality and breeding. Lilac Ranch, Escondido, Cal.

SIMON NEWMAN CO., breeders of Registered Herefords, Newman, California.

HEREFORDS — Mission Hereford Farm, J. A. Bunting, Prop., Mission, San Jose, Cal.

REGISTERED HEREFORDS—H. H. Gable, Diamond G Ranch, Esparto, California.

GEORGE CALLAHAN—Breeders of registered Herefords. Milton, California.

GEORGE WATTERSON — Breeder Registered Herefords. Bishop, California.

REGISTERED SHORTHORNS — Fair Oaks Ranch, Willits, Calif.

SHORTHORNS — Carruthers Farm. Live Oak, California.

SHEEP AND GOATS.

F. A. MECHAM ESTATE, Petaluma, Cal.—Breeders and importers of Shropshire, Rambouillets and American Merinos, both sexes. Also Red Polled cattle. Take electric car at Petaluma or Santa Rosa for Live Oak Ranch.

WRITE ME for early Rambouillet ram lambs, ready for light use, by September 1. Also a few yearlings. Carl Lindheimer, Woodland, Cal.

HARRY L. HUSTON, Winters, Calif.—breeder and importer of Shropshire sheep. Stud and range rams. Prices on application.

FOR SALE—Rambouillet rams an purebred; the very highest grade smooth body; heavy shearers; the mutton type. Immediate delivery of or carload lots. You can find non of higher grade. Address Glenn, C tion, 8 miles south Hamilton City west Ordbend. Windell Orchards C

FOR SALE—Purebred unregistere shire rams, 3 years old. Big growth As we cannot use them will sell a price. Spreckels Sugar Co., Green

FOR SALE—155 head of sheep, white faces. About 70 spring la ewes nearly all young. All in good will sell cheap. Box 24, McFarlan

GOATS—2 thoroughbred Toggen lies, worth $300. Quick sale, $35 Geese, Orpington and Wyandotte Cash Nursery, Sebastopol.

J. R. BLOOM, Dixon, Calif.—T years breeder of purebred Shropsh Rams for sale. Single or carload lo

DORSETS AND ROMNEYS — D lambs for sale. John E. Marble, So dena, California.

SNAP FOR SALE.—1,000 head e sell in lots to suit. Chas. G. Owe more, Cal.

H. G. BROWN, Dixon.—120 Ch bouillet yearling rams for sale. sonable.

HARVEY S. VAN VLEAR, Lo Breeder and importer of Registered sheep.

CALLA GROVE FARM, MANTECA Breeders and importers of Hampsh

KAUPKE BROS., WOODLAND, Breeders and importers of Hampsh

FOR SALE—600 two-year-old Me Swall & Wilson, Box 742, Bishop, C

CHAS. KIMBLE—Breeder and im Rambouillets, Hanford, Calif.

BULLARD BROS., Woodland Cali ers and importers of Rambouillet

MISCELLANEOUS.

BUTTE CITY RANCH
SHORTHORN CATTLE, SHE
Sheep, Berkshire Hogs, Shetland Bronze Turkeys, White Plymout Stock for sale at all times. W. P. W. S. Guilford, Box P, Butte C county, California.

ONE REGISTERED GUERNSEY 3 mos. old. Well marked and fro line of breeding; a grandson of known Dairymaid's Prince. His da class heifer, is going to make a g as a two-year-old. H. O. Mohler,

50 HEAD GOOD DAIRY COWS For further information, write, Oakdale, Cal.

CHOICE STOCK EWES AND BU herding Collie dogs. John G. Mee, Calif.

WANTED

uction hogs for the farmers of the er San Joaquin, stated that the s amount in round numbers to 00,000 for the 2 years this organ- ion has been in business.

lanche Bright and Lillie May d, eleven- and twelve-year-old s belonging to the pig club at lows, have entered their pigs in club contests at the State Fair, also will compete in the open

R. Howard, president of the rican Farm Bureau Federation, in pany with a committee, is visiting fornia and will spend two days, at Hanford and one at Fresno, nding auctions of market hogs ducted by the farm bureau market- association.

Beef Cattle.

eo. J. Meister of Sacramento is g the foundation for a fine herd horthorns on his Natomas ranch. has some 18 females and the herd Bride's Emblem 2d, purchased the Black Hawk Ranch at lo.

e anniversary number of the deen-Angus Journal is just to l. It is very attractive, both in arance and reading matter. It s progress as a breed magazine it is with wishes for a continued ess that we view their beginning eir second year of existence.

e Finnell Stock Farms Company, h has taken over the Henderson h, near Galt, recently purchased entire Hereford herd of the F. J. el Estate, Ontario, Oregon. This prises 185 head. Thirty of the cest animals will be retained as ation stock for their Hereford ding farm.

rangements have been completed he big meeting of the California emen's Association on Cattle- s Day at the State Fair, Sacra- o, September 8. With stock ers present from all parts of the the association expects excellent ts from this meeting. A tenta- program includes short talks by rnor Wm. D. Stephens, M. D. , G. H. Hecke, Peter J. Shields, C. W. McCampbell, District For- Redington, R. L. P. Bigelow, F. ixby, Dr. J. P. Iverson, R. N. Wil- nd Dean H. E. Van Norman.

herd of registered Shorthorn the first in San Joaquin ty, is being established near Bel- on the Calaveras river. Forty of cows and heifers compose female side of the herd, not all hich are registered. The bulls young. One, Ormondale Archer, bred by the Ormondale Com- of Redwood City. He was sired olden Goods Jr., the sire of Little theart. Another young bull is Oak Glory 5th, bred by W. M. uthers, and his sire was Count . The herd has been selected H. McGurk, who is a cattleman ide experience, and the ranch is d by his son, R. T. McGurk, M.D., ysician of Stockton.

ul Grizoli, of Trinidad, Hum- county, was arrested on July 31 ot retaining in his possession for n days, as required by law, hides ved from cattle slaughtered by Grizoli was fined $50. George b, of Alderpoint, Humboldt coun- leaded guilty to the charge of an unrecorded branding iron he purpose of branding cattle. accused had recorded his brand he county records of Humboldt y but failed to record his brand the State Department of Agri- re. Fremb was fined $50. John Jewitt, of Harris, Humboldt y, pleaded guilty to the charge ntinuing to use a brand that had cancelled on the records of the of Cattle Protection, State De- ent of Agriculture, for nonpay- of renewal fees of 1919. Jewitt fined $50.—State Dept. of Agri- re.

Sheep and Goats.

American Milk Goat Record iation has notified Secretary of the State Fair of an offer of onal prize money to be divided equally between the best of the three breeds — Anglo-Nubian, Toggenberg and Saanen.

The Yolo county wool pool amounted to over 150,000 pounds this season. It was all shipped to a co-operative wool warehouse in Chicago.

As weed destroyers a small flock of sheep will add much to the appearance of the average farm. They will do this and pay their own way as well.

Sheep shearing is finished in North Dakota, with an estimated clip of 3,000,000 pounds. A system of co-operative auctions, under the direction of the county farm advisors, will be tried out in selling the clip.

W. H. Guscetti, Rambouillet breeder of Loyalton, is optimistic as to the future for the Rambouillet not only as a wool-producer, but for fat lambs as well. His consignment of last year to the Grayson-Owen Packing ,Co. was considered the best of the season.

"Sacrificing the Kernel to the Husk" is the title of a very convincing little booklet issued by the National Sheep and Wool Bureau of America. It tells the truth about the shoddy business and it affects adversely both the wool producer and those who wear woolen clothes as well. Every one should read it.

R. E. Taylor, "the Goat King of America," of Pecos, Texas, and owner of a million-dollar goat ranch, is in Los Angeles to reserve space for an exhibit at the Livestock Show in October. Mr. Taylor has been invited to consult with Anita M. Baldwin on the subject of goat raising, and will endeavor to interest her in the production of goat meat. Mr. Taylor says the U. S. Department of Agriculture is co-operating with Angora goat breeders in an effort to establish a fair market for the flesh of the goat.

Miscellaneous Livestock.

Last call for the Sonoma County Fair with its livestock show, horse racing, auto racing, dog show and night horse show. Education and amusement go hand in hand, so don't fail to attend.

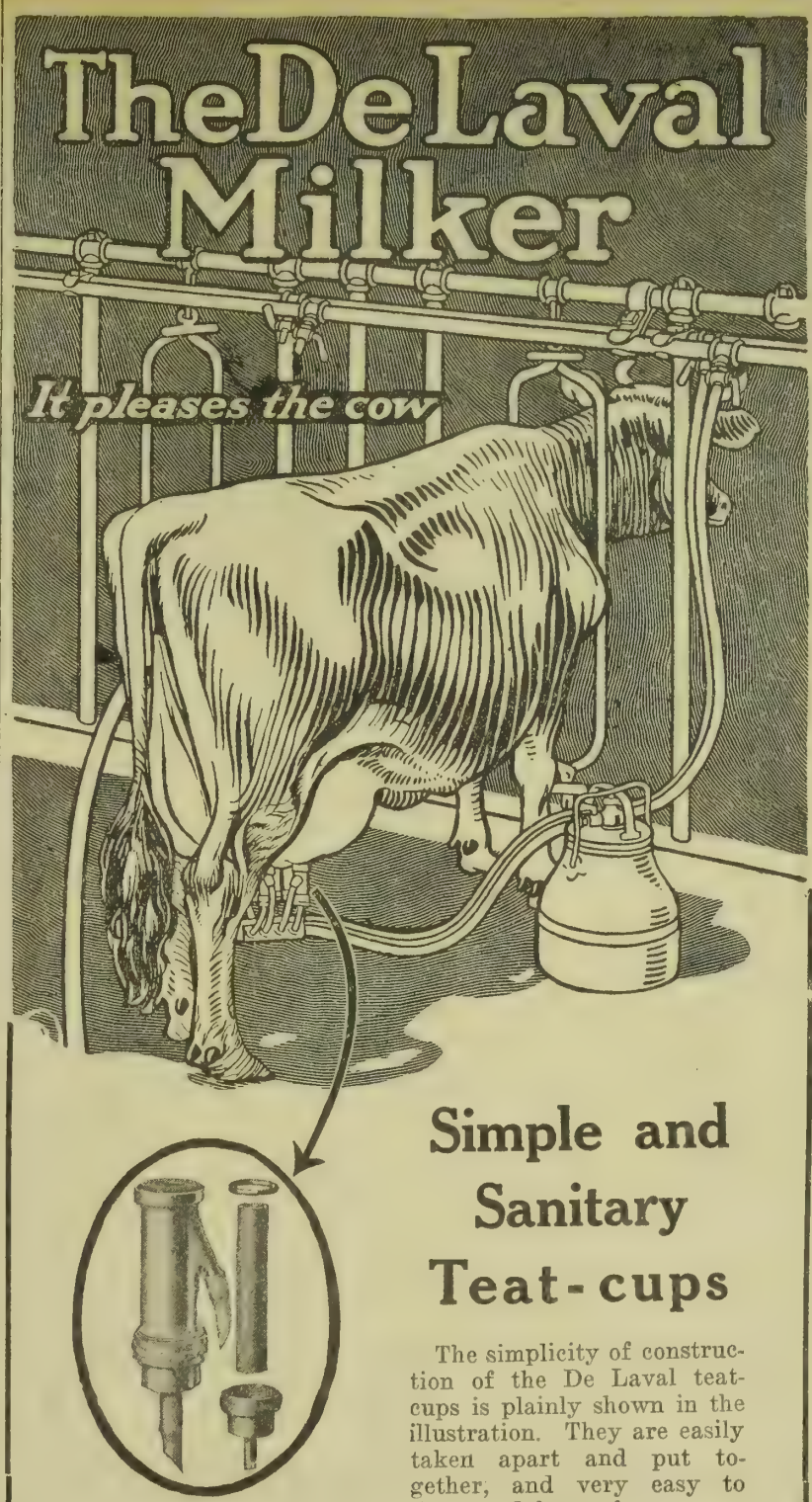
"Horse Power" is the name of a new monthly publication issued by the Horse Association of America, with headquarters in New York City. It is filled with pointed facts about the utility of the horse in comparison with power trucks and tractors.

Two farm bureau fairs are reported by County Agent Talbot in Shasta county this fall that will be attractive, both from an educational and amusement standpoint. The dates are Fall River, September 23-25, and Anderson, October 1 and 2.

Fight the flies for the sake of the cows and to keep the milk clean. To kill flies mix 1 pint of milk, 1 pint of water and 1 ounce of formaldehyde. Fill a pan with sand and cover it with a blotter. Use enough of the above mixture to moisten the sand and sprinkle over the blotter.—N. Dakota Agriculture College.

The Fall River Fair in Shasta county will be put on by the Fall River and Hat Creek farm centers. The grounds were deeded to the farm center by Scott McArthur. The Forest Service donated the posts and the timber with which to build the fence and grandstand, which are being built by donation work, the farm centers holding labor days. A Shorthorn Calf Club has been started in the Fall River Valley and a large number of purebred bulls have been brought in. There is a nucleus for a very creditable livestock show.

E. D. Conolley of San Francisco, and we must also say of Willows, as he has acquired about 6,000 acres of ranch land in that vicinity. Five thousand acres are located near Fruto, of which 1300 acres is dry farming land, with rest range. One thousand acres is within 6 miles of Willows, most of which is planted to rice this year but will be turned to alfalfa, Holstein cattle and Duroc swine as soon as possible. Mr. Conolley has retained the services of E. H. Grubb, the man of international authority on potato growing, in an advisory capacity.



Simple and Sanitary Teat-cups

The simplicity of construction of the De Laval teat-cups is plainly shown in the illustration. They are easily taken apart and put together, and very easy to clean and keep clean.

The rubber lining is simply a straight piece of rubber tubing. It is small enough to fit the smallest teat and is held in the metal casing, which is large enough to fit the largest teat. Hence the De Laval teat-cups are self-adjusting. They are made in only one size, which fits all teats.

The liner is made of pure rubber, scientifically correct in construction and design, producing a massaging action on the teat between suction periods.

A flexible rubber mouthpiece is formed by the top of the liner in such a way that no metal touches the teat.

The De Laval Milker is faster, more economical and more reliable than any other method of milking. The sanitary features are of special importance. It is quickly and easily cleaned, and is used by many dairies in A. R. O. work and where certified milk is produced.

An additional insurance of lasting satisfaction to users of De Laval Milkers lies in the De Laval Company's well-known facilities and reputation for service.

Write to nearest De Laval office for Milker Catalog mentioning number of cows milked

DE LAVAL DAIRY SUPPLY CO.

THE LARGEST DAIRY SUPPLY HOUSE ON THE PACIFIC COAST

61 BEALE STREET SAN FRANCISCO, CAL.

DIRECT FROM PRODUCER TO CONSUMER

Why Pay a Middleman's Profit

when you can buy the

Best Alfalfa Hay

direct from the producer at prices commensurate with the cost of production?

This hay is grown on one of the largest hay ranches in the upper San Fernando Valley, and the

Quality and Grades are Guaranteed

Make sure that your next order is for the

Carl Iverson Brand

Home Grown Alfalfa Hay

Deliveries loose or in bales, either at the ranch or delivered by our own motor trucks. Write for Prices to

Carl Iverson

Owensmouth, California

Ranch three-quarters of a mile north of Owensmouth depot and ¼ mile to left of Chatsworth Blvd.

REGISTERED

Holstein Bulls

FROM 14 GALLON MILK STRAIN

At FARMER'S PRICES

Now is a good time to purchase your fall herd sire while the selection is choicest.

M. M. HOLDRIDGE, San Jose, Cal.

R. F. D. A, Box 437. *One and one-half miles north*

OVER TWO MILLION CALVES

protected against **Blackleg** for LIFE with ONE **treatment** vouch for **Purity Blackleg Aggressin** (Germ-Free Vaccine made by the Kansas Process). Absolutely safe to use. Cannot transmit disease. Brand, castrate, etc., when you vaccinate. OTHER PURITY PRODUCTS.—**Anti-Abortions Vaccine for Cattle; Hemorrhagic Septicemia Vaccine for Cattle and Sheep; Anti-Hog Cholera Serum, and High Count Mixed Infection Vaccine for Swine.** For service that counts, write, phone, or wire.

PURITY SERUM CO., J. L. Thatcher, Mgr., Riverside, California

CLARK, HUNTER & CLARK
LIVESTOCK AUCTIONEERS
915 I St., Modesto, Calif.
Registered Hog Sales a Specialty

LEONARD FARM JERSEYS
Bulls for sale from Register of Merit Cows. Write for information.
W. J. HACKETT,
CERES, CALIFORNIA

As an indication of the immensity of the business connected with a breed association we give the cash receipts of the Holstein-Friesian Ass'n of America for the fiscal year ending April 30. These amounted to $541,060.08, or an increase of 63 per cent over that of the previous year.

Livestock Queries and Replies

Warty Teats.—Please give formula for removing warts from cows teats. —G. B., Modesto.

Sign your name in full next time if you expect an answer. Warts may be twisted off with the fingers or snipped off with scissors. If there is excessive bleeding it may be necessary to touch the spot with lunar caustic, or in very persistent cases use of the actual cautery may be indicated. The application of olive or castor oil after milking for a period of two weeks may cause the disappearance of the troublesome growth. —Livestock Editor.

Value of Corn Silage.—What is the market value of corn silage when alfalfa hay is selling loose for $20 per ton and barley at $2.50 per hundred. —A. M., Stockton.

The value of corn silage would be about $6.50 per ton when compared with alfalfa hay of average composition and about $11 per ton if the barley is taken as a standard according to the tables giving the digestible nutrients of the various feeds in Henry on "Feeds and Feeding." Alfalfa hay on the same basis is cheaper than barley as one pound of digestible nutrients would cost about 2 cents while in the barley the cost of a pound would be 3 cents.—Livestock Editor.

Cocoanut Meal.—Should cocoanut meal be soaked in water before feeding to cows or hogs? Is it best to mix cocoanut meat, alfalfa meal and wheat bran, or should the alfalfa meal be fed separately. What proportions would you suggest of each?—F. M. T., French Corral.

It is not necessary to soak cocoanut meal before feeding to cows, but many prefer to soak or wet grain either whole or ground before feeding it to hogs. Feed the various meals mixed. We would suggest the substitution of barley, ground or rolled for the cows, in the place of the wheat bran, as the three substances mentioned have practically the same composition. Two pounds of barley to one each of cocoanut and alfalfa meal would give a ration not so narrow and better adapted to milk or meat production.

To Calculate Butterfat.—Will you give a rule for calculating the amount of butterfat in cream at different tests? In 21 pounds of cream at 40 per cent test, how many pounds of butterfat?—S. E. P., Newman.

Multiply the number of pounds of cream by the per cent of fat as shown by the test and point off two figures on the right, and the result is the number of pounds of butterfat. For example: 21x.40 equals 8.40 pounds fat. In this case 2½ pounds cream would make one pound butterfat. If the test was 33, the amount of fat would be 6.93 pounds and three pounds of cream or a little over would produce a pound of fat.

Corn Stover or Fodder.—Have corn stalks standing in the field after the corn is husked any value as feed for stock if they are allowed to become dry and white? Or is it best to cut and store as soon as ears are removed? Has it any value either way? Have pumpkins any value as hog feed? —W. T. J., Stent.

The stalks have some feeding value in either case, but more in the latter than in the former. If allowed to become dry and white in the field they are much less palatable and digestible than if cut and cured as soon as possible, and while the stalks and leaves contain much of their natural juices. At the time the corn is ready to harvest the stalks and leaves contain about one-third of the total crude protein and carbohydrates, but only one-fifth the amount of fat of the whole plant. Therefore, if only the ears are fed nearly one-third of the total nutrients of the plant are lost. Excellent results have been obtained by putting the fodder or stover in a silo. This necessitates running through a feed cutter and if moisture is lacking supplying the deficiency so that the ensiled material would pa solidly and exclude the air. Go pumpkins have considerable value hog feed, although some swine gro ers think if fed in excess they w cause abortion in pregnant sov Hogs should receive some grain fe in addition as pumpkins alone are t watery.—Livestock Editor.

A record public sale of Guerns cattle was held recently in Montar The top of the sale was the thre year-old cow, Inez Morrill of Co Brook Farm, for which $1,000 w paid. This is the highest price ev paid for a dairy cow in the Sta Twenty-nine purebred females av aged $427. Most of these cattle we brought in from the eastern stat and were selected by a local repr sentative of the Bitter Root Guerns Breeders' Association.

In some sections of the range cou try of northern California the fe conditions are reported excellent.

HOLSTEIN BREEDERS' ASS'N STANISLAUS COUNTY
A. M. BIBENS, President
E. M. MORROW, Secretary
Modesto, Calif.

"ORMSBY"
Means Quality and Production.
Get a young bull sired by King Korndyke Hengerveld Ormsby 7d
KOUNIAS REG. STOCK FARM
Waterford Road,
P. O. Box 296, Modesto

HOLMES STOCK FARM
Modesto
REGISTERED HOLSTEIN-FRIESIANS
Prize-winners at all Shows. Inspection invited and satisfaction guaranteed. Write for prices.
R. L. HOLMES, Prop.

BRIDGFORD HOLSTEIN CO
Patterson
THE CHAMPION SHOW HERD
The herd of high records.
STOCK FOR SALE.
Visitors Welcome.

WALTER K. ADAMS,
Rte. 1, Box 245, Modesto
BREEDER OF REGISTERED HOLSTEI AND POLAND-CHINAS

A. M. BIBENS
Modesto,
BREEDER OF REGISTERED HOLSTEI
Some fine young bulls for sale.

BULLS AND BULL CALVE
Sired by SEGIS DUTCH ORMSBY
My 32-lb. Herd Sire
Out of A. R. O. dams.
JOHN SAXER, Modesto, Ca

H. E. CORNWELL
MODESTO, CALIFORNIA
Prescott Road, 1 mile from Highway
If you want to see some of the be Holsteins in the State, visit my hes
YOUNG STOCK FOR SALE

R. H. DAVIS
REGISTERED HOLSTEINS
Route C. Box 196, Modesto, Cal.
Animals of both sexes for sal Herd tuberculin tested.

BULLS FOR SALE
From 1000-lb. sire and high-produci dams that carry same blood as Be Faskie DeKol Witkop, the highest pr winner in the Holstein-Friesian Assoc tion of America last year.
FREEMAN (E. E.) & EDWARI
Modesto, Calif.

It is not necessary to urge the prospective purchaser of an ensilage cutter to buy a Papec. We merely request him to compare the Papec with any other cutter. His good judgment does the rest. Make this comparison for yourself at our exhibit, California State Fair, September 4th to 12th.

SIMPLEX SILO

Solving the Silo Problem by the Rule of Three

In mediaeval times, mathematicians sought a general rule by which all problems could be solved, known as the Rule of Three. Such a rule is unknown to mathematics; but modern science has given us the Rule of Three as applied to silos. It is:

"The perfect silo must possess three characteristics: (1) It must be air-tight; (2) the inner surface must be round, smooth and perpendicular; (3) the walls must be strong enough to withstand pressure from within and the elements from without."

The one-piece staves of the Simplex Silo make it air-tight by eliminating end-joints. The Clear Oregon Pine (Douglas Fir) from which the staves are cut gives the inner surface smoothness that prevents honey-combing and air pockets.

The Crissell Tangent Top, steel hoops and Patented Interlocking Anchorage System not only keep the walls of the Simplex round and perpendicular, but bind the structure to its base in a rigid, inseparable unit, defying inside pressure and high winds.

It is as easy to own a silo that has all of these qualifications as it is to own one that has only a few of them—if you apply the Rule of Three. If the Simplex did not comply with this rule, agricultural experts would not have pronounced it "scientifically correct."

Remember this when you select your next silo.

SANTA FE LUMBER CO., Department A.
16 California Street
San Francisco.

Please send me complete information regarding the Simplex Silo and Papec Ensilage Cutter.

(Name) .....

(Address) .....

Santa Fe Lumber Company 16 California Street San Francisco

LIVE OAK STOCK FARM

SHROPSHIRES
RAMBOUILLETS
and
AMERICAN MERINO
SHEEP

We have for sale this season 400 head rams, yearlings and 2-year-olds. All purebred. Will sell singly or in carload lots.

Also 15 Head Purebred Red Polled Yearling Bulls

For further particulars apply

F. A. MECHAM ESTATE

PETALUMA, CAL.

Rambouillets

700 2-YEAR-OLD RAMS

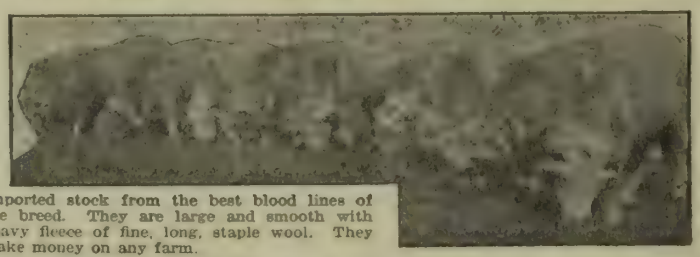
PRICE REASONABLE

These highly bred sheep are ideal in type and wool, vigorous and ready for service.

For further particulars write or call

J. BIDEGARAY, Fresno, Calif.

KIMBLE RAMBOUILLETS



Imported stock from the best blood lines of the breed. They are large and smooth with heavy fleece of fine, long, staple wool. They make money on any farm.

Rams, Yearlings, and Older Breeding Ewes. Call or write for further particulars.
CHAS. A. KIMBLE, HANFORD, CAL., IMPORTER AND BREEDER

BULLARD BROS., Woodland, Cal.

BREEDERS OF

RAMBOUILLET SHEEP

Have for immediate sale

50 Registered Yearling Ewes
50 Non-Registered Yearling Ewes

350 OTHER EWES

WRITE FOR PRICES AND PARTICULARS

HILLCREST STOCK FARM

Shorthorn Cattle

Shropshire and Merino Sheep

RAMS AND BULLS FOR SALE

Single or in Carload Lots

T. S. GLIDE, Prop. Davis, California

FIRST MARKET HOG AUCTION.

The first public sale of market hogs under the auspices of the Farm Bureau in the counties of California north of Stanislaus, was held Tuesday, August 17, at Dixon, Solano county. Much interest was manifest not only among the consignors, but others interested in the swine business and business men were in attendance. Three carloads were offered and sold. Two loads of butcher stuff, comprising 160 hogs, were bought by the Virden Packing Company at $15.30. The third carload of 102 were bought by the enterprising firm of local packers, C. B. Mace, at $14.05. Buyers from the Western Meat Company and Virden Packing Company of San Francisco and C. Bruce Mace of Dixon were present. Arrangements should be made for continuing these sales at regular intervals. More extended comment on this system of selling market hogs will be made in our next issue. W. G. Harris, a local auctioneer, sold the hogs.

THE LOS ANGELES LIVESTOCK SHOW.

A recent letter from Secretary Thomas indicates very decidedly that prospects for a great exhibition are excellent. More than that, 17 barns for housing the animals are 90 per cent finished, and that everything will be in readiness at least two weeks prior to the opening of the show.

Premium lists to the number of 3500 have been mailed to breeders, and the response has been very gratifying. In fact, many applications for entry blanks had been received before the issuance of the prize list.

An up-to-date rodeo, along with many other amusement features, will be staged for the pleasure of all attending. It will be a continuous performance in front of the grand stand every afternoon, and the management assures each and every one a good time—even better than last year.

FAIR DATES.

Sonoma County Fair, Santa Rosa, August 25-29.
Patterson Fair, Patterson, August 19-20-21.
California State Fair, Sacramento, September 4-12.
San Joaquin County Fair, Stockton, September 13-18.
Humboldt County Fair, Ferndale, September 14-18.
Tulare County Livestock Show, Tulare, September 14-18.
San Fernando Valley Fair and Market, Owensmouth, September 15-18.
Paso Robles District Fair & Almond Show, Paso Robles, September 15-19, inclusive.
Kings County Fair, Hanford, September 21-25.
Ventura County Fair, Ventura, September 22-25.
Fall River Fair, September 23-25.
Glenn County Fair, Orland, September 27-October 2.
Fresno District Fair, Fresno, September 28-October 2.
Shasta County Farm Bureau Fair, Anderson, October 1-2.
Los Angeles Livestock Show, Los Angeles, October 2-10.
Siskiyou County Fair, Yreka, October 5-9.
Tulare County Fair, Visalia, October 9-16.
Southern California Fair, Riverside, October 13-19.
Western Royal Livestock Show, Spokane, Washington, November 1-5.
Pacific International Livestock Show, Portland, Oregon, November 15-19.

Poultry Breeders' Director

Rate 8½ cents per word each issue.

BARRED PLYMOUTH ROCKS — "No Better in Poultry." Wonderful layers. C hens and pullets for sale; also fine cock that will improve your flock. Now boo orders for hatching eggs. I have ma specialty of Barred Rocks for over tw two years. That's why our birds win a the leading shows. Catalog free. Chas Vodden, Box 3, Los Gatos, Calif.

SANTA CRUZ CHICKS are in demand. hatchery will run full blast this fall, su ing Leghorns, Anconas, Minorcas, Rocks, I and Orpingtons. We also offer W. L. H cockerels from Pen 1, with trapnest r 236-284 at $5.00. Write for folder chick price list. B. W. Archibald, Sa Santa Cruz Co., Calif.

PETALUMA HATCHERY — Establ 1902. If you want good fall layers, chicks in the fall. We guarantee sati tion. There will be but few chicks hat this fall. The wise ones are buying. for prices. L. W. Clark, 615 Main St., aluma, Cal.

PEERLESS WHITE WYANDOTTES — 200-egg strain bred for years for show ities and high-egg production. Fifty erels, 100 pullets for sale. Trios and n yards. Eggs for hatching. Catalogue J. W. Atkinson, Box 8, 130 Willard St., Jose

WHITE LEGHORN BABY CHIX heavy-laying Hoganized Stock. Safe arriv full count, live, strong chix guaran Price list and interesting literature on a cation. The Pioneer Hatchery, 408 Sixth Petaluma, Cal.

RAISE FALL CHICKS—We will have every week. R. I. Reds, Barred Rocks, W Leghorns. Write for special circular. why they pay. Stubbe Poultry Ranch Hatchery, P. O. Box 67, Palo Alto.

BABY CHIX—Order now for Septe delivery from our selected, bred-to-lay ganized White Leghorns, Barred Rocks, Reds. Maxwell Hatchery, Madera, Cal.

BARRED ROCK, White Orpington hat eggs, now $1.75 and $3.50. Breeding C Cockerels, Hens, Pens. R. P. Lutzi, 20th Ave., S. F. Yards at Los Altos.

GOLDCROFT BUFF ORPINGTONS, C bian Wyandottes and White Leghorns. B laying strains. Breeders and young Samuel Abrams, Box 13, Los Altos.

RHODE ISLAND REDS.—Improve color and egg capacity. Breeding stock ready for shipment. Wm. Larm, 3915 "Hal's Win Out," page 247.

FOR SALE — R. I. Red Cockerels. utility stock, bred from selected layers cullis. $3.00 each. Mrs. Stephen Blacet Orland, Cal.

CHICKENS, DUCKS, GEESE, GUIN Pea Fowl, Pigeons. Wm. A. French, 54 Park St., Stockton, California. Stamp

BUFF ORPINGTONS, BUFF DUCKS, B bon Red Turkeys, White Guineas. The ris Ranch, R. 2, 144 D, Pomona, Calif.

BABY CHICKS from selected S. C. W Leghorn hens. Write for prices. Tu Poultry Farm, Box 7A, Ceres, Calif.

FOR SALE—S. C. W. Leghorn baby from selected mature hens. H. W. Fi Livermore, Calif.

FOR SALE—Kresky Brooder Stov good condition. H. W. Fitting, Livermore

WHITE ORINGTONS, White Leghorn erels. Mabel Smith, Hollister.

While the price of milk has advanced to 17 cents per quart in Bay cities, no such advance has t place in San Jose, although, acc ing to Manager Haley of the Ar can Dairy Company of the latter the advance is justified by the creased cost of production.

Ninety billion pounds of mi two and one-half pints to each pe in the United States daily—was duced in 1919, according to the Department of Agriculture. value about $2,000,000,000.

A considerable quantity of sours quickly because it is too di remain sweet.

Are You a Salesman? Write Parks Br

Hal's Win Out

Hal had a family, a homestead—then the "flu." After the flu—mo gone—debts a-plenty. Jake said: "Get a job selling Parks Bros.' Qual Groceries Wholesale to Farmers. Goods Guaranteed. 'Satisfaction Money Back.' And we save them 20 per cent." Now debts paid; fam happy; making more money each month than he used to in three. He's two of his friends started in the work. We have a job for another like Hal. Do you want it? Full time work only. Write for Ha proposition. Tell me your age, experience, occupation for last five yea

J. C. H. HUNTTING, Care Parks Bros., Portland, Oregon
(Read "Ed's Job Wins," next issue.)

FOR SALE

60 Head of Three-Year-Old Merino Rams
Pure Bred. Bullard raised.

W. H. WORLEY

Susanville, Califor

Poultry for Profit

IN-AND-IN BREEDING.

ever, double matings alone will sufficient to secure the best re- h mating Silver Wyandottes, or at matter, any other breed or where dual matings are a ne- says the American Poultry and Stock Keeper. Syste- ine breeding must be followed at practically means in-and-in g of all thoroughbred races of he same as it does in all other of domesticated animals.

rmer years the subject of stam- gor and size of Standardbred as freely discussed in the rural usually with the object in f proving cross-bred fowl and ls superior to pure-bred poul- this respect. We do not read so much of this fallacy today, eders have learned the lesson "survival of the fittest" from ld fowl of the forests, plains , finding it adaptable to domes- poultry breeding equally well.

ld breeder of Wyandottes says: not had a strange cock on my s for twenty-five years till the 09, when I mated a pen com- of a purchased cock and two nd three hens of my own. I that with close line breeding roper selection, every known can be bred out. New blood, sporting in plumage, brings iseases they have been immune y the survival of the fittest. ross-bred pen did not bring e 'gapes,' no single case having een in my yards for sixteen but half the chickens last fall d from cholera and several Three also had skin disease, ture of which I did not know. bred Wyandottes exclusively enty-nine years, as the Stand- d been changed, I believed some could be more quickly im- by buying what markings , but shall go a little slower rer, for there is no telling what n can do with the admixture of drops of outside blood.

e frequently in poultry and ag- ral journals many inquiries as health of animals, birds and and always a few there are ink there is too much in-and-in g. The persons who believe it ible to inbreed too closely are g their mouths shut believing ave a secret worth keeping.

a poultry journal in answer to estion, 'How to get the most om ducks?' several replied that must not be inbred. Now, I e man who does not know by ation or reading that crossing, untrue to nature, leads to ex- n from sterility, while inbreed- creases the progeny in all ani- s well as in plant life.

re is no more reason for gapes, , roup or canker, etc., in a f hens, than there is in a flock ils which breeds in-and-in and itself to local environment. A of mine four years ago, brought berated on his farm six South na quail. Some disease got them last year, for he picked eral, and one covey and a pure quail, showing what is called g back.' "

rles Darwin, in his great book, als and Plants Under Domesti- ," remarks: "The evil results close interbreeding are difficult ect for they accumulate slowly ffer much in degree with differ- pecies whilst the good effects almost invariably follow a cross m the first manifest. It should, er, be clearly understood that ivantage to close interbreeding, as the retention of character is ued, is indisputable and often ighs the evil of a slight loss of tutional vigor."

kens never wash, as many other do, but cleanse themselves of s by wallowing in soil. For this every poultry house should be led with a dust box.

USE OF DOUGLAS MIXTURE.

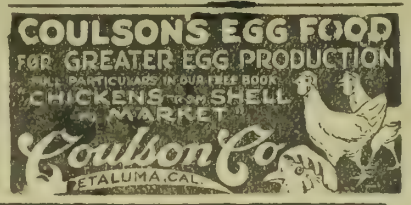
To the Editor: Many thanks for the answer to my inquiry about my pullets showing symptoms of ptomaine poison. I have always up to the last brood of baby chicks lost many at the age of six weeks, just about the time they were getting their head feathers, the symptoms being dragging of wings on the ground and general debility, in spite of the best of feed and greatest care. I happened to get the "Douglas Mixture" formula and followed it strictly from five weeks to the time they were three months old, when I slackened up, but still gave it off and on up to about two weeks ago. What I want to know is: should I follow the same course again? Do you think one-half pint of the Douglas Mixture to two gallons water a day is too strong? What proportion would you recommend for the baby chicks? After they have all had a rest should I start in giving the mixture to all the fowls?—Mrs. W. P., Sebastopol.

As the Douglas Mixture produced such satisfactory results in the past we recommend that it be continued. However, we suggest that it may be wise to give to the young stock over one month of age not more than one-quarter pint to two gallons of water, and a still weaker solution to the chicks that are less than one month old. As a rule, those who make a practice of constantly administering the mixture consider that it is proper to give it twice a week, and plain water during the other five days.

KEEP DRINKING WATER IN SHADE.

During hot weather keep drinking fountains and other watering devices for poultry in shady places. Not only does the shade keep the water cooler, but it results in less evaporation. Whether the drinking receptacle is in the shade or not may determine whether the poultry have plenty of water to drink or whether they go thirsty until the attendant notices the lack of water. Successful poultry management depends on many details, mainly the proper care of drinking water.

If possible, locate brooders on ground that has recently been cultivated, thereby eliminating the danger of tainted soil and transmissible diseases.



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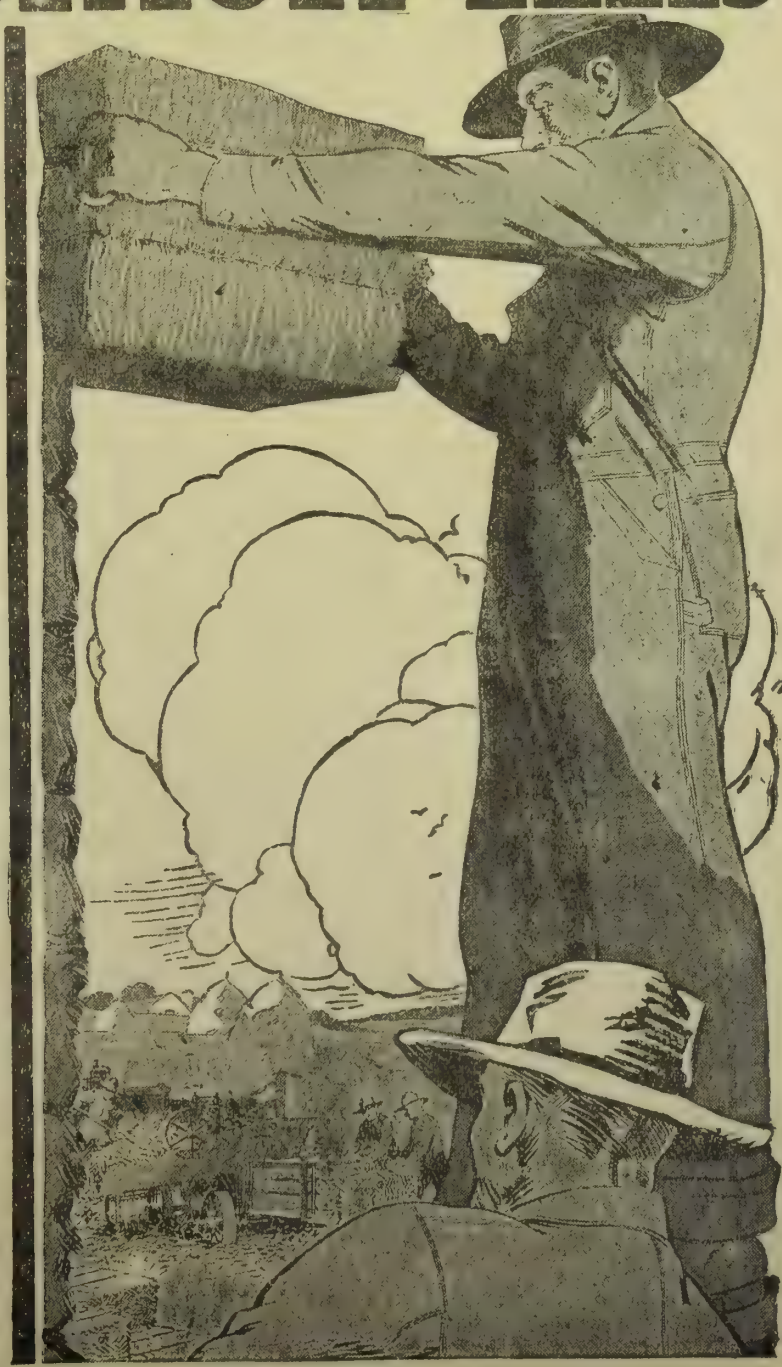

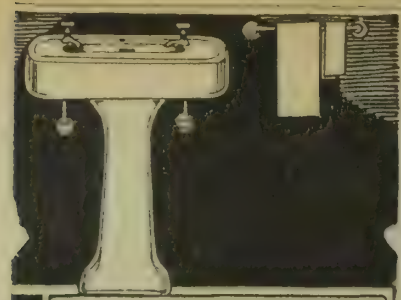

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"BE THE BEST OF WHATEVER YOU ARE."

"If you can't be a pine on the top of the hill,
But a scrub in the valley—but be
The best little scrub at the side of the rill;
Be a bush if you can't be a tree.

"If you can't be a bush be a bit of the grass,
Some highway to happier make.
If you can't be a muskie then just be a bass—
But the liveliest bass in the lake!

"We can't all be captains, we've got to be crew,
There's something for all of us here;
There's a big work to do and there's lesser to do,
And the task we must do is the near.

"If you can't be a highway, then just be a trail,
If you can't be the sun be a star;
It isn't by size that you win or you fall—
Be the best of whatever you are!"

—Golden Gate Sentinel.

WHEN FATHER RAN AWAY.

My father lives in New York now and edits a big newspaper, but when he was a little boy he lived way off out West with Grandpa and Grandma Burritt. Grandpa Burritt doesn't have a newspaper. He preaches in a church, but he has another preacher to help him 'cause he's pretty old and preaching makes him tired sometimes.

Grandma knows a great many interesting stories, but the most interesting of all is one about what happened to my father a long, long time ago, when he was only three years old.

Grandma Burritt has a picture of father the way he looked then. He had long yellow curls, and a little suit with a skirt, but you would know he was a boy, because his hair is parted on one side; besides, he doesn't look like a girl anyway. My father's name is Robert, but they called him Bobbie then; and sometimes Grandma Burritt calls him Bobbie now, though he's a grown-up man.

The story is about how father went to see Gen—; but I mustn't tell the name till I get to it, because that's the surprise.

This day my father ran away, but I guess now he's glad he ran, for if he hadn't run away this story wouldn't have happened. It was like this. He had been playing out in the yard with his little dog, Trouble—Grandma Burritt named him that—and people kept going by and going by, and father wondered where so many people were going. By and by he was tired of playing with Trouble and went to sit on the steps. As he was sitting there, suddenly he heard the sound of a band playing. It sounded beautifully. Father thought maybe it was a circus. Grandfather Burritt had taken him to see a parade a little while before, and this music sounded just like the circus band's.

Father ran down to the gate. He thought perhaps the parade would come by the house, but it didn't come. Then he thought if he went down to the corner he might see it from there, so he slipped out of the gate and went along the street the way all the people were going. Trouble tagged along behind. When they came to the corner, there wasn't any parade, but father was so excited that he kept right on.

The music kept getting louder and louder until finally father came to a big building with a flag in front and some soldiers and policemen by the big doors. Crowds of people were going up the steps. The band was inside. Father picked up Trouble and the little dog snuggled under father's jacket. Then father went right up the steps with the rest of the people. He was behind a big man, and the policemen must have thought he was the man's little boy, for they didn't stop him or ask any questions. They didn't see Trouble at all, or probably they wouldn't have let him go in.

Inside the building the band was way up in front on a kind of platform, and all the folks were in single file, marching up toward the front, the way we march in school, only they went very slowly and every once in a while the line would stop.

Finally father peeked around the big man, and way up in front of the building he could see a man sitting in a chair. He was behind some ribbons fixed like a fence, and there were a lot of flags back of him. People were shaking hands with this man, and after they shook hands they marched on.

The man was short and rather stout, and he wore a beard. He didn't smile or say anything, but just kept on shaking hands and looking tired.

When the big man in front of father came where the man was sitting, father heard him say when he shook hands, "How do you do, General Grant?"

Yes, sir! That's who it was—GENERAL GRANT! He was President of the United States, and he was there for a political rally.

Father held out his hand, too. He looked up at the President, and he said, just as he had heard the big man say, "How do you do, General Grant?"

When General Grant shook hands with him, there was a funny look on his face—not exactly a smile, but most one—and he said to the big man, "Is this your boy?"

The big man said, "No." Then what do you think! General Grant reached right over the ribbons and lifted father up and set him on his knee. He didn't say anything, only kept on shaking hands with folks. Father didn't say anything either. He just sat there and looked at the folks marching by. Trouble stuck his head out from under father's jacket and pricked up his ears; then he just wiggled around and went to sleep. When the President saw Trouble, he patted his head, and Trouble opened one eye and licked the President's hand.

After a time, way down the line, father saw Grandpa Burritt coming. He seemed worried and he kept looking ahead. All at once he caught sight of father sitting on the President's knee. Then grandpa looked astonished, but glad too, for he had been afraid father was lost.

When he reached the place where the President was sitting, he shook hands with him; then he said, "I'll relieve you of this young man now, Mr. President. His mother is anxious to see him," and the President nooded.

"Come, Bobbie," said grandfather, and he swung father and Trouble to his shoulder. Trouble wagged his tail, because he knew grandpa.

Father leaned down from grandpa's shoulder and held out his hand.

"Good-by, General Grant," he said, "I've had a nice time."

This time the General really did smile. "Good-bye, my son," he said, and he took off a badge he had on and fastened it to father's little jacket.

Father kept looking around till they came to the door where the folks went out. The last thing he saw was the President still shaking hands and looking tired.

That's how my father ran away to see General Grant, though he didn't know he was going to see him when he ran.

Father has seen a great many Presidents since then, because editors are likely to see them; but he says he has never enjoyed seeing one as much as he enjoyed seeing General Grant. He has General Grant's picture in the library, and in a little drawer in his big desk he keeps a faded badge. Some day he is going to give it to me.
—Mary Wells.

We all know the kind of milk a filthy pasteurization plant produces.

HOBOING IN CALIFORNI

(Written for Pacific Rural Press.)

Your correspondent has joined ranks of the hobos, though not exa as a volunteer. Early in the sea after a sleepless night, through w he rolled and tossed and swea unable to rest because of the heat stuffiness, he paid his bill at the f class hotel (the bill also being f class) and went out and bough hotel of his own in the shape o auto camping outfit. Now he do have to telephone ahead for a r (heat free). He stops wherever low-descending sun warns of proaching night, and, with all the there is to breathe, sleeps like a l —that is, if the mosquitos are not thick. Every dog has his flea, every sleeper-ant must someti have his mosquito, else he would terly revert to type. Because of camping outfit, your correspon straightway found himself in the l ranks, and he likes it. The hea the family went along once; now hobo has both a camping outfit a family on his hands whenever he the road. Perhaps it was the hea the family that let us into the i circles of hobodom, for when a wo becomes infected with democra usually proves a violent case. way, we soon learned the grip pass-words, and now we are masters. Not an evening wanes we do not swap a chunk of ice f dish of berries, or a few peaches the privilege of making coffee on other fellow's fire, and it doesn't m a bit of difference who we are who the other fellow is. We have joyed a lot, and learned a lot, an trust, are a bit more human for this happy-go-lucky night life. M it is bohemianism, but if so, it is in the open, where the air is pu that is, usually it is; but before forgotten, just a word about the m advertised free camping grounds. exception proves the rule that you get for nothing is usually about what it costs you. We l struck a good many free camp grounds and find ourselves divi them into three groups. There some cared for by cities, where t are real conveniences, good sanita and enough neatness. There are n where some canning or packing-h obligingly lets the community fur a free camping-ground where employees settle for the season. ally these are left to run themse and, as the season advances the ta disappear, the toilets become im sible, and the remains of can gone before present a depressing and sometimes an unholy smell. there are others that "just grov because there was water near, that seemingly "do not love no and nobody don't love them." or twice we have pulled in at n too tired to go farther, and after v ing the landscape o'er, have raised question, Where is the Immigra and Housing Commission?

Now we seek the wilds when we but a public camp-ground is neces in settled country, where the are fenced and "No trespassing" s greet you everywhere, for hobos not going to change their spats become guests at hot hotels—no the good old summer time. If pl that boast free camping grounds not afford to give any care to t why not charge a nominal enough to pay someone to keep place looking and smelling decent not enough to shut anybody Anybody who is anybody will stand for having anybody barred. are democrats with a big "D" hobos—and it's: "All hail! Com on foot, in a rickety wagon, a or an auto! It's all the same whether you are a blanket ma cannery worker, or a bank presi so long as your heart is right; in hobodom hearts come near right.

We have discovered several gr of hobos—not classes; far out o open road this class business do go. We all look alike in the and, stripped of our superficialtie are alike. Some are more alike others, but we are all alike— matter of degrees.

One evening we pulled into a little amp-ground a way up north and be-an setting up our hotel next to a agon. The head of the family, who "bugs" on cats, noticed a beautiful ne under the wagon. Tom proved hy, and as an introduction could be ad only through the master, she truck it off with him. He was a big ough fellow, who swore every other ord and apologized to the "lady" by aying he was so d——d used to wearing that he forgot himself.

He had traded for the wagon, and kitten, born therein, went with it. e who had no home but a wagon had gged that kitten clear from the Im-erial Valley and developed it into a eautiful cat as devoted to him as a og could be. He was rough outside; is language was more powerful than legant, but he loved the cat, and at awn from his bed in the wagon he alled a cheery good morning to his orses, and they answered him with affectionate neigh. Pretty much f a human he was, and you could ever convince the head of the family at he would steal her purse or at-mpt to overthrow the government.

But about those groups of hobos. here may be "tramps" in the cities, ut there are none on the open road, tramp being one that thinks that ociety owes him a living and who arts out on foot to collect, doing no ork except that involved in making e collection. Everybody you meet the road works and pays his way, is manner of going about giving him is title of hobo.

There are the blanket men, ever rowing fewer and farther between. hether it is prohibition, or these ping times of high wages, or both, neither—anyway, most of this roup now carry their belongings in uit cases and go from job to job in e auto stages. Now and then, ough, you meet one of the old hool, and when you do he is quite t to be intelligent, well read in eral literature, and companionable, you give him half a chance.

Then there are those who follow the asonal work. These are mostly hole families, who, with the coming the early fruit load the wagon, or ore often now the Ford, with the cessary camp-stuff, and "hit the ad." They follow the fruit as it pens, winding up with late grapes, d seeking cover only when the rains ive them in. Everybody works who old enough to work. No nationality minates—they are all there, except e Orientals. They represent a good any walks in life, too. There is that merican family from Missouri in a g eight-cylinder car, seeking a farm me in fabled California, but usually rking through a summer before lo-ting. There is that refined little oman with her husband and little y in a Ford, as finely rigged out as camp hotel. A nervous breakdown llowing the "flu" and the death of baby caused them to sell their me in Los Angeles, and for six onths they have been on the road hile she has bravely fought her way ck to health. One night four col-ge boys from Colorado, in a thing ith four wheels and a wheezy en-ne, nearly took our lamps off as ey backed into camp. They are aking their way back through a va-tion in California. Then there is e ubiquitous Mexican family out r the "mon," which they frankly say ey need. So it goes. Mingle with em and you will learn with one of d not to call any common or un-ean. You are liable to become em-rrassed most any time if you at-mpt it in this company. Then ere are the tourists proper—prac-ally all of them are proper, but ey have caught the spirit of hobo-m and are hale fellows well met as ey come snorting in about dark, full good cheer and dust.

It is not quite the peaceful thing David Greyson's "The Friendly ad"—there is too much engine roar d smell of bum gas for that, but the irit of it is the same. Follow the e a while, and if your life has been rkened with fear of national dan-r—fear largely trumped up by cheap liticians to further their own petty bitions—that fear will fade away, and a great assurance will possess your heart.

"The Masses," we hobos are, and when you come to know us you will find us just like the rest of you.

WHAT DID SHE MEAN?

Mickey: A doctor was to school today and said I had ad'noids.

Mrs. Finnegan: An' what's them?

Mickey: They're things in yer head as has to be taken out.

Mrs. Finnegan: 'Tis not so. I've germicidal soaped yer head and fine-combed it and niver a one did I find.

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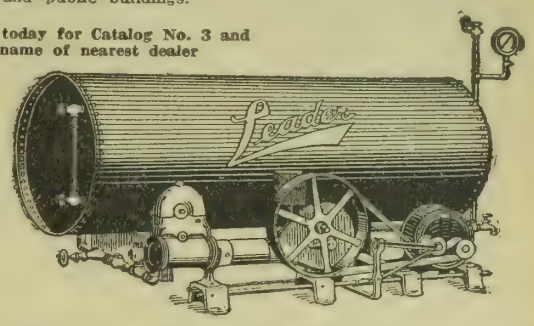

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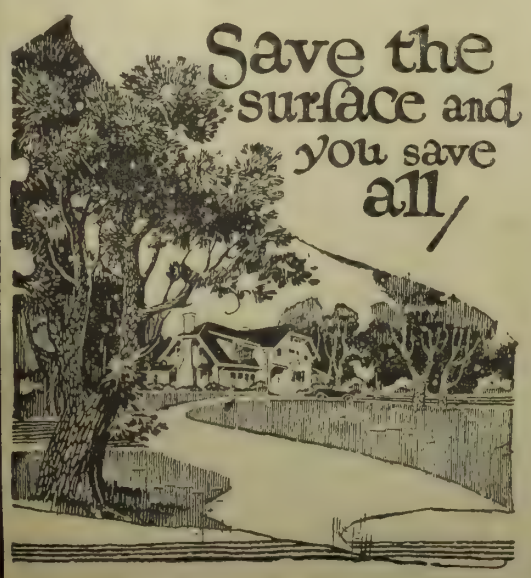

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THE MARKET REPORTS

Compiled from Independent Sources.

SAN FRANCISCO

San Francisco, August 18, 1920.

WHEAT.

Although very quiet, the wheat market is steady. No concessions are being made because the market may soon gather activity.

Wheat .....$3.50@3.65

OATS.

In common with other grains, oats continue dull. No relief from a dull market is predicted.

Red Feed, ctl. .....$2.85@3.15

BARLEY.

The demand has been very light, with practically no spot or call board trading. No change in price is contemplated.

Feed Barley .....$2.40@2.45

CORN.

Egyptian corn is being shaded on the market in order to dispose of some of the vast amount on hand. Mexican corn, which has lately come on the market, is expected to hurt other corn. A drop in corn prices is looked for.

Egyptian, white .....Nominal
do, brown .....$3.65@3.75
California .....$3.80@$3.85

FEEDSTUFFS.

Feedstuffs are quiet as are all grains in the local market. Rolled barley is weaker, but the market is expected to stiffen on it this week. More inquiries for dry feed are expected this week because of the growing scarcity of green feed, which is almost all gone. A dried beet pulp feed is now on the market. While but 90 pounds of it are extracted from a ton of sugar beets, it sells for $60 a ton.

Rolled Barley .....$55.00@56.00
Rolled Oats .....$62.00@63.00
Alfalfa Products .....$45.00@52.00
Cracked Corn .....$80.00@81.00

HAY.

Last week's hay receipts were 3,621 tons. Receipts for the week before were 3,344 tons. A still larger increase in hay receipts is predicted for the coming week. The alfalfa market continues dull, with a slight decrease in price. First cutting alfalfa is by this time off the market. Very little export trade has been done in the past week, and prices have generally shaded off a little.

Old Hay .....Nominal
Wheat Hay, new .....$26.00@28.00
Tame Oat Hay, new .....$24.00@26.00
Wild Oat Hay, new .....$18.00@20.00
Barley Hay, new .....$18.00@21.00
Alfalfa, new .....Nominal
do, 2nd cutting .. $22.00@25.00
Stock Hay .....Nominal
Barley Straw, bale .....Nominal

FRESH FRUIT.

(Wholesale prices paid by commission houses.)

Cantaloupes are plentiful with hardly any demand. Loganberries are finishing. The berry market on the whole has been poor the past week and moving slowly. No increased demand is predicted for the coming week. Apples are selling fast, and prices have increased. The increased in apple prices is expected to continue for some time. There are practically no more apricots on the market. Plums are beginning to come in. Other fruits are firm. Some big Persian cantaloupes are on the market selling at 5 cents a pound. The bottom has dropped out of the watermelon price, but further declines are considered unlikely. Casabas are cheap and in light demand.

Apples, Gravenstein, fancy $2.35
do, choice $1.75
do, Alexanders $1.75
do, Red Astrakhan .....Nominal
Plums .....$1.25@2.00
Apricots, lb. .....5@7c
do, box .....$1.25@1.50
Peaches, 4 baskets $1.25
Pears .....$2.00@4.00
Figs, box, 1 layer .....$1.00@1.25
Strawberries, 6 12-oz. boxes .....75@90c
do, 6 8-oz. boxes, drawer .....50@65c
Blackberries, drawer, 12-oz. drawers..35@45c
Raspberries, drawer .....75c@$1.00
do, 8-oz. boxes .....50@60c
Cantaloupes, Standard .....50@75c
do, Ponies 50c
do, Flats .....25@35c
Watermelon, lb. .....1¼@1½c

DRIED FRUITS.

The apricot price is rising slightly, otherwise the market is very quiet. The demand for raisins continues.

Apricots, choice, lb. .....24@25c
do, fancy, lb. .....28½@29½c
Peaches, blue ribbon, 60 11-oz. case.. $9.00

POTATOES, ONIONS, ETC.

(Wholesale prices paid by commission houses.)

Potato growers seem to have stopped digging and the market is firm with a tendency toward a slight advance in prices, which will probably remain about the same as quoted at the close of the week. Five cars of Australian Brown onions were received here during the past two days. Further large shipments are expected. The market is flooded with green beans, carrots and lettuce. Tomatoes are a little scarce, but have a very poor demand. No more Merced tomatoes are on the market. Large shipments of Nevada potatoes are to be made soon, it is reported.

Peas, Bay, lb. .....6@8c
Beans, wax, lb. .....5@6c
do, green, lb. .....3@4c
Carrots, per sack .....$1.50@1.75
Green Corn, each .....$1.50@2.50
Lettuce, local, dozen .....25c@50c
Cucumbers, Alameda, lug box .....50@75c
Tomatoes, River, large box .....75c@1.25
Rhubarb, Strawberry, box 40 lbs..... $1.50
Summer Squash, box, 35-40 lbs. ...50@75c
Egg Plant, box .....25@75c
Potatoes, New River, cwt. .....$2.50@1.75
Onions, Yellow, sack .....$1.50@1.75
do, Red .....75c@85c
Green Onions, box, 25 lbs.....$1.25@1.50

BEANS.

The market is poor. The lima crop is looking very poor. There have been no low fogs and more heat with consequent decreased yield.

Bayos .....$12.50@14.00
Blackeyes .....$ 7.50@ 8.00
Cranberry .....$ 6.75@ 7.00
Pinks .....$ 6.35@ 6.50
Red Mexican .....$7.50@7.75
Garbanzos .....$ 7.75@ 9.00
Large Whites .....$ 5.90@ 6.10
Small Whites .....$ 5.90@ 6.10
Limas, Ass'n prices, South $11.42
do, Baby, Ass'n prices, South $11.42
Limas, S. F. prices .....$10.15@11.00
do, Baby, S. F. prices .....$10.15@11.00

POULTRY.

The market has been firm and receipts have continued light throughout the entire week. There is a big demand for all classes of hens, which is likely to continue for some time, owing to light receipts. Hens and Leghorns grew very scarce at the close of the week. An advance in the price of hens is noted.

Broilers .....38@40c
Hens, mixed color .....38@40c
do, Leghorns .....25@30c
Roosters, young .....42@45c
do old .....17@20c
Fryers .....38@40c
Squabs .....55@60c
Geese .....22@26c
Ducks .....22@25c
do, old 18c
Belgian Hare, live .....18@20c
do, dressed .....22@25c
Jack Rabbits .....Nominal

CITRUS FRUITS.

There has been a fair demand with light receipts. The scarcity of pineapples has sent the price up a little. The lemon market is picking up and a further advance on choice lemons is expected, but the market is loaded with fancies and a drop in their price is looked for. After an advance Valencia oranges are holding steady.

Lemons, fancy, box .....$4.00@4.25
do, choice .....$2.75@3.25
Oranges, Valencias .....$5.50@6.50
Grapefruit, seedless .....$3.50@4.00
do, choice $3.00
Pineapples, doz. .....$4.50@5.00

HONEY.

The market is moving a little faster than heretofore. Receipts are still light with practically no price changes.

White to Water White, sage.....18c@20c
Light amber .....16c@18c
Amber, Alfalfa .....15c@16c

BUTTER.

While butter receipts have been much heavier, the demand has greatly increased and prices are evincing a tendency to move up.

	Thu.	Fri.	Sat.	Mon.	Tu.	Wed.
Extra	58	57½	57	..	..	..
Prime firsts	57½	58	58	..	..	56½

EGGS.

The egg market has not fluctuated much during the past week. Prices have been steady. Supply and demand have been about equal. Petaluma egg shipments to the East are still heavy but not quite so heavy as in July. Cases of eggs shipped East from California during the first 11 days of August numbered 10,052.

	Thu.	Fri.	Sat.	Mon.	Tu.	Wed.
Extra	54	54½	53	53½	53½	53½
Ex. Pullets	46½	46½	45	45½	47	47½
Dirties ...	49	49	48	47	48	48½
Undersized	34	33½	33	33½	33½	33

CHEESE.

(Quotations are exchange prices less regular commisisons.)

The market has been very quiet throughout the week. Receipts continue light. Two carloads were brought in from Oregon. The price increase may continue for another week, conditions indicate.

California Flats, fancy 28c
do Firsts 24½c
Y. A., Fancy 33c
Oregon Triplets 27c
do, Y. A. 33c

LOS ANGELES

Los Angeles, August 17, 1920.

BUTTER.

A steady and good demand was had the past week for extra creamery from the consuming trade. Receipts were liberal—183,600 pounds for the week. While this was in excess of the immediate wants of the trade, yet in sympathy with stronger markets East, prices were advanced 1 cent. We quote:

California, extra creamery 59c
do, prime first 57c
do, first 56c

EGGS.

A good demand and higher market was had the past week for all strictly fresh extras and pullets. Receipts light and under the influence of the very hot weather and a falling off in the production, extras were advanced 2 cents up to Monday and demand good at this improvement. Case count and pullets unchanged but firm. Receipts by rail for the week, 933 cases. We quote:

Fresh ranch, extras 56c
do, case count 51c
do, pullets 47c

POULTRY.

A very good market was had the past week for most poultry. Broilers came in less freely and were in good demand and higher. Hens also showed more life and light hens brought a little more money. Fryers slow sale but steady. Turkeys scarce and in fair demand at quotations. Ducks dull. We quote from growers:

Broilers, 1 to 1½ lbs. 31c
do, 1½ to 1¾ lbs. 34c
Fryers, 2 to 3 lbs. 32c
Hens .....25@32c
Roosters (soft bone), 3 lbs. and up..... 38c
Ducks .....17@20c
Turkeys .....40@44c
Geese 25c

VEGETABLES.

All good fresh stuff in good demand. Potatoes were steady but slow of sale. Onions were in only fair demand but higher. The early onions are pretty much all gone and late ones are now coming in and they are bringing more money. Lima beans steady and selling fairly. Bell peppers dull and lower. Chile's higher and in fair demand. Lettuce higher under scarcity. Cabbage dull. Corn in good demand. Summer squash steady. Cucumbers selling a little higher

Potatoes, local, cwt. .....$2.50@2.75
do, Northern, cwt. .....$2.75@3.00
Onions, Stockton, yellow, cwt. ..$1.25@1.35
do, local, crate .....40@50c
do, local white, lug crate ....$1.35@7.50
do, white, late, cwt .....$1.75@2.00
Lettuce, crate .....$1.15@1.25
Rhubarb, per 30-lb. box .....50c@$1.00
Peas, lb. .....9@11c
Carrots, doz. bunches .....30@35c
Summer Squash, local lug .....25@40c
String beans, green, lb. .....7@8c
do, wax, lb. .....7@8c
do, Kentucky, lb. .....8@9c
Cucumbers, lug. .....40@50c
Tomatoes, home-grown, No. 1 lug 50@60c
do, No. 2 .....25@35c
Bell peppers, lb. .....2@3c
do, Chile, lb. .....5@6c

FRUITS.

There was a firmer tone to this market the past week. Receipts were good. Of plums, Black Diamonds and Satsumas were higher and in good demand. All others steady and selling well. Peaches are a little higher under the influence of better quality and demand. Grapes coming in more freely and lower, but demand fair at the decline. Apples steady and selling well. More figs coming in and demand very good, but prices lower under the influence of increased offerings. Pears steady and demand good. We quote from growers:

Plums, Santa Rosa, lb. .....8@9c
do, Satsuma .....7@10c
do, Black Diamond, lb. .....8@10c
do, Burbank, lb. .....5@6c
Nectarines lb. .....7@8c
Peaches, Freestones, lb. .....5@6c
do, Clings, lb. .....5@7c
Figs, black, northern, lb. .....10@12c
do, local, 15 to 18-lb. box, $2.65@2.75
Crabapples, lb. .....4@5c
Grapes, Malaga, lb. .....8@9c
do, Muscat, lb. .....8@9c
do, Thompson Seedless, lb. .....5@6c
Apples, Red & Wh Astrakhan, bx $2.25@2.50
Pears, Northern, lb. .....4@9c
do, local, lb. .....4@5c

BERRIES.

Not many in the past week and not many wanted. Raspberries are all gone. What few strawberries are coming in met with a fair demand. The same may be said of blackberries. We quote from growers:

Blackberries, 30-basket crate ....$4.00@4.50
Strawberries, 30-basket crate ....$5.00@5.25
do, poor to choice, crate ....$4.50@5.00

MELONS.

Market slow and lower for cantaloupes. Lots coming in and buyers taking advantage of the increased supply to force prices lower. Demand fair, however, at quotations. Watermelons coming in freely. We quote from the growers:

Honeygrown, Tip top, standard $1.00@1.25
do, Pineapple, standard .... 75@1.00
do, Rocky Ford, standard ..$1.15@1.25
do, Paul Rose, standard .....$1.15@1.25
Honey Dew Melons, standard....$1.50@1.75
Casabas, lb. .....½@1c
Watermelons, lb .....¾@1c

BEANS.

The past week was another dull one in this market. We quote f. o. b. Los Angeles:

Limas, per cwt $10.00
Large white, per cwt .....$5.25@5.50
Small white, per cwt .....$5.25@5.50
Blackeyes, per cwt. .....$6.50@7.00
Tepary, per cwt .....$3.00@3.25
Pink, cwt $6.75

HAY.

Receipts were good much in excess of the demand and receivers had to carry over a number of cars unsold each day. Dairy people were about the only buyers and they only wanted alfalfa. We quote from growers:

Barley hay, ton .....$23.00@25.00
Oat hay, ton .....$25.00@28.00
Alfalfa, Northern ton .....$30.00@32.00
do local, per ton .....$28.00@33.00
Straw .....$14.00@16.00

SPECIAL DECIDUOUS REPORT.

Sacramento, August 18, 1920.

With the exception of peaches, all varieties of deciduous fruits are selling well in all of the Eastern markets. Bartlett pears have recovered from the temporary slump. Reports down to the last minute from Eastern auction markets are: Bartlett pears, $4@5.60 per box of 48 pounds net; few sales below $4.75.

All varieties of plums retain their usual strength: Grand Duke, $1.95@2.75; Gross, $2.05@4.50; Giant, $1.80@3.00; Diamond, $2.50@2.70; Yellow Egg, $2.25@2.65; Kelsey, $2.30@3.20; Sugar, $1.85@2.05; Hungarian, $2.10@3.25; President, $2.30@4 per crate. Wide range in prices are due to quality and condition of fruit, when opened for inspection in the auction rooms.

Grapes continue to lead in prices. Thompson Seedless, $2.45 per crate, car grossed $2.498; $2.55 per crate, car grossed $3.293; Malagas, $3.00 per crate, car grossed $2.946; $4.02 per crate, car grossed $4.024. The wide range in prices due to quality and pack.

SPECIAL CITRUS REPORT.

Los Angeles, August 18, 1920.

New York, August 17.—Market higher on oranges and lemons. Valencias sold according to sizes and condition, $4.80@8.50; general run of prices, $6.25@7.75; some lines as low as $3.50, due to condition. Lemons, $3.60@$4.20.

Boston.—Market easy on both oranges and lemons. Valencias, $3.25@6.80; general run of prices, $4.20@6.00. Lemons, $2.65@3.50. For the past week shipment of oranges has been heavy, due possibly to advance in freight rates that go into effect August 26.

Shipments to date: Oranges, 27,001 cars; same date last year, 30,383. Lemons, 6,986; same date last year, 8,657 carloads.

Special Livestock Market Report

San Francisco, August 18, 1920.

CATTLE—The past has been a quiet and featureless week. The acute feed situation is forcing the market badly, and buyers are a little exacting in the selection of supplies. All well-finished stock commands a ready market. In the East the market is a trifle brighter.

Steers, No. 1, 1000-1200 lbs..... 9½@10c
do, 1200-1400 ..... 9 @ 9½c
do, 2nd quality ..... 7 @ 8c
do, thin ..... 6 @ 7c
Cows and Heifers, No. 1 ..... 8 @ 8½c
do, 2nd quality ..... 6 @ 7c
do, thin ..... 2 @ 4c
Bulls and Stags, good ..... 4 @ 5c
do, fair ..... 3 @ 3½c
Calves, lightweight .....10 @10½c
do, medium ..... 8 @ 9 c
do, heavy ..... 7 @ 8c

HOGS—The hog market is also in a somewhat apathetic state, and demand, lessened by hot weather, about absorbs the not overabundant supply. Quotations unchanged.

Hard, fat, grain-fed, 100-150 lbs.....16½c
do, 150-225 lbs. 17c
do, 225-300 lbs. 16½c
do, 300-400 lbs. 15½c

SHEEP—The mutton sheep market continues weak, with little hope of an early reaction. The arrival of large consignments of frozen lamb carcasses from South America and New Zealand is felt in the market even here in the "Far West." Dry range conditions in California also aggravate the local situation. However, prices are maintained.

Lambs, milk ..... 9½@10c
do, yearling ..... 7½@ 8c
Sheep, wethers ..... 7 @ 7½c
do, ewes ..... 5½@ 6c

Los Angeles, August 17, 1920.

CATTLE—The shortage and high price of feed increases numbers of both steers and cows on the market. Hence buyers are backward, sales slow, and prices weak at quotations.

Per cwt. f. o. b. Los Angeles:

Beef steers, 1000@1100 lbs. ..$8.50@10.50
Prime cows and heifers .....$8.00@ 8.50
Good cows and heifers .....$7.00@ 7.50
Canners .....$4.50@ 5.00

HOGS—Offerings the past week were very good and tone of the market weak. Killers all wanted a few hogs for the fresh meat trade. The weather has been hot, which lessens the demand for fresh pork. There is little disposition to buy for curing at present quotations. Per cwt. f. o. b. Los Angeles.

Heavy, averag'g 275@350 lbs. $12.00@12.50
do, 225@275 lbs. .....$14.00@14.50
Light .....$15.50@16.50
Rough docked 20 lbs. piggy sows 40 lbs. and stags, 40 per cent.

SHEEP—Demand continues very good for lambs, but values weak in sympathy with low markets East. Per cwt. f. o. b. Los Angeles.

Prime wethers .....$7.00@10.00
Yearlings .....$ 6.00@10.00
Prime ewes .....$ 8.00@ 9.00
Lambs .....$10.00@12.00
Spring lambs .....$10.00@12.00

EASTERN.

Chicago, August 17, 1920.
(U. S. Bureau of Markets.)

CATTLE—Receipts, 10,000; general trade draggy; choice light and heavy steers, steady; heavy beeves and medium grades, slow to 25c lower; top steers, $17.10; best yearlings, $17; bulk, choice, $16.75; good steers, slow, $15@15.75; grassy kinds, mostly, $9.50@14.50; she stock, slow to 25c lower; sales averaging $4 to $12.50; bologna bulls, easy; some sales lower, $5.50@7.50; choice vealers, early to city butchers up to $15.25, and $15.50; bulk, choice, $14.50@15.00; stockers, steady.

CALIFORNIA FARM BUREAU MARKETING ASS'N.

REPORT OF SALES.

Visalia, August 10, 1920.

No. Hogs	Av. Wt.	Price	Buyer.
81	203	$16.20	Bertram Bros.
60	201	16.20	Joe D. Biddle
52	215	15.85	Bertram Bros.
99	111	13.85	Holliday Bros.
10	161	14.85	Bertram Bros.
1	200	8.50	Holliday Bros.
7	312	14.90	Joe D. Biddle
2	360	14.85	Bertram Bros.

Four cars, 12 consignors.

Tulare, August 10, 1920.

80	188	16.05	Joe D. Biddle
93	174	15.80	"
59	152	15.25	"
40	179	15.25	"
47	254	13.05	Holliday Bros.

Four cars, 22 consignors.

Hanford, August 12, 1920.

169	176	16.30	Joe D. Biddle
70	207	15.80	E. B. Miller
79	190	15.25	Joe D. Biddle
81	142	15.25	"
24	401	14.30	"
4	250	14.30	"
1	330	14.30	E. B. Miller
3	393	13.80	"

Five cars, 27 consignors.

Corcoran, August 13, 1920.

71	176	16.40	E. B. Miller
77	229	16.25	Wilson & Co.
53	195	16.25	Joe D. Biddle
22	156	15.75	"

Three cars, six consignors.

MARKET COMMENT.

e Eastern Peach Market.

The New York and Chicago peach rket has been anything but en-uraging to the California peach wers and shippers during the past w days—straight cars of Elbertas lling in New York at 85 cents per -pound box; Chicago as low as 65 nts per box. Boston has nothing to ke faces over at 70 cents per box Early Crawford peaches. Balti-ore trails along with 95 cents per x. Pittsburg, not to be outdone, lls at the six-bits mark. Cleve-nd and Minneapolis show some ep" at $1.05 to $1.40 per box. ese unprofitable prices are due to mpetition from near-by points. It the same old story. Early in the ason reports reach California that tire peach-producing sections have en wiped off the map as far as the ason's production is concerned. The lifornia growers become enthusi-tic over prospects for high prices d ship freely, to find when it is too te that other sections had peaches, nce a slump.

rticultural Courtesy.

Horticultural courtesy is mani-sted in the tree fruits gradually lling back for that of the vine. apes are now coming into their n, and a glimpse at prices indicate ey are holding it. We have before the sale of a car shipped from Sul-na, Tulare county. Thompson's edless averaged $3.70; Malagas, .00; car grossed $3.884. Another r from Hooper, Tulare county—raight car of Malagas—grossed $4,-6. Both cars sold in New York the me day. While it is not expected at these splendid prices will con-ue at such a high rate, it is, how-er, expected that there will be a ntinual spirited demand as long as e demand for wine and raisin grapes e commanding the prices they are ing contracted for at the present ne.

o Cantaloupe Slump.

The cantaloupe market is sick, al-ost unto death. For several days e arrivals have run from 10 to 14 rs daily, which, of course, is ough to throw the market into a nicky condition. Good Ponies have ld as low as 25 cents per crate, hile the standards sold as low as cents per crate, and it required a gh class article to reach the top ice of 90 cents. Upon inquiry we arn that heavy shipments to the bay ties are due to lack of ice to re-igerate cars for eastern shipment d with a view of saving something t of the wreck the shippers take a ance.

stern Bartlett Pear Market.

The Eastern Bartlett Pear market s revived somewhat from its low ter mark. This weakness was not e to overcrowding of markets with erchantable fruit, but fruit arriving an overripe condition, rendering it fit to be held for any length of me, after being exposed to the heated mperature that has ruled through-t the East for weeks. Naturally e large amount of ready-to-eat ars had a depressing effect on the arket, causing all lines to suffer, ac-rdingly. However, the market has aced up and all hard ripe pears are demand at $4.50 to $6.14 per box 48 pounds net.

aches in the Doldrums.

The local peach market is anything t brisk. It continues low. Some of e off-grade canning stock is being ld for what can be obtained for it. s the peach season is now at its st, the daily receipts are heavy on ble stock, wrapped stock in 21-ound boxes selling at 90c@$1.25 baskets of less weight, 75c@$1; os Angeles lugs of 20 pounds, 75c@ ; large lugs of 40 pounds, $1.75@

Classified Advertisements.

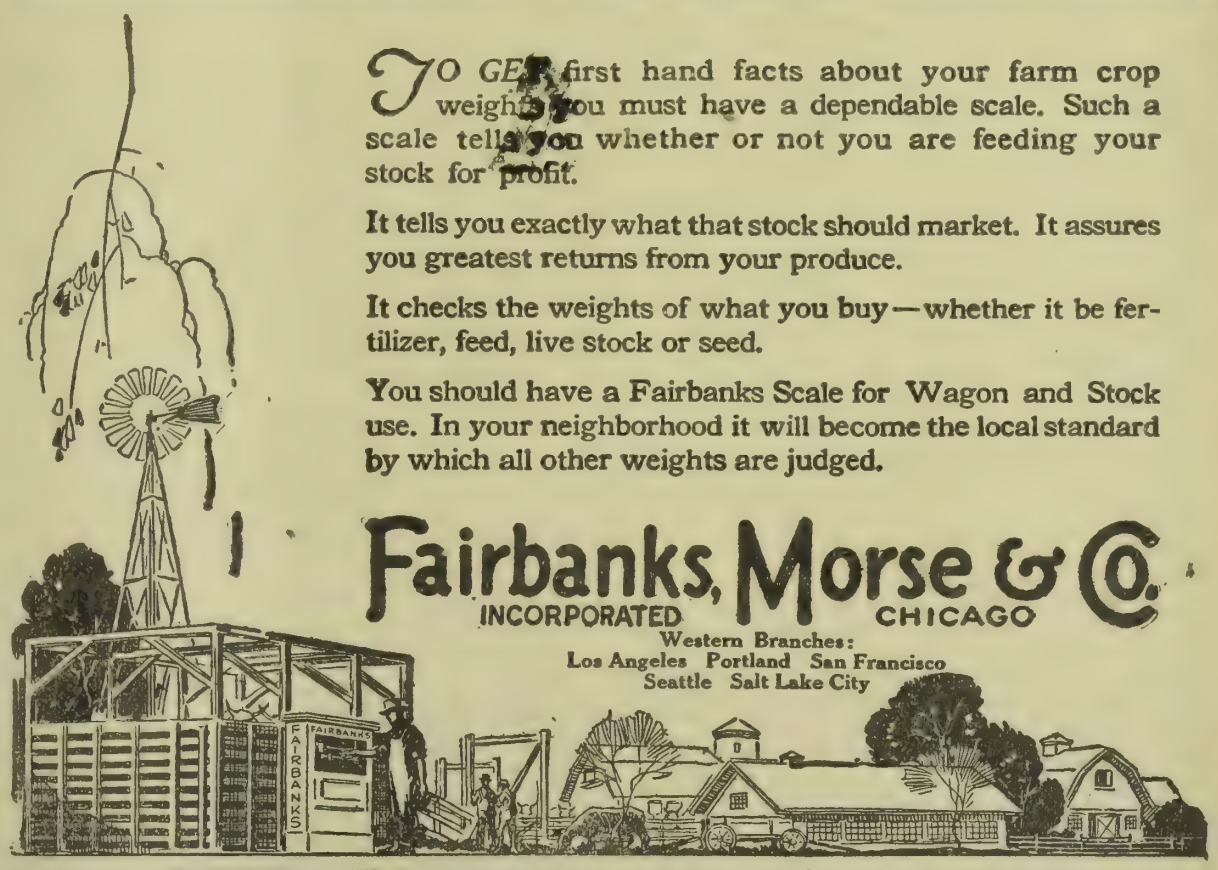
te, 3½c per word. Cash must accompany all orders.

COUNTRY LANDS.

FOR SALE—14 4-5 acres irrigated farm th farm implements, team, heifer, 300 ickens and hay. Jacob Wilbois, Route A, kdale, Cal.

FAIRBANKS SCALES

Accurate Weights now even more important



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FOR SALE—5 acres almonds, full bearing, with crop. Water right in Clark Colony Water Company and Greenfield Water Company fully paid up. Price $3,000 if sold at once. Address, F. J. Greer, Owner, Greenfield, Calif.

FOR SALE—40 acres—10-year-old orchard, 4 in apricots, 10 in almonds and balance in summer fallow. Three-fourths mile from highway on the Turlock Main Canal. For particulars, inquire, G. W. Bowles, Hickman, Cal.

FOR SALE—11½ acres right at Sunol, well improved and equipped for 1,000 chickens, 4 acres level; fine pumping plant. $6,500; terms. Swigart, 1715 Telegraph Ave., Oakland, Cal.

MISCELLANEOUS.

WANTED—A number of experienced men to cut grain with old-fashioned cradles. Will pay 75c per hour. Six weeks or 2 months' steady work. Apply C. S. Jurges, Willows.

WANTED—Farmer agents for high-grade, well-known tractor in territories where there are no dealers. A chance to get a high grade tractor at a dealer's price and make profitable income from sales to your neighbors. Territory is limited, so write at once. Box 345, Stockton, Cal.

FOR SALE—12 H. P. International Engine. Friction clutch, kerosene burner, all bronze bearings, Webster magneto. Almost new; run very little; perfect condition. $350—a snap for some one. A. R. Dysart, R. F. D., No. 2, Merced, Cal.

REMANUFACTURED PIPE
All sizes standard pipe and wrought iron screw casing. All kinds of fittings. Guaranteed good as new. Write for prices. **Weissbaum Pipe Works**, 160 Eleventh street, San Francisco.

BIG MONEY AND FAST SALES—Every owner buys Gold Initials for his auto. You charge $1.50; make $1.35. Ten orders a day easy. Write for particulars and free samples. American Monogram Co., Dept. 11, Glen Ridge, N. J.

WANTED TO RENT—My lease expired, experienced Japanese orchardist with agricultural college training seeks new bearing orchard or vineyard. Will consider partnership. Best of references. Box X, Pacific Rural Press.

WANTED—Carload of wheat straw, and also carload of mixed grain—wheat, milo mire, Egyptian corn, white, etc. Must be reasonable in price. Write all particulars to Hohn & Smaus, Los Gatos, Cal.

RELIABLE CABBAGE SEEDS—I grow them. You want them. Let's get together. Write for special offer on what you need. Isaac F. Tillinghast, 32 Podel St., Santa Rosa, Calif.

PUMPKIN SEED — Mixed pumpkin seed. Good germination, 25c per lb. Aurora Seed Mill, Stockton.

WANTED—Position as manager of large ranch. Experienced in fruit, vineyards, sheep, grain and general farming. Lawrence Haven, 52 North Morrison Ave., San Jose, Cal.

ALL SIZES OF PIPE and screw casing, both new and second-hand, dipped and undipped. Guaranteed. Prices right. Shecter Pipe Works, 304 Howard St., San Francisco.

FOR SALE—Two Monitor Bean Separators, size 5-E; condition as good as new. Call or write, California Almond Growers' Exchange, 18th C Street, Sacramento, Calif.

AGENTS — Mason sold 18 Sprayers and Autowashers one Saturday; profits, $2.50 each. Square deal. Particulars free. Rusler Company, Johnstown, Ohio.

WANTED — Salesman capable of earning $250 to $350 a month, selling groceries wholesale to farmers. (Commission.) Read "Hal's Win Out," page 242.

FOR SALE—One Beeman Garden Tractor, complete with plow, cultivator, disc harrow, etc. Practically new. Bargain. Robert Weinstock, Los Altos.

WANTED—Married dairyman, expert feeder and calf-raiser. Experienced in A. R. O. and fitting for shows. Sunnybrook Ranch, Willits, Cal.

CROLEY'S BALANCED HOG FEED—The cheapest feed to fatten hogs. Write Geo. H. Croley, Townsend St., San Francisco, Calif.

FOR SALE — Mariout Barley Seed—clean and good quality, weighing over 100 lbs. per sack. J. D. Rowe & Sons, Davis.

FOR SALE—3 John Deere Corn Binders, with truck attachment and one Husker and Shredder. Webber Bros., Byron.

SHEEPMEN—I will pasture and care for your rams. A. Esparcia, Felix, Calif.

WANTED AT ONCE, one nursery budder. The Cash Nursery, Sebastopol.

FISK

Red-Top Tires for Small Cars

WE have specialized in a tire for small cars—The Fisk Red-Top. It is pre-eminently a tire designed for hard service under all conditions.

Its success is due primarily to two things: extra size and extra strength.

For size, compare it with any other tire on the market. As an instance, you will find the Fisk Red-Top 30x3½ is larger than the so-called standardized oversize tires.

To get the extra strength an extra ply of fabric is built into the Fisk Red-Top. The tread is also extra heavy. This means both side walls and tread stand up under the most severe usage.

In every section of the country small car owners are getting from Red-Top Tires greater mileage, greater ease in riding and with the least attention of any tire that is made.

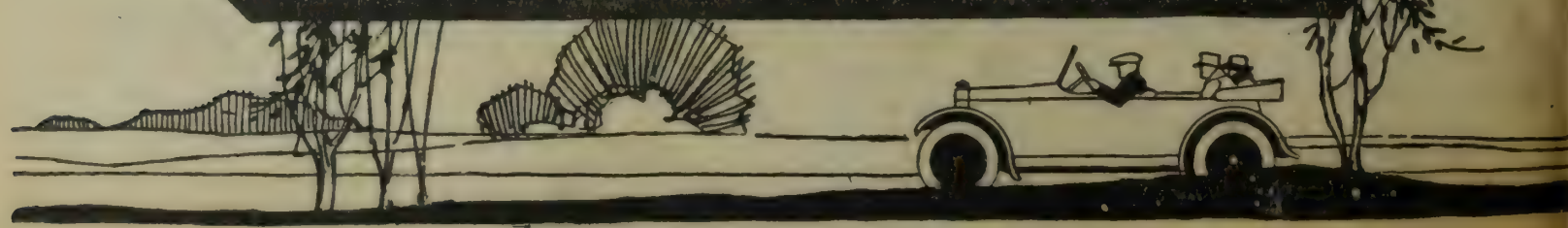
The Fisk Red-Top Tire in its present construction was put on the market early in 1918. It was not offered to our trade until we felt sure that our facilities for production would be equal to the demand—yet the demand was so great that for fifteen months after we were unable to catch up with orders.

With our present greatly enlarged equipment, however, we are now ready to supply Fisk Red-Tops promptly. You will find wonderful satisfaction in this tire especially designed for your small car.

Next time—BUY FISK
from your dealer

Time to Re-tire? (Buy Fisk)

Like all Fisk Tires, Fisk Red-Tops are backed by the Fisk Ideal, "to be the best concern in the world to work for, and the squarest concern in existence to do business with."



VOL. C—No. 9 Fiftieth Year

THE PACIFIC RURAL PRESS

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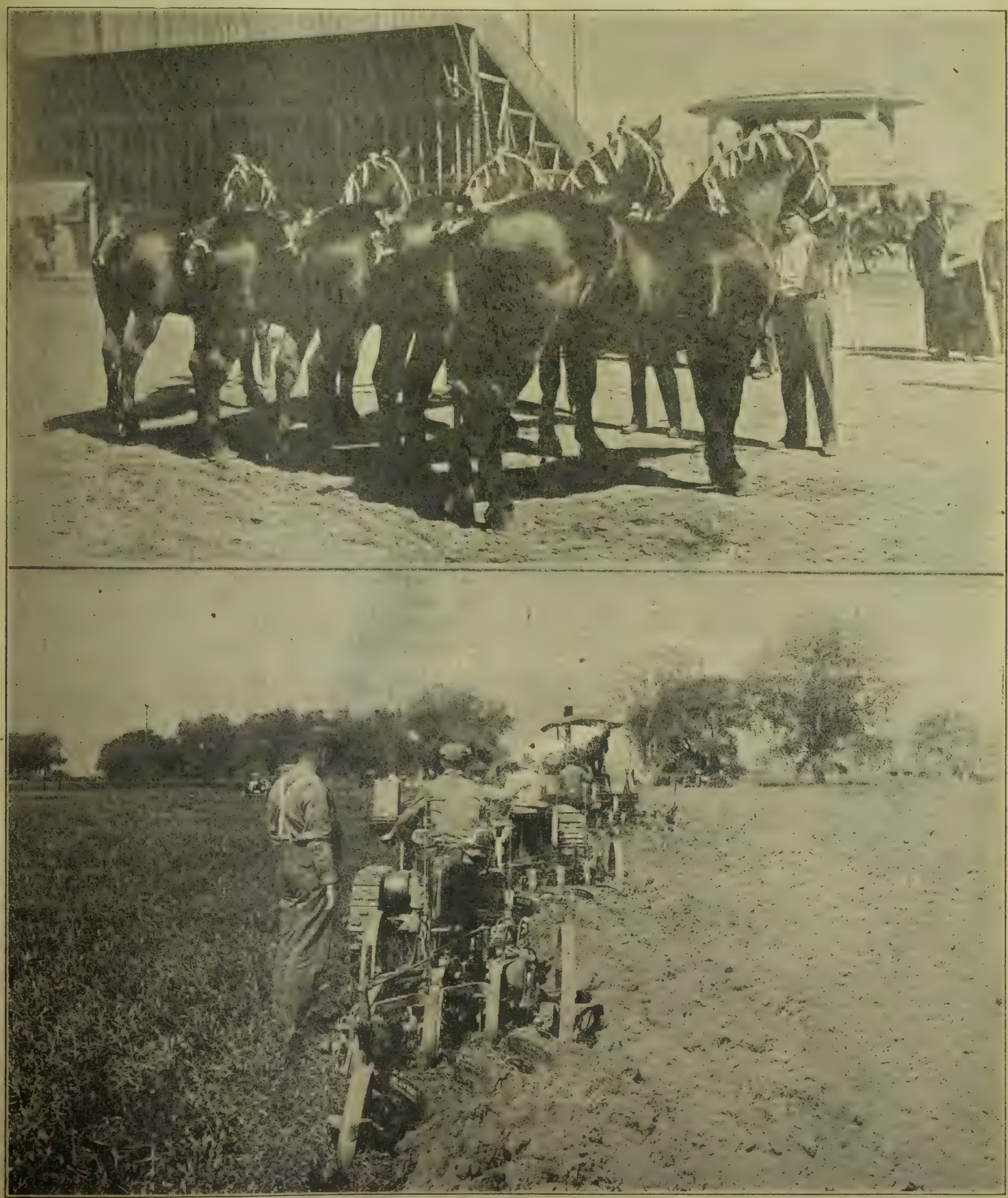
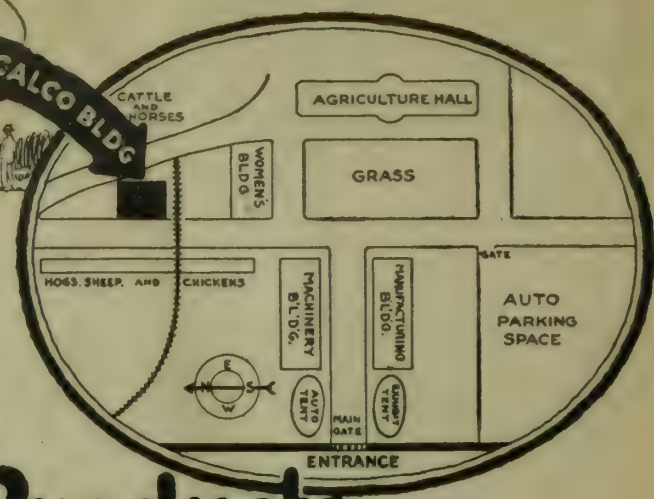
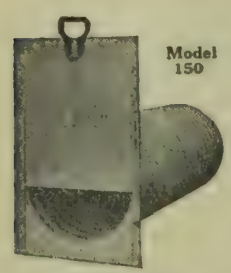


Farm Power at the State Fair. Livestock and machinery of all kinds constitute the greatest exhibits and the greatest values of our present State Fair. Horticulture, agriculture, and industry share exhibits to a lesser extent.



At the State Fair:

See CALCO Products in our own Building



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Lateral Headgate

Hand Lift

Model 101

Slide Headgate

For use under heads of water up to 20 feet. Water tight.

WHEN YOU—and other progressive, thrifty farmers—go to the State Fair this year, you'll find Calco Products displayed in our own building located right in the heart of the Live Stock Exhibit.

As the cost of materials soar—and as farm help becomes increasingly hard to secure—then the real time saving, money making value of Calco Stock and Irrigation Products is most apparent.

Calco Stock Products not only save time, and make work easier, but they save money on feed—they save the loss resulting from disease—**they modernize your farm.**

All Calco Stock and Irrigation Products are constructed of rust-resisting "Armco" American Ingot Iron and Cast Iron—giving you the same durability demanded by railroads and factories who use this metal for *hard service.*

As you go to the Live Stock Exhibit—stop and examine these products where you see the Calco Sign. Ask the experienced men to explain the merits and uses of any Calco Products that interest you. Ask how other farmers use them.

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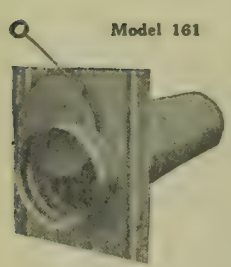

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Irrigation Gate

Made with or without bulkhead.

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Automatic Drainage Gate

Water tight—Sensitive—reliable. Automatically operated.

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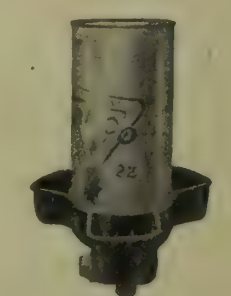
Calco Grain Bin

Safe and economical storage. Fireproof, rat-proof and theft-proof. Grain-saving and labor-saving.



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Calco Hog Fountain

Constant supply of fresh water. No overflow.

California Corrugated Culvert Co.

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Model 251

Self Watering Tank for Hogs

Used where water must be carried. Portable—strong—durable.

Model 244

Calco Hog Trough

Sanitary—Strong—Durable

Model 258

Calco Self-Feeder for Hogs

Plenty of feed. Automatically controlled. Sanitary. No waste.

AGRICULTURAL NOTES.

Baled hay is being delivered on board cars at Fernley, Nevada, at $23.50 per ton.

The recent hot spell was welcomed by the rice growers. Where they have had sufficient water crop conditions are reported as most favorable.

In the Fallon district of Nevada and surrounding territory the ranchers have signed up approximately 2,000 acres to be planted to sugar beets.

Garlic growers at Sargent are packing firsts in apple boxes for Eastern shipment. The gunnysack pack is still made up for local markets.

Farmers of Mason Valley, Nevada, have refused $15.00 per ton for hay in the stack, regardless of the fact that there is a very heavy crop in all sections of Nevada.

Sugar beets in the Salinas Valley and in the upper San Benito and lower Santa Clara Counties are in excellent shape. Cutting will begin in about five weeks.

Vegetable shipments from California for the first seven months of 1920 aggregated 11,716 carloads as compared with 7,142 carloads during same period in 1919.

The Sutter-Butte Canal Company now have a plan on foot for the completion of a system of canals to furnish water to the 14,400 acre rice area in that section next year.

The excessive heat has reduced the lima bean crop prospect below the estimate given out by the United States Bureau of Markets, Department of Agriculture, for July.

A cotton-sampling law is needed according to Alward & Bradwell, who are growing 165 acres of cotton in Kern County. Several buyers taking half a pound each may knock the profits off from a bale.

About 300 acres of garden peas in Arroyo Grande Valley and 200 along the Beach made a fine crop this year, the first part of which was sold green and the last part of which was threshed in July for seed.

Seed farms in the Hollister and Gilroy sections are nearly through threshing. The last of the lettuce and peas are on the sheets now. Radish is being threshed everywhere and giving excellent seed. Heading by hand has just commenced in the onion fields.

Bureau of Markets report a slightly larger production of the early crop of alfalfa seed in the Southwest over that of last year. Due to smaller acreage and lighter yield per acre, a production of timothy seed of approximately 80 per cent of last year is forecast.

The S. P. Sunset Route, on which much of California's farm products move to the Atlantic seaboard via Galveston and New Orleans, is now open for unrestricted shipments. Permits have been required recently on account of congestion due to industrial disturbances.

Bureau of Markets, Department of Agriculture, report that the production of practically all small vegetable seed crops will be considerably less this year than in 1918 or 1919. However, increases are shown for garden pole beans, garden peas, and onion sets.

At a conference of the Arizona and California cotton growers, county horticultural commissioners and representatives of the United States Government, held in Los Angeles, a committee was appointed headed by Maynard McFie, president of the Los Angeles Chamber of Commerce, to make plans to protect both States from the Mexican boll weevil, the ping boll weevil and boll worm.

Thirteen warehouse companies in Fresno, Kings, Stanislaus, Kern, Tulare, Ventura, San Luis Obispo, Monterey, Yolo, San Joaquin, Los Angeles, and Tehama counties were recently authorized to increase their storage rates 25 to 75 per cent. They showed the Railroad Commission that warehouse employees' wages had increased 50 to 100 per cent.

The farm advisors of Fresno and Kern Counties have called a meeting of the cotton growers of the two counties for the purpose of fixing the price on the picking of cotton for this year. This crop has reached the state of importance where it is necessary that such be done.

The second largest wheat crop in the history of Kansas was produced this year. The corn crop promises to be the largest in five years. This report was issued by the Kansas State Board of Agriculture. The wheat yield will be 147,000,000 bushels, and the corn will be 127,900,000 bushels.

Orange County ships around 100 carloads of sweet potatoes per season to Pacific Coast States and as far east as Denver. The Orange County Produce Growers' Assn. handled about 60 carloads last year and expect about the same in 1920. Transplanting to the field was completed before the middle of July.

F. M. Bigelow came to the rescue of the onion growers of the State when he perfected an agreement between the producers and wholesalers that prices would be reduced, and at the same time urged the housekeeper to be more liberal in the use of onions. He states that there has been a 50 per cent reduction in price and consumption has been greatly increased.

From a report prepared by the United States Bureau of Crip Estimates for the Twelfth Federal Reserve District the yield of barley in California will probably amount to 750,000 tons as compared with 550,000 tons during 1919. Prices have dropped 10 cents per hundredweight during the past month, now being around $2.40 as compared with $2.50 a month ago, $3.00 earlier in the season, and $3.00 during August, 1919.

DRAFT HORSES AT SACRAMENTO.

Black Hawk Stock Farm, owned by Easton & Ward at Diablo, will exhibit Shire horses. We have no detailed description of what they will show, but if it is anything like what they have had in former years the Shires will be exceptionally well represented.

N. W. Thompson of Patterson will exhibit 18 stallions. Three breeds will be represented—Percherons, Belgians and Shires of the very best type, combining size, conformation and superb quality. Mr. Thompson has made a very close study of the horse situation in California and states we have a horse famine with us right now, and warns those who are obliged to use horses of the draft class that none will be obtainable in the near future.

Palo Alto Percheron Farm will show Percherons exclusively and will have a large exhibit of both sexes in the ring.

LOS ANGELES WILL HAVE THEM.

The Los Angeles Livestock Show is making especial effort to accommodate goat exhibitors, as two barns are being especially equipped for the economical milk producers.

Manager Thomas says: "Our show is no longer a local affair; it is being supported by breeders all over the United States who are looking toward California as the ideal place in which to operate. Several entries from North Carolina and Illinois are promised. Requests for space are coming in so fast that I would urge all exhibitors to enter early, by September 5th at the latest, so that we may arrange our building program to provide suitable display space for every one."

HORTICULTURAL JOTTINGS.

The prune crop averages close to 70 per cent around San Martin this year.

Straw is laid on the orchard driveways to keep dust from shipping fruits grown by D. B. Harris in Madera County.

Fruit shipments from California for the first seven months of 1920 aggregated 43,638 carloads as compared with 47,049 carloads during same period in 1919.

Eureka lemon growers in the Claremont section are carefully irrigating and caring for their groves, hoping for hot weather in the East to raise the price so it will permit them to ship.

An orange cling peach weighing one pound, and twelve inches in circumference, has been secured by the Fresno County Chamber of Commerce for exhibit at the State Fair in Sacramento.

Apple crops are to be lighter than last year, according to the last report of the State Department of Agriculture, which rates the crop at 72, in comparison with a 79 for a ten-year average.

Peaches improved 1 per cent last month and the crop estimate is placed at 397,000 tons. The peach crop of the United States is estimated at 45,521,000 bushels, a decrease from last year's crop.

The State Utilities Commission of Colorado makes the statement that it will require 13,000 refrigerator cars to move the Colorado crop this season; of the 13,000 cars, 7,000 will have to be fully iced.

First carload of California almonds was shipped from Chico district, August 20, 1920, by the California Almond Growers' Exchange. The car contained 600 bags of the Nonpareil variety.

That there are more vegetables consumed in Chicago than fruits are shown in the following figures. In 1919 approximately 10,600 cars of fruits were consumed while there were 16,366 cars of vegetables.

The annual meeting of the International Apple Shippers' Association is now in session at Chicago, where apple growers, buyers, shippers and commission men are meeting to discuss the coming season's deal.

The forecast is that the Watsonville district will produce a large crop of Bellflower apples this season. It points to much heavier shipments than last season. Newtown Pippins will be about 85 per cent of last year's crop.

A prediction has been made at the International Apple Shippers' convention now in session at Chicago that the 1920 apple crop of the United States will be the largest in many years, but practically the same price of last year would prevail.

The apricot crop was light in the Elsinore, Riverside county, district this season, hence the cannery did no business, but there is a splendid crop of peaches, which has necessitated the opening of the cannery, which is now running on full time.

Sacramento is fast becoming the Mecca of the fruit and vegetable canning industry of the State. The latest in the line of increase is the California Packing Corporation's new four-story reinforced concrete building located on Front street, to cost $800,000.

According to Carlyle Thorpe, general manager of the California Walnut Growers' Association, the 1920 crop of California walnuts will be approximately 81 per cent of last year's record-breaking crop. The estimated tonnage is 46,000,000 pounds with a value of $10,000,000 to $13,000,000. The harvest will begin early in October, which is two weeks later than usual.

The excessive hot weather of the past three weeks has had a telling effect on fruits of all kind. The premature ripening of cannery peaches is most noticeable. The fruit was not only checked in growth but relieved of the necessary sugar content, which lessens it in weight and depreciates its quality.

"The largest walnut packing house in the world" is the claim of Puente, Los Angeles Co., for its new packing house, which is now being finished up in readiness for the 1920 crop. The new building will have 52,200 square feet of floor space and will be able to handle 150 tons of nuts per ten-hour day. $150,000 is the estimated cost.

A questionnaire sent out by the Farm Bureau and the Chamber of Commerce, concerning labor conditions in Los Angeles County and Southern California in general, disclosed the fact that, with one or two exceptions, there is plenty of labor in all districts. Most of the replies described the available workers as very inefficient, however.

So great has been the increase in consumption of raisins since prohibition went into effect that the imports of Spanish raisins for the first six months of 1920 increased to 1400 per cent. Nearly 8,000,000 pounds were exported from Malaga up to June 30, exceeding the total exports from that port from 1913 to 1919 inclusive. At 30,000 pounds to the car this would total 267 carloads.

A demand has been created for the Thompson Seedless grape in the East to that extent that these grapes grown in Sutter County heretofore dried will go East this season in the fresh state. It is estimated that the product from 400 acres will go to Eastern markets. It is the first time in the history of the industry that such has been attempted on such a large scale. The crop is now being sold at $75 per ton.

Some of the Eastern wine grape purchasers remind us of the little boy that wanted to get married, he "couldn't wait." So eager are they to get the grapes in action they can't wait for them to arrive by freight refrigeration but must have them go by expedited passenger express service. We will probably be able to publish in a not far distant issue that express air service is being used to "rush the growler."

The new North Whittier Heights citrus district, in the foothills of the eastern San Gabriel Valley, bids fair to take its place with the important commercial districts of the State next season. The oldest trees are six and seven years of age, but they have set an abnormally large number of oranges this summer, and the trees, which have a very thrifty growth, will be taxed to capacity to hold up their present load of fruit.

FRESNO DISTRICT FAIR.

Especial effort is being made by the management to exceed all former exhibitions. This is some task as the Fresno Fair in years past has been right up next to the State Fair in many repects.

Fred Gatewood, who has charge of the livestock department, proposes to have an especially fine aggregation of famous horses, cattle, swine, sheep and goats for the discriminating eye of the judge to pass upon. Fred says they will be educational, too, as such animals show the farmer who is starting in the livestock business the proper types to raise.

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RALPH NEWMAN - - - - - Dairy
H. E. PASTOR - - - - Poultry

EDITORIAL

NOW FOR THE STATE FAIR!

THIS edition of the Pacific Rural Press is dedicated to the welfare of the California State Board of Agriculture and to the success of the State Fair of 1920, which will be at the service of the public on the Fair Grounds at Sacramento from September 4 to 12. We made the claim last year, and no one has disputed it, that the greatest exhibit at the State Fair is a man—a representative Californian; therefore, we urge all our readers to go to the fair this year to see each other. Last year we put it a little more narrowly and gave a fine portrait of the president of the State Board, George C. Roeding, just to show our readers what to look for to be sure that they know a representative Californian when they see one. This year we feel that they have the type in mind, so we give no picture, but exhort them to go to the fair and look each other over—but if any one should get confused in the multitude, and not be able to see the men because of the people, all he has to do is to take a look at Mr. Roeding, who will be on the grounds day and night through the whole of the fair, and start in again. For we are still sure that the greatest exhibit at the fair is and always will be a man—unless such exhibit be a woman. But we dare not give any advice about picking out women. We are not sure that we ever did that right but once—though we have showered our affections on many men who have made good.

We exalt a man as the greatest thing at the fair because man made the fair for the benefit of mankind and the time has come in the history of California when a man who makes a fair has a right to be proud of his work, for fairs of the present era are good. There was a time when, owing to the supremacy of gambling and dissipation in all their forms, our fairs were good for nothing and bad for everything. Then it was that California farmers largely repudiated them as representative of our agriculture, because they were simply high carnivals of vice and shame. During the last decade and more, they have been improving, and during the last few years they have attained a very high standard as expositions of agricultural achievement in all practical lines, and thus have become leading factors in our agricultural education and progress. The fairs are really the greatest occasions we have for instruction as to what is the best in practical achievement; for incentive to do the best; for suggestion as to how to enjoy the best, and for examples of how best to behave in our business and social relations with each other. The fairs, when well planned and conducted, are therefore most potent influences toward the industrial and social advancement of the State, and they teach their lessons when mankind is in a most impressionable mood—that is the recreational. The farther we advance in institutional resources, for education, for research, for high executive standards, etc., in our agricultural progress, the more we need commendable expositions to distribute the wealth of them among all the people. This year's fair will show that the State Board of Agriculture has been planning for and building for greater facilities, more creditable and permanent in character than California has ever attained before, to the end that the State Fairs shall be more representative of our incomparable farming industry and more contributive to the future of such a calling in the grandest country on earth for its fullest development. It is the privilege of all, and it is the duty of all who can, to attend the State Fair and do all that they can for the fullest success of it, not only as a present agency for instruction, incitement and joy, but for the promotion of it so that it shall become an exposition worthy of California, in the greatness of which we are in the dawning.

A SPRINT FOR A FARMER-GOVERNOR.

To the Editor: Your publication is in a class by itself, and every page worth while, but pre-eminently so are the editorial columns, and especially those of August 7, which present pertinent questions calling for serious consideration and correct answers. Personally, I am not a farmer, but have been serving farmers to the best of my ability for the last 25 years, and every mood I have is in tune with the producer's interest, and I know it requires greater capacity to be a real farmer than it does to be a publisher or other business man. There is no reason why we should not have "a farmer at the top," after our substantial incumbent retires, for really, though not a farmer, the State owes Governor Stephens a great deal for the distinguished service he has rendered, for his unswerving loyalty, his exemplary thinking and acting after obtaining facts. He does his own thinking, refuses to be stampeded in any direction, and his conclusions are invariably right, so I say, let us have, after him, a real farmer for governor.

Not having the policies of an editor to hedge me about, I am not embarrassed to name a few men who can qualify in the statesman class. In southern California there are C. C. Chapman, C. C. Teague, and others; in central California are James Mills of Hamilton City, B. B. Meek of Oroville, F. B. McKevitt, or G. H. Hecke of Sacramento. Each one, in the main, is a producer, has the view-point of the farmer, and in every way qualified for the onerous duties of Governor. You have started something; may we help you finish it?—W. W. H., Fairoaks.

A WRONG START.

Certainly you may help; the men you name are of the right kind, but we will not play the game your way, for two reasons: first, you start out after a candidates like a greyhound after a jack-rabbit. That is the way the politicians do and after they have caught their candidate they see how many qualifications they can find under the skin of him. That is the wrong way to get a candidate whom all farmers will support. The right way, as we conceive it, is first to get all farmers' organizations to agree upon qualifications. They can be led to agree on qualifications more easily and widely than on men, and then, instead of measuring qualifications down to a man, you will be measuring men up to qualifications, and that is a process more farmers will stand for. Second, although you and we, as near-farmers, may lecture farmers as much as we like about qualifications, neither of us has any business to be picking out candidates for farmers. That is, again, just what politicians have always been doing, and it ought to be stopped. Actual farmers ought to pick out their own candidate, but it ought not to be done until there has been wide consideration of the principles of patriotism and human progress for the advancement of which qualifications are generally agreed to. If you pick out a man, he will hire a publicity agent, get out a big red automobile, and start in to mobilize his friends. The result is that all principles are merged into personality, and you have submerged the ideas which alone make it reasonable to have a farmer for governor. You are apt to think that to get your principles you have to get the farmers' votes, the hired men's votes, the ladies' votes, and all that sort of thing. So you do, of course, to contitute a majority, but you might as well reckon that the politicians will beat you to it if you decide to play the game their way. Our notion is that the only way to get a farmer for governor is to lay out such a broad scheme of indispensable qualifications that it will appear so superior to the lay-outs of all the class-mongering office-seekers that the general public will recognize its chance to vote for great American principles and jump to it.

CAN IT BE DONE?

We do not know, but we do know this: if there is any group of citizens of the United States that can do it, it is the farmers, because there is no other class which is so large in its voting power and none which carries broad principles so largely into such large organized force. But some one may ask: Is not federated labor more strongly and prevalently organized? We believe it is; but labor is federated, according to its own declaration of purposes and constant practices, for the purpose of securing class domination, and it pursues this purpose by manifestations of willfulness; of carelessness of what happens to any other individual or class; by outright and cruel denial of other's rights, even of the public itself, and it proposes to use its votes to get office-holders, in executive and legislative functions, who will secure and enforce its class policies. If farmers organize to enforce their own class interests without respect to private and public rights of others, they would be, perhaps, no more qualified for the great, transcendant function of righteous governing than the federation of labor is. But they will not organize that way to any great extent. They will do class business in a business-like way, of course, but in their relations to other classes and in their service of the best interests of their country, they can only be brought to act largely together by declaration of broad principles of patriotism and humanity. It will be on that basis that they will elect a governor, if at all. Whom they may accept as a candidate, because he is an exponent of such principles, is a much later consideration, and the farmers must name him for themselves.

CAN FARMERS FORMULATE PRINCIPLES?

If you doubt it, you do not know much about farmers. As a group they are the greatest natural, mental and moral philosophers in the world. They take to philosophy like a kid to candy, and it is harder to pry them loose from it. Singly, they are sometimes inconsistent and unsystematic, but you just team-work a lot of them for a while and you will find them pulling hard and true and turning the straightest possible furrow toward any reasonable objective. Of course, you will not expect them to elaborate a treatise on ethnological ethics, as President Wilson can do it, nor constructing a system of international jurisprudence, as Senator Root can do it, but if you wish straight-shooting toward simple, fundamental things in individual rights and in social and economic relations between individuals, or groups of them, give the gun to a bunch of farmers. We do not know, of course, just what they will do in laying down principles which their candidates for office must measure up to. If we did we would be tempted to write it out and run for office on it ourselves—for we would surely arrive. But that is the very mistake which the politicians are always making. They keep thinking they can tell the farmers what they want, both in principles and candidates, and the farmers amuse themselves by throwing rocks at their slates. But we recognize the fact that to rescue this discusion from being merely a blast of hot air, we have to try to put something concrete into it, even if we miss in the prescription, just as the politicians do. Our only hope lies in putting into our formula what no politician would dare to do, and thus, perhaps, escape their fate.

A FEW SAMPLES.

We would say, then, that the farmers' votes can be had for these principles and practices:

1—"See America first" of all the earth.

2—Recognize public interest as supreme; inviolable by individual or class interests; incapable of interference by any class interest, no matter whether a class is claimed to have no other way to serve its selfish purposes than by inflicting public distress and loss, or not.

3—Declare that no man has a right to strike beyond his own will not to work himself; to strike to profit by public distress is treason; to keep others from their right to work is inhuman; to threaten employers with impending ruin is an economic crime.

4—Insist that every producer has a right to price

his own commodity, whether it be food, raiment, service, pleasure, or anything else. Every consumer, thereof has a right to take it or leave it, without reward or punishment.

5—Declare that public burdens shall be distributed according to the ability of individuals to carry them, as evidenced by their material possessions, real or representative. Every form of property shall be taxed according to a just system of valuation.

6—Provide that public utilities shall be publicly owned to whatever extent a majority vote, local or general, shall decide; privately or corporately owned public utilities shall be expertly regulated so that neither owners nor employers can loot the public.

7—Provide that private ownership of property of all kinds, capable of being proven to have been righteously acquired, srall be resolutely safeguarded as a fundamental right of mankind, but no one shall be permitted to use his property in encroachment upon the rights of others to "life, liberty and the pursuit of happiness." Monopoly, conspiracy and the like, by either capital or labor, are encroachments of this kind.

To avoid the suspicion of a design to supplant Moses, we stop at seven commandments. We do not know whether farmers will stand for them or not, and we have no idea that anything we can say would wheedle support from them—and that is where we differ again from the politicians. But we are sure that farmers' organizations, after due deliberation, can agree upon declarations of concrete declarations of principles and policies, which enough of them will support and which will gain enough support from non-farming people to elect a farmer to be Governor of California. But with due respect to our correspondent, who desires a candidate first and whose letter has precipitated this discussion, we must say that we desire first to select a harness strong enough to pull this State out of the slough of personal politics into which it has fallen, and then pick out a candidate of the right size to fill such a harness. We have wasted too much time already trying to fit an elephant harness to a jackass, or a jackass harness to an elephant. Let the farmers declare the principles and then name the man!

QUERIES AND REPLIES

By the Editor.

Inquirers Must Give Full Name and Address
Answered Questions also on other pages.

Garden Raided by Mealy Bugs.

To the Editor: I enclose sample of the pest that is ruining our garden. At first it seemed to be only on the roots, but lately gets up onto the stems and branches. Potatoes covered by it were small and withered. What is it and what can we do to get rid of it?—J. C. U., Chico.

The insect is a "mealy bug" (pseudococcus. It is most successfully prayed with a kerosene or distillate emulsion, but probably a summer garden so near its end and so badly stricken as you describe will not pay the cost of treatment. We would be tempted to get a bonfire going and dig up and burn up all infested plants—or if the infestation seems to be universal cover the whole patch thickly with straw and burn it over, if it can be done without danger from fire. Then dig up the ground loosely (pulling out and burning all infested roots and stems), and let the ground burn in the fall sunshine until the rains come. The pest will probably not hurt your winter garden, which can be started then.

"Pusley" No Pest in California.

To the Editor: I send a plant which grows profusely in a truck garden at Antioch in sandy soil. It is excellent chicken feed. What is it, and is it worth propagating and how can it be propagated? —G. R. H., Oakland.

The plant is "purslane" or "pusley"—a great garden pest at the East, from which fact comes the proverb, "As mean as pusley." It is portulaca oleracea, sister species of the garden flower called portulaca. As pusley does not grow as freely in our semi-arid climate as it does in regions of summer rains, it can hardly be considered much of a pest except perhaps in gardens kept continually moist. On low, moist lands it is good pig and chicken feed. It is freely grown from the seed.

Growing Cherry Seedlings.

To the Editor: I have Mazzard cherry pits just gathered. I want to plant them this coming spring. Kindly tell me how to keep and germinate them.—J. C. B., Sebastopol.

Keep the pits in shallow boxes of sand—mixing the pits with the sand and moistening occasionally to keep from too hard drying, guarding also against remaining too wet. After the rains come on give the boxes some sun-heat and a little more moisture and watch from time to time for signs of sprouting. Have the nursery ground ready and sow the pits in nursery rows when they begin sprouting freely. Our book, "California Fruits and How to Grow Them," treats in detail of nursery methods with all fruits.

Preventing Borers.

To the Editor: The flat-headed apple-tree borer has destroyed a number of my cherry, apricot and plum trees which I planted last winter. How can I keep these borers off my trees?—R. P. T., San Diego.

The chief preventive is whitewashing the young tree as soon as planted—and before the hole is completely filled, so as to get the whitewash a few inches below the ground surface. This will prevent sunburn, which often occurs in the winter before the foliage appears, and therefore has to be done as soon as the tree is planted. Repeat this during the summer, so as to keep a good white cover, and look then for discolorations, etc., which may indicate the presence of a borer and cut him out.

Resistant Roots for Peach.

To the Editor: Every year I lose some trees of my 13-year-old Tuscans from root-knot. I wish to replant the vacant places with Tuscans. Is there any other root than peach or almond which would resist the disease, when planted into the same places. Have any experiments been made in that respect and who made them?—S. J., Fresno.

We know of no root which will take the peach satisfactorily and refuse the knot.

CALIFORNIA WEATHER RECORD

The following rainfall and temperature record is furnished the Pacific Rural Press by the United States Department of Agriculture Weather Bureau at San Francisco for the week ending August 23, 1920.

Station—	Week Past	To Date Seasonal Rainfall	To Date Normal	Highest Temperature	Lowest Temperature
Eureka	.00	.12	.15	48	66
Red Bluff	.00	.01	.00	60	102
Sacramento	.00	.00	.00	54	92
San Francisco	.00	.00	.01	54	68
San Jose	.00	.00	.03	50	90
Fresno	.00	.00	.00	59	110
San Luis Obispo	.00	.00	.03	50	92
Los Angeles	.00	.00	.00	61	82
San Diego	.00	.00	.00	63	78
Winnemucca	.00	.00	.29	40	96
Reno	.00	.00	.31	50	94
Tonopah	.00	.00	.23	56	92

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Dependable Power

Sixty-Sixth California State Fair Starts Wednesday

Written for Pacific Rural Press by W. S. Killingsworth.

From September 4th to 12th, inclusive, the State Board of Agriculture will hold "open house" at the State Agricultural Park in Sacremento, in commemoration of the sixty-sixth anniversary of the California State Fair. Acting as host, the Board invites the entire population of this great empire to join in making this the greatest event in the annals of California's agricultural and horticultural history. Meeting, as it does, during the closing days of the most prosperous agricultural and horticultural season since California became a prime factor in successfully producing and marketing of both, it is the duty of every loyal sojourner to answer the call.

In order that the readers of the Pacific Rural Press might gain some idea as to what to expect on their arrival at the scene of amusement and education, we visited Sacramento for the purpose of getting the "dope" first hand. On our arrival at the recently constructed $300,000 building, taking the place of the shack that went up in smoke, we were given an audience with three of the busiest men in Sacramento, J. W. Kavanagh, superintendent of exhibits, as one, J. A. Robinson, on publicity, and Charles W. Paine, secretary of the State Board of Agriculture, the other two. Although comparatively a cool day in Sacramento, those human dynamo-self-starters were stripped for action. However, we must say that they were not too deeply engrossed allotting space, caring for correspondence and arranging matters in general for the grand opening not to be able to extend greetings to the representative of the Pacific Rural Press.

Exhibition Space in Big Demand.

Our "magazine" carried several rounds of queries and in order to get quick action we fired them in rapid succession. Believing that the success of this great undertaking depends largely upon the moral support it receives from the various counties, we asked Mr. Paine if such was forthcoming? He said in part:

"The agricultural and horticultural exhibits at the California State Fair of 1920 are at this time taxing the capacity of the new $300,000 building erected last year and we are being called upon from all sides for additional as well as new space. We will be forced to turn down many applicants for space unless we can arrange to provide for them under cover outside the new building.

"Many of these counties, in order to have a representative display of their fresh fruits, are now holding in cold storage fruits of many varieties that have long since been marketed. The dried fruit packers, canners and food product manufacturers will be allotted ample space in the gallery of the new building, thus giving them equal prominence with the fresh products. An attractive feature of what is being accomplished in experimental lines, will be an extensive exhibit from the gardens of the U. S. Department of Agricultural Experiment Station at Chico, also a varied exhibit by the State Department of Agriculture. This exhibit will be very comprehensive, showing the activities of the various departments."

Does the State Fair Warrant the Expense?

When asked if the State Fair benefitted the industries of California sufficient to warrant the continuance of large appropriations by the State, to be expended in the expansion of the grounds and improvements thereon, Mr. Paine replied:

"The activities now going on in many counties, in the matter of holding county fairs, is proof in itself that much benefit is being derived. For example, there are many livestock, cattle and sheep raisers in California who have good material for exhibition purposes, but they are timid about entering same in competition at the State Fair; however, they are quick to take advantage of inducements offered at a local fair or land show. At all such places there is keen competition and those who are successful take great pride in promoting such, then after taking a prize or two, as a natural consequence they are then anxious to compete at the State Fair.

Some of the Prominent Exhibits Proposed.

Carpenters and decorators were a very busy set in getting things in shape to receive the exhibits. We learned that one of the attractive features would be a model of the California State Fair grounds as laid out and adopted by the State Board of Agriculture, placed in the rotunda of the new building directly under the great dome of architectural beauty and stability. This work of art represents that which the Board of Directors are striving to accomplish that the products of the State when placed on exhibition may be properly housed and protected. Surrounding this model will be an exhibit from the State Mineralogist taken from the various mines of the State. As each fair is held and afterwards becomes a part of the history of the State, those who are directly interested in making its successor one of greater attraction, keep ever in mind changes that may be wrought, not in the management, but in the advancement of plans whereby those competing in any of the departments may b eon an equal plane, not that there has been any irregularity heretofore, but there has been confusion and delay. Mr. Kavanagh, superintendent of exhibits, in speaking on that point, said: "Several important changes have been made in the schedules of the county exhibits, such had been found necessary to prevent confusion and delay. It is imperative that exhibitors in the competion for special county premiums in several classes file, on the opening day of the fair, a schedule of their exhibits, following as closely as possible the general classification in the premium list. All exhibits must be properly labeled and names on fruit exhibits must conform to the American pomological standard. Quality and variety of exhibits scheduled will govern in the awards, the installation and arrangement being allowed 25 per cent only by the judges."

Exhibits Must Be Labeled Correctly.

This ruling should meet with the approval of all exhibitors. The mere matter of changing the name of some variety of fruit to satisfy the ambition of some would-be propagater will not be allowed. It would be unfair to those who are honest in their intentions and attempting to uphold the pomological standard. However, any attempt to deceive will be readily detected by the judges. Our attention was called to another matter that will be obviated. In former years some counties have been slow in the arrangement of their exhibits, all of which has been very unsatisfactory and annoying to the judges. Therefore it is now a ruling that preparedness on opening day will be a factor in determining special county awards. "The use of score card for packed fruit," said Mr. Kavanagh, "was of great assistance last year and will be used again this." By this system each lot of fruit is judged on its merit. The score in fruit will be 650 points, as follows: quality 150, condition 150, color 125, size 75, uniformity of size, color and shape 150. Score of container will be 50 points, as follows: material 10, marking 20, solidity, nailing, etc. 20. Score of pack will be 300 points as follows: height of center 100, height of ends 60, alignment 20, compactness 80, attractiveness and style 40—a grand total of 1,000 points that a package of fruit will be required to score in order to receive a prize.

Qualities Fruits Must Possess.

Among the requirements of the fruit will be quality—flavor, texture juciness, etc. Next, condition—insect injury, bruises, spray injury, maturity and trueness of type, etc. It will be well for the exhibitor to study these points carefully as all fruits will be given a thorough test as to their condition and qualifications. The neatness and accuracy in make of container will be as closely watched as the quality and condition of any variety of fruit. whether it be packed for exhibition or commercial purposes, may be seriously impaired when packed in a container of poor material , poorly constructed and generally disfigured in the labeling and marking. All such practice is discouraged by the trade, the fancy dealer will not countenance such and as for the huckster and push-care trade it matters not to them how it is packed, however, under the standardization act, even then certain rules and regulations must be observed. All packages of fruit of any character must be "standard pack." For example, pears must be packed in standard boxes as used in California for Eastern shipment; half boxes to contain two layers of fruit not exceeding 48 pears in number, unless otherwise noted. Exhibits may be made by counties, growers, packers or shippers.

Plate Exhibits.

An attractive feature will be the plate exhibits, this includes all varieties of tree and vine fruits, so many of each variety on a plate—apples 5, peaches 5, plums and prunes 10, grapes 2 clusters, etc. These exhibits may be made by counties, district organizations within counties, of growers, and of course the exhibits must conform to the rules as heretofore mentioned. In confining the plate exhibits to counties and district organizations within counties, it prevents an organization, doing business in many counties, from selecting their exhibit from the best orchards and vineyards of several counties which would be unfair to a grower or local organization in any one county. There will also be a "quality exhibit" of the different varieties of fruit, in five box or crate lots. Pears, for instance, five boxes and half boxes of the following varieties: Bartlett, 5 boxes; Doyenne du Comice, Beurre Clairgeau, Beurre Hardy, and Seckle, 5 half boxes each. Then there is the "sweepstake" for the best exhibit of 34 varieties of pears, showing quantity, quality and arrangement considered.

The sweepstake applies also to apples, plums, peaches, prunes, etc. However, there will be no award in the sweepstake except upon exhibits of outstanding merit.

Wide Representation.

We learned that Los Angeles county was coming with a duplicate of the exhibit of oranges made at the National Orange Show in San Bernardino recently. The great San Joaquin Valley will be there with the best that tree and vine can produce. Yolo, the victor in two successive struggles for the grand prize, expects to be there even stronger than before. Merced is coming with a punch that will land the prize if it is in her power to do so. "The Hill" will be there with a bevy of tree and vine products grown within the shadows of the tall Sierras. As a matter of fact, every county whose name has been mentioned as an exhibitor will go to Sacramento with the determination of making every other county know that they were there with the very best that their soil, trees and vines could produce, and if relentless fate overtook them they would not be discouraged but content themselves with the feeling that they did their best and awaited the opportunity of another trial. Aside from the exhibit features, the fair this year promises a program of amusement and entertainment far superior to that of former years, high class, clean cut, in every respect.

Specialist Tells Causes of Tractor Troubles

Written for Pacific Rural Press by R. E. Hodges.

FROM THE BEGINNINGS OF TRACTORS and automobiles, L. M. Higgins, of Santa Barbara county, has been their doctor in time of trouble. His experience with their difficulties has led to conclusions elaborated below from notes taken at his ranch repair shop. The best opportunity in the world to find out for yourself whether the points made are justifiable will present itself at the State Fair Power on the Farm exhibit, September 4 to 12, and the National Tractor and Implement Show, near Glendale, Cal., Sept. 20 to 26, 1920.

A joke is told about a tractor manufacturer who started to drive one of his machines around the factory yard. He couldn't stop it. The interior expanding clutch, rotating at high speed, was so affected by centrifugal force that it could not be contracted enough to release, even by its spring and hand levers, until the engine speed was slowed down. A switch by the driver's seat was provided, so current could be shut off when the clutch sticks. Another tractor still on the market has been made with an interior expanding clutch and an engine speed of nine hundred revolutions per minute. The clutch proved so hard to disengage that a brake pulley had to be put onto the clutch shaft to slow down the speed before it would release. A clutch of this sort should be of the exterior type, so that centrifugal force will help disengage it, or should be provided with some other compensating device other than a brake.

Grousers at Angles from Spokes

Samson Sieve Grip lugs are more criticised for inability to pull a load in sandy ground than for anything else. One such tractor as it came from the factory couldn't get through the sand wtihout any load at all. Mr. Higgins fixed it up so it walks right long with two twelve-inch bottoms nine to ten inches deep in blowsand, using lugs only 2½ inches deep and the same width as the original ones. The machine also navigates dry beach sand with ease. Ordinary angle lugs are set "radially." That is, they project in line with the wheel spokes. The effective remedy as demonstrated by Mr. Higgins is to so bend the angles that they project at an agle of 30 degrees from the spokes, and rest more nearly flat on the sand. With such lugs the wheel actually slides forward, rather than backward, as it revolves. It stays on top of the sand, and actually pulls better on plowed ground than on hard soil. When you get the wheels fixed so they do not slip backwards and dig in, they are not perpetually climbing up hill; but they stay on top, and the engine will pull a heavier load without jerking or straining.

The philosophy of the slanting grousers is that the pull is transmitted from plow through wheel to ground, in a line square against the ground surface which receives the pressure. If the distance from drawbar hitch to ground is half the horizontal distance from draw-bar to plow bottom, the line of pull is 30 degrees upward from horizontal, and the lug surface bearing on the ground should be square across that line at its moment of greatest pressure. In order to accomplish this the lugs must be set at an angle forward from the radius of the wheels. If they were angled backward from the radius they would simply pull edgewise into the ground, doing no good at all. As ordinarily set radially they lose a great deal of their possible advantage. The same principle has been worked on solid rim wheel type tractors. The line of pull is different with various tractors and with various hitches to the implements. Forty-five degree angle lugs on the Samson proved not so good as 30 degree angles.

Simplest Heavy-Fuel Carbureter

Mr. Higgins has a stationary single-cylinder vertical engine to run the various line shafts and machinery in his shop. It has been running since 1893, and has never been rebored. We looked at some of the fuel it burns—yellow and silty, with a 103 degree flash test. The engine was cold, but two or three turns of the fly-wheel started it without priming. It runs all day, smoothly idling the lineshafts, or picking up any load that may be put on it, with no further attention. A similar ease of starting is experience on a little tractor which starts cold on kerosene. The advantage lies chiefly in a temporary carbureter designed and installed by Mr. Higgins so long ago that it has become permanent. It is the simplest, most automatic device we have ever seen. Mr. Higgins realized, as pointed out in a recent issue of Pacific Rural Press, that the greater distance the carbureted fuel has to travel to the cylinder, the more likely it is to condense and fire poorly. Also, every bend in its path to the cylinder adds to the condensation. So he hit on the idea of doing the carburetion close by its entrance to the cylinder. A slide throttle, governor-controlled, was installed in the intake pipe. Just in front of this, on the opposite side of the throttle from the engine, a copper pipe of about an eighth of an inch outside diameter was soldered across the opening so that the sliding throttle would expose more or less of it to suction from the cylinder, according to how far open the throttle might be. This pipe is punctured at regular intervals close together with holes a few thousandths of an inch in diameter. One end is closed. The other is connected by pipe to a carbureter float-chamber located so the gasoline lift is about 1¼ inches. The engine gives maximum vacuum suction of nine pounds past the throttle. When the latter is more or less open it exposes more or fewer of the holes and therefore sucks into the cylinder more or less gas. That gas is thoroughly broken up and mixed with the open air all around the perforated pipe, and it meets practically no obstructions to condense it before it enters the cylinder. The engine ran one year on engine distillate with no work on the carbureter.

Dust and Heavy Fuels.

Dust and heavy fuel are testing the ability of the tractor business to survive. One stationary engine has been running since 1890, sometimes night and day for several months per year. This indicates one difference between the dusty fields and the comparatively clean air of an engine room; for a few years in the dust cuts the heart out of inadequately protected tractor engines. Tractor users should insist on adequate dust protection. Many tractors have two air-cleaning devices.

We are passing through a transition to heavy fuels, hard to vaporize and prone to condense without exploding. Wash oily cast iron with kerosene and you expose a dry, open relatively rough surface. If it happens to be a cylinder wall in an active engine, you rub metal on metal with no lubricating film between, and disaster comes quickly. That is what happens to greater or less extent in the use of kerosene or distillate without proper carbureting devices. Even in the high heat of the combustion chamber some fuel condenses and runs down the cylinder walls, washing them off and diluting the lubricating oil. In most engines this oil is used repeatedly with diminishing lubricating ability. It brings about the wearing of rings and walls discussed below.

Curves between Carburetor and Cylinder.

With heavy fuel oils, every obstruction or curve in their passage from carburetor to combustion chamber tends to condense part of the fuel; and every inch of distance it travels tends to cool and condense more of it unless artificial heating devices are used. In order to burn explosively, every particle of fuel in the form of a spray must be surrounded with air. Condensed fuel either damages the lubrication or burns slowly, acting against the engine as well as burning lubricating oil from cylinder walls and overheating the engine. In general, if the carbureted mixture could be carried to the combustion chamber without touching anything, practically none of it would condense. Therefore, the most direct manifold that will distribute the fuel evenly to all cylinders is most efficient.

Objects to Side-Valve Engines.

For the same reason, Mr. Higgins maintains that a side-valve engine is not so well adapted to heavy fuel as a valve-in-head engine. The extra wall area and valve pocket in combustion chamber required by the side-valve construction add to the condensation unless this is compensated some other way. Mr. Higgins has been working on this problem fifteen years and the home-made carbureter described above is one result.

Old Piston Grooves Need Squaring.

No piston should be fitted with new rings until the grooves are turned out to square corners. You can tell how much a cylinder is worn by the wear on the piston-ring grooves. If the cylinder is worn to say 1/32 inch greater diameter at one end of the piston stroke than at the other, it permits the rings to expand at each stroke into a circle about 3/32 inch greater circumfence. Working under explosion pressure and their own pressure against cylinder walls at, say 500 revolutions per minute, forces the rings to contract at the small end of the cylinder 500 times a minute. The alternate expansion and contraction wears the grooves not only back and forth squarely, but it pounds their outer edges and increases the angle of their corners. The groove wears more at its outer edge than at its rear. Then the ring doesn't seat so well and it leaks and wears some more. The first indication of a worn cylinder, according to Mr. Higgins, is rapid wear of the top ring. He has seen a set of tractor rings worn out in a two weeks' run. In such a case, of course, the cylinder should be rebored or reground. Quite commonly, however, service men put new rings on old pistons, fill up with heavy oil, and get away, leaving the farmer soon to cuss tractors in general; for you can't keep an engine tight if its cylinder walls are not parallel. It costs comparatively little to have them reground and the grooves squared out before putting on new rings.

Fitting Piston Rings to Grooves.

To fit a piston ring to its groove, insert its back full depth into the groove. If the opposite side of the ring can wobble over 1/16 inch, it is too loose. If it is tight enough, you can put it on after all is well cleaned and work it around without feeling grit.

For quick work getting dry piston rings or hot bearings back to work without waiting to do a permanent repair job, increase their lubricating ability by scratching or grooving them in a direction crosswise of their line of travel. This carries lubrication more certainly to all parts of the bearing surfaces.

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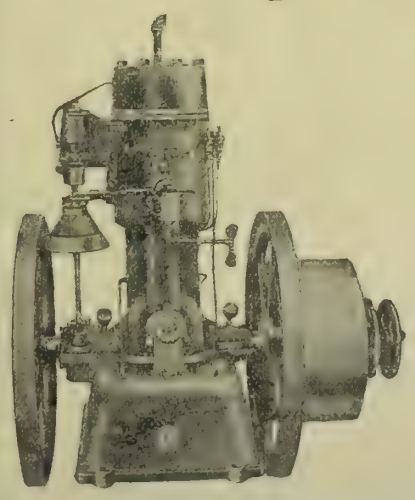

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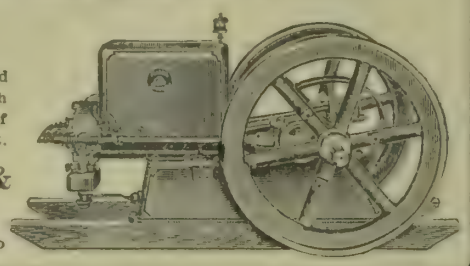

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Timely Work in the Orchard

(Written for Pacific Rural Press by W. S. Killingsworth.)

Irrigated Orchards Deliver the Goods.

During recent travels through the interior fruit producinng districts of the State, we are more favorably impressed and convinced that the fruit growers will necessarily have to resort to irrigation, not only as a protection to crops that may be on the trees, but a protection against the loss of the trees themselves. Since the recent hot spell it has been our privilege to visit fruit districts where irrigation is practiced by a few orchardists, and as proof of the beneficial results one has but to pass through an orchard that has been systematically irrigated and subsequently cultivated, then through an adjoining orchard that has suffered the evil effects of not only the 1920 drought, but that of the three preceding years. Our particular attention was drawn to that while on a recent trip through the upper San Joaquin Valley. There we inspected an orchard of something like 200 acres of fruit, most of which was in bearing. This property was being systematically irrigated and cultivated, the result of which the trees were in perfect form, taking on a luxuriant growth, and holding the natural color of the foliage. Across a creek, the dividing line, was another orchard of cherry trees, one to two years older than the one we had just inspected. This orchard had been poorly irrigated, cultivation and general care was on a parity with irrigation. Neither of which was like anything up to the actual requirements. To say the least there was no comparison in the condition of the two places. As a matter of fact, the partially cared for orchard will find it "hard sledding" to not only produce a limited amount of fruit, but preserve the life of the tree. This is only one instance among numerous others that have suffered accordingly, which proves conclusively to our way of thinking, that in order to preserve the orchards irrigation must be resorted to, as it has developed that there is not a fruit-growing section in the State that is not sadly in need of such.

Red Spider Attacking Young Trees.

It was the writer's privilege to visit a five-year-old plum orchard a few days ago, and while passing through we found that Red Spider had made its appearance. The foliage on many of the trees was curling up and turning yellow. Otherwise the trees were perfect in shape, showing care in pruning. Irrigation had been practiced, and the ground was in splendid state of cultivation. But there was still lacking that care of the trees from insect ravages. We advised an immediate application of atomic sulphur at the rate of 10 pounds to 100 gallons of water, covering both top and bottom side of leaves, all fruit spurs and small limbs. This spray should be applied as soon as the Red Spider makes its appearance in any orchard or on any variety of trees.

Look Out for Gummosis.

The owner of a cherry orchard need not be reminded of the disastrous results attending the appearance of gummosis on the body and lower limbs of young cherry trees, and it is not unusual to see trees from ten to fifteen years old suffering from such evil effects. As soon as the trouble is discovered the cause should be removed and the wound well treated, if not it is but a question of short duration before there will be a vacant space in the orchard. When the gum is seen to be escaping through a self-inflicted puncture of the bark, the entire affected part should be removed at once, leaving the edges of the wound clean cut, then the wood should be well scraped and painted with Bordeaux paste. This is a disinfectant and aids a new growth of bark which will in time cover the wound, provided the tree is otherwise healthy.

GRAPE SHIPPING SEASON NOW ON.

(Written for Pacific Rural Press.)

On a trip through the grape belt of the Lodi-Stockton fruit district, we learned from Norman Swim, manager of the fruit shipping interests of the Pioneer Fruit Co., that grape shipments would begin on an extensive scale this week, and if refrigerator cars could be obtained there would be a daily shipment of 150 cars of wine grape alone, and by the latter part of next week the daily shipment of the table grapes would equal that of the wine grape. When asked as to probable number of cars of grapes that would go from the district, he stated that if iced cars could be obtained and climatic conditions were favorable, there would be 5,000 cars of wine grapes and 5,000 cars of table grapes shipped. In reply to our inquiry as to prices being paid for wine grapes Mr. Swim stated that the price had reached the $150 per ton mark; many lots had been bought at that price. That of course is for selected, best varieties suitable for wine purposes. The prevailing prices are $125 to $140 per ton. He was of the opinion that there might be a slump in the purchase price, as many contracts have been made as low as $30 per ton, and those speculators might be satisfied with a reasonable profit and not take the chance of something coming up and stopping the use of the wine grape for juice, syrup or wine purposes. The shortage of iced cars might also cause many to dispose of their cheap purchases. However, Mr. Swim stated that it was a "hot time"—not so much climatic—around Lodi these days and nights. The town is over-run with grape buyers from all parts of the United States. Hotel accommodations are at a premium. One fruit shipping concern has 200,000 lug boxes made up in readiness to move their shipments. Many other shipping concerns are doing likewise. He stated that an unusual, serious problem confronted the shippers, equally as serious as car shortage—that of ice shortage.

THE SILENT ALAMO

—furnishes electric light and power for the country home. Runs without vibration. Write for catalog.

DURO WATER SYSTEMS

—The All-round water system for the household. Furnishes water under pressure at small cost. Send for catalog.

UNIVERSAL MILKING MACHINES

—enable dairy farmers everywhere to add hours to the day for other duties. Write for catalog.

PUMPS

Horizontal Pumps, Vertical Pumps, Deep-Well Pumps, Direct-connected Outfits, etc. Write for catalog.

LOUDEN BARN EQUIPMENT

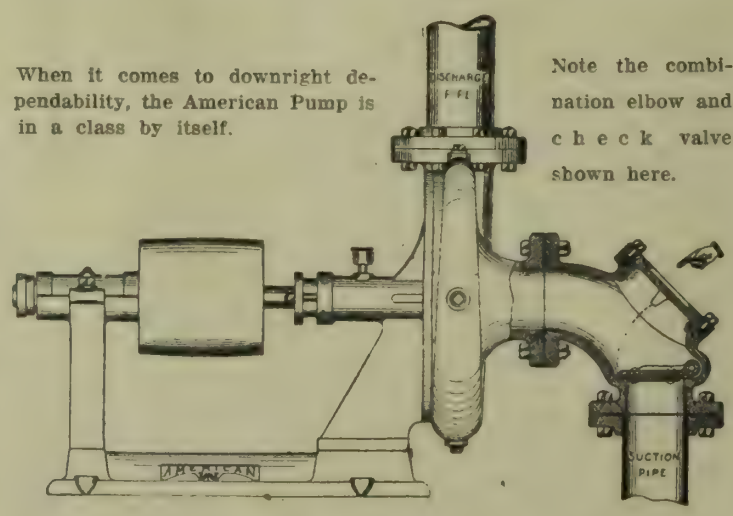
Get 25 per cent more milk, save feed, and save labor, by making your cows comfortable with Louden Equipment. Write for catalog.

GAS and OIL ENGINES

We can furnish you with any kind of any engine in any size you require. Write for catalog.

When it comes to downright dependability, the American Pump is in a class by itself.

Note the combination elbow and check valve shown here.



American Centrifugal Pumps

It is a satisfaction to buy a pump that is absolutely guaranteed. The American is guaranteed to meet all the conditions and to perform the work for which it is sold. The workmanship and finish are guaranteed first-class in every respect and fully suitable for the purpose designed. The materials are guaranteed first-class and free from inherent defects.

SEND FOR CATALOG

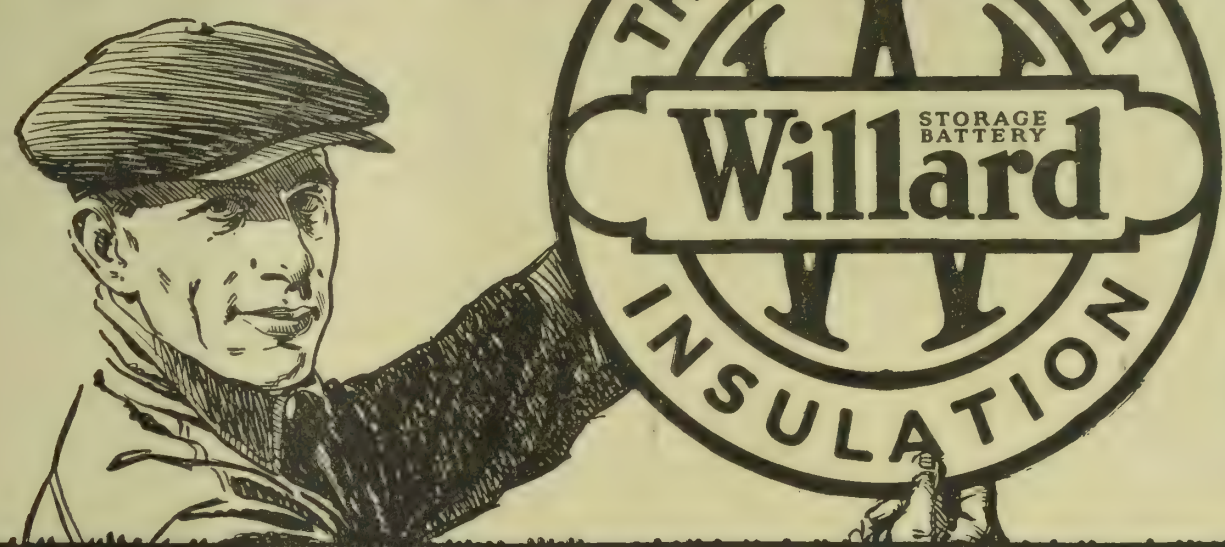
If your water problem can be solved with any pump it can be solved with an American. They get the MOST water at the LEAST cost and with the LEAST trouble. Put your irrigation problems up to irrigation specialists.

CALIFORNIA HYDRAULIC ENGINEERING & SUPPLY CO.

69 Fremont St., SAN FRANCISCO

420 E. Third St., Dept. D, LOS ANGELES

Willard STORAGE BATTERY



This trade-mark is branded in red on one side of the Still Better Willard—the only storage battery with Threaded Rubber Insulation.

Remember!

That in the ordinary storage battery the insulation is the weakest link.

1 That in the *Still Better Willard* the Threaded Rubber Insulation is the *longest lived* part of the battery.

That in the ordinary battery both plates and insulation wear out.

2 That in the Still Better Willard the wear is *cut in halves*—for Threaded Rubber Insulation does not wear out; it is not affected by the solution.

That with the ordinary battery the big expense and risk come when you have to tear down the battery and put in new insulation—perhaps with the result that you ruin the plates.

3 That with the Still Better Willard the Threaded Rubber Insulation prevents this expense and risk.

That in the ordinary battery, the insulation between plates carbonizes, causing leakage of current; and perforates, causing short circuits and permitting "treeing."

4 That with Threaded Rubber Insulation these faults, which greatly reduce the efficiency of the battery, *cannot occur.*

That the ordinary battery has to be shipped and stored wet or partly wet —aging and deterioration are almost sure to take place.

5 That the Still Better Willard with Threaded Rubber Insulation is shipped "*bone-dry,*" not a drop of moisture in it. It begins service in your car as fresh as when built.

Willard Service.

Of the 191 passenger cars and trucks using Willard Batteries as standard equipment, 138 have adopted the Still Better Willard with Threaded Rubber Insulation.

138 Manufacturers Using Threaded Rubber Insulation

Acason
Acme
All American
Allis-Chalmers
American LaFrance
Apex
*Apperson
Armleder
Atterbury
*Auburn
Austin

Bacon
Bell
Belmont
Bessemer
Betz
Biddle
Brockway
Buffalo
*Buick

Cannonball
Capitol
*Case
*Chevrolet
Clydesdale
Cole
Collier
Colonial
Comet
Commerce
Commodore
Cunningham

Daniels
Dart
Dependable
Diamond T
Dixie Flyer
Dodge
Dorris

Fargo
Fergus
Ferris
F W D
Franklin
Fulton

Garford
G M C
Giant

Glide
Great Western

Hahn
H C S
Hurlburt
Hawkeye
Haynes
Henney
Highway
Holmes
Holt
Hupmobile

Indiana
International (I. H. C.)

*Kissel
Koehler
Lancia
Lexington
*Liberty
Luverne

Madison
Marmon
Menominee
Mercer
Mercury
Meteor (Phila.)
M H C
*Mitchell
Murray
McFarlan
*McLaughlin

Napoleon
Nash
Nelson
Nelson & LeMoon
Noble
Northway

Ogren
Old Hickory
*Olds
Oneida
Oshkosh

*Paige

Parker
Peerless
Peugeot
Phianna
Pierce-Arrow
Premier
Preston

Ranier
*Reo
Republic
ReVere
Riddle
Robinson
Rock Falls
R & V Knight
Rowe

Sandow
Sayers
Seagrave
Selden
Service
Shelby
Signal
Singer
Southern
Standard 8
Standard
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Studebaker
Stutz
Sunbeam

Tarkington
Tiffin
Titan
Tow Motor
Transport
Traylor

Ultimate

Velie
Vulcan

Ward LaFrance
*Westcott
White
Wilson
Winther
Winton
Wolverine

*For Export

One of California's Big Cherry Orchards

(Written for Pacific Rural Press by W. S. Killingsworth.)

Located "on the plains" fifteen miles east of Stockton, in San Joaquin county, is the second largest cherry orchard in California. It is not a real estate scheme booming a town site, but a bona fide producing orchard consisting of all commercial varieties. Twelve years ago A. B. Haslacker, owner of this property, walked into the writer's office at Vacaville, Solano county, in search of information on cherry culture. As manager of the largest cherry orchard in the district at that time, we took him to the property that he might learn something of the care in connection with cherry trees, cherry picking, packing, spraying and cultivating. So well impressed was Mr. Haslacker with what he saw and learned, that he decided at once to plant 100 acres to cherries. We selected the varieties best suited to the soil and climatic conditions, as was best explained to us, and suggested that one whom we knew to be an expert in the planting and subsequent care of an orchard, that no mistake might be made at the outset of such an extensive undertaking. Those who have had experience with cherry culture need not be reminded of the many pit-falls one may stumble into in search of a location compatible to to growth and production. However, Mr. Haslacker, was possessed with both means and nerve, necessary essentials, when about to embark in an undertaking contrary to public opinion, as explained to the writer that existed in the locality where now flourishes a cherry orchard that will do credit to any successful cherry localities in California.

Irrigation a Prime Factor.

As sponsor for this undertaking we accepted an invitation to visit the property on the last week end. We have been advised from time to time of the adaptability of the trees to both soil and climate, as well as prices that have been obtained for the fruit. On our arrival at the ranch we were taken directly to the orchard in which of course we recognized our favorite of all fruits, the cherry. We stood for a few moments admiring the size of the trees, the dark green foliage and the splendid prospect for the 1921 crop as shown by the prolific setting of fruit buds. The trees, but eleven years old, had we not known such to be true, would have said without a moment's hesitation fifteen years. It was unnecessary to put the question as to the cause of such abnormal growth, in a territory apparently as unsuited for the production of trees or fruit as the parched, dried-out sections of the desert portions of the State. However, our doubts were dispelled when particular attention was called to the soil's fertility, the hum of three 20-horsepower electric motors, throwing 1.100 gallons per minute each into furrows leading to all parts of the ranch.. There is a reservoir that holds 1,000,000 gallons of water pumped from one of the wells, that is held in reserve to be dispatched to any portion of the ranch that seems in need of immediate attention.

Soil Not Allowed to Dry Out.

These wells are 360 feet deep throwing an eight-inch stream for any length of time desired. In cemented pits, 30 feet deep, motors are stationed and manipulated from the surface. The soil is watched closely to determine when to apply the water. This is determined by testing with an auger, if the ground at a certain depth is found to be abnormally dry the water is turned on and the land given a thorough soaking. It is by this means and this alone that Mr. Haslacker can boast of the next to the largest cherry orchard in the state, among the largest producers, according to age, and in the best of condition to carry the 1921 crop. The nature of the soil is sandy to heavy loam. The orchard lies along the banks of the "Big John" creek, which has for centuries, possibly been overflowing its banks and depositing a coating of slickings that has made it possible for the plains of the great San Joaquin Valley to produce cherries equal to any raised in the state. To the eastern markets, Mr. Haslacker shipped this seaon 3,614 loose pack 20-pound lugs, which netted above freight and commission $15,950.77.

Dry Land Orchardists, Take Notice.

But for irrigation with subsequent cultivation there would have been no such showing made. As a matter of fact, without the irrigation from year to year there would have been but a poor showing of trees, as there is not sufficient moisture in that soil to produce trees regardless of fruit. The results here given should be an incentive to those who are meeting with little success in attempting to produce not only cherries but other fruits, without irrigation, to use all means possible to secure water for that purpose.

In addition to the 100 acres of cherries on his ranch, there are 90 acres in bearing peaches. However, Mr. Haslacker's pronounced success in cherry culture will no doubt temper the pessimistic mind of many in his district who predicted failure.

BOLTON ORCHARD HEATER

The U. S. Department of Agriculture estimates the annual loss by frost at $75,000,000. It may hit you next. The Bolton Orchard Heater

Prevents Frost Damage

Safest and surest frost prevention method known. Coal and wood heaters take too long to generate required heat. The Bolton beats Jack Frost to it, generates heat rapidly, maintains the temperature above the freezing point. This is important.

Send for Booklet B-1

Tells you all about frost prevention. Filled with valuable information for the grower.

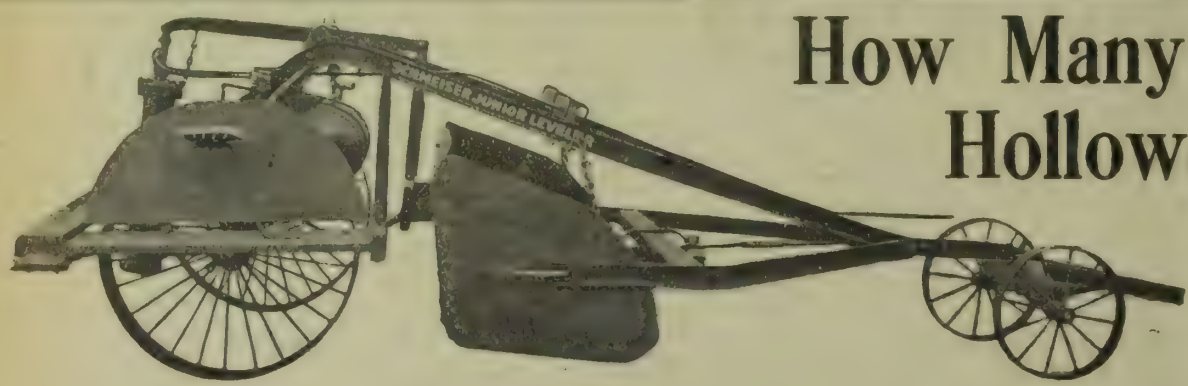
W. R. AMES COMPANY
8th and Irwin Streets, San Francisco, Calif.

Largest stock of Surface Irrigation Pipe and Pipe Equipement on the Pacific Coast

WANTED
Pear Blight Expert
Steady work.

Send recommendations to

JAMES MILLS ORCHARDS CORPORATION,
Hamilton City, Calif.



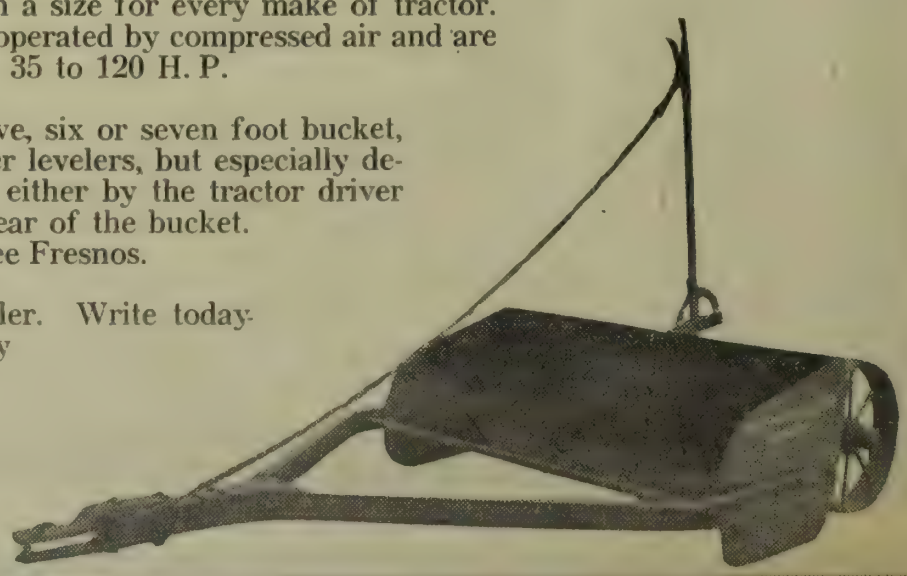
How Many Hills and Hollows on Your Farm?

Hills, hollows, knolls and swales mean waste land—and waste land cuts down your farm profits. Level your land with a Schmeiser Land Leveler and increase your acreage, your crops and your profits.

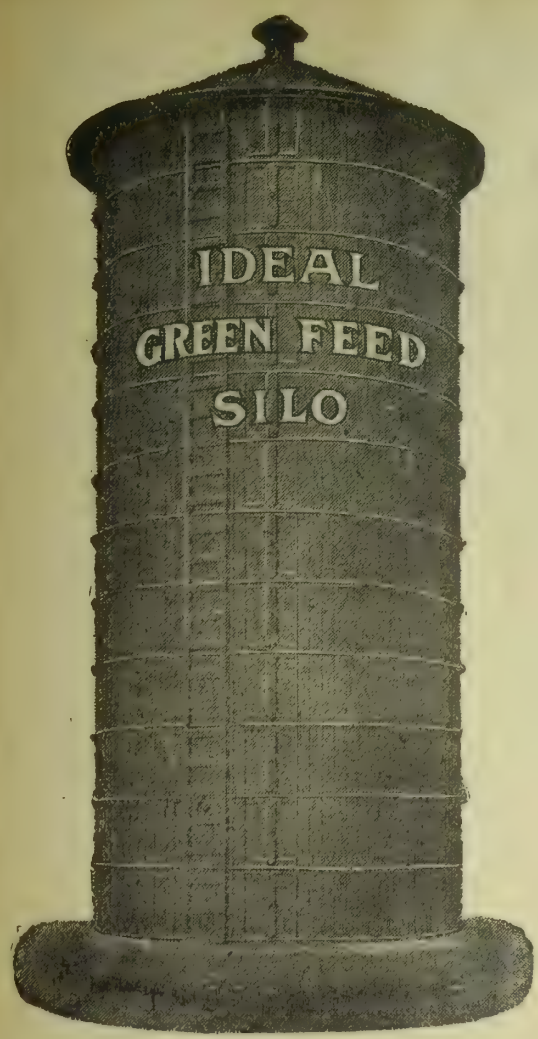
Schmeiser Land Levelers are made in a size for every make of tractor. The eight, ten and twelve foot sizes are operated by compressed air and are suitable for any tractor developing from 35 to 120 H. P.

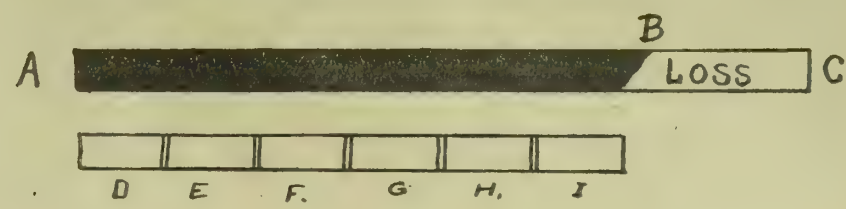
The Schmeiser Baby Leveler has a five, six or seven foot bucket, made on the same principle as the larger levelers, but especially designed for small tractors. It is operated either by the tractor driver or by an operator on the leveler in the rear of the bucket. It will move more earth in a day than three Fresnos.

Investigate the Schmeiser Land Leveler. Write today for descriptive folder A—see it on display at the State Fair.



SCHMEISER MANUFACTURING COMPANY
AGRICULTURAL IMPLEMENTS
DAVIS, CALIFORNIA





Let the line AC, in the above figure, represent the initial cost of a silo. Let each division, d, e, f, etc., in the lower line represent the saving between silage and dry feed for a given unit of time. If, through inferior construction, the silo becomes useless before the lower line equals the upper line, there is an actual loss instead of a saving.

A Fact about Silos

Notice the above diagram. It proves that saving begins only when the difference between the cost of silage and dry feed totals the cost of the silo.

The **Ideal Green Feed Silo** is made of California Redwood, a material of which the Encyclopedia Americana says: **"It resists decay . . . it resists fire . . . it will last as long as 40 years."**

The tongue and groove staves, and heavy refrigerator doors with a three point contact on all four sides, keep the Ideal absolutely air-tight.

The steel hoops, placed where pressure is the greatest, add strength, stability, and prevent warping.

In short, the Ideal Green Feed Silo is built for **permanence**—for years of service after it has paid for itself.

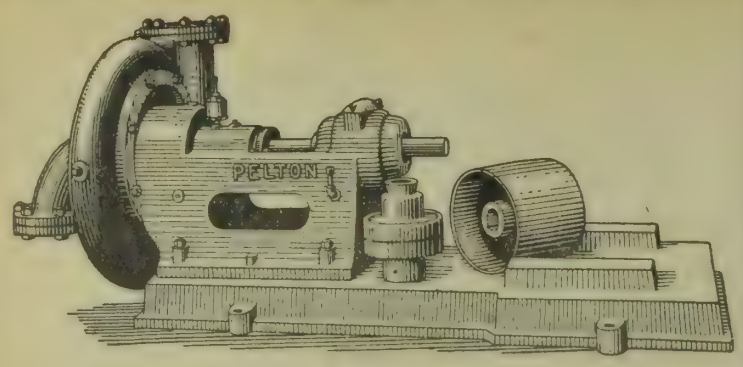
If you are buying a silo in order to save money, an investigation of the Ideal will be to your advantage. Mail the coupon today.

PACIFIC TANK & PIPE CO., Dept. "A"
318 Market Street,
San Francisco, Calif.

Please send me complete information regarding the Ideal Green Feed Silo.

Name .....

Address .....



PELTON PUMPS INSURE IRRIGATION

See the PELTON pumps on display at PELTON Dealers' Stores or farm service.

They are built for gasoline engine or motor drive.
The big bearings will stand heavy loads and hard use.
The one-piece base makes them strong and steady.
They pump more water per horsepower.
Only the best materials are used throughout in their construction.

See the PEYTON pumps on display at PELTON Dealers' Stores or mail in coupon for a descriptive bulletin.

THE PELTON WATER WHEEL COMPANY
1990 Harrison Street San Francisco

THE PELTON WATER WHEEL COMPANY,
1990 Harrison St., San Francisco.

Send me a copy of your irrigation pump bulletin. No cost nor obligation.

.....
.....
.....

The new cannery opened at Gridley by Libby, McNeil and Libby about one month ago has already outgrown itself and as a result the plant is to be enlarged by the addition of 80 feet running the full length of the building. This will make it one of the largest canneries in the State.

LETTUCE GROWER GETS 10% OF MARKET VALUE.

P. Henricksen, of Seeley, Imperial county, raised 823 crates of lettuce during the past season and delivered it to the American Fruit Growers Inc. of California to be packed and marketed for his account. For this service he received an advance of 25 cents per crate from the shipper as it was delivered. He received nothing more until the end of the season, when his balance was $10.72! The lettuce paid him less than 26½ cents per crate. He paid the American Fruit Growers Inc. of California practically as much for selling the lettuce on commission as he received for growing and hauling it to the packing shed. He paid the same outfit 80 cents per crate, over three times as much for packing the lettuce as he received for growing and hauling it. (Probably this included the cost of crates.) He paid the railroads $1.227 per crate for hauling it. The railroads got nearly five times as much out of his lettuce as he did. Secretary F. N. Bigelow, of the State Market Commission furnishes us the Account Sales and other papers from which we get these figures first-hand.

Now are the farmers of Imperial county going to stand for that kind of encouragement to produce food crops? They are not. They have already adopted subscription and marketing agreements for an organization of the Imperial Valley Vegetable and Melon Growers Association to market their own crops. The campaign for membership is meeting enthusiastic response at this writing.

COAST BEANS SUFFERING.

To the Editor: Bean prospects in Lompoc and Santa Maria Valleys are daily getting worse on account of exceedingly warm weather and lack of average coast fogs. Mr. Rickards' estimates will be greatly reduced. Where last year over 500,000 centals of small white beans were raised, considerably less than 100,000 will be produced this season.—L. E. Blockman, Berkeley.

HOLIDAY PEA GROWERS HOPEFUL.

(Written for Pacific Rural Press.)

The green pea growers of Oceanside, South Oceanside, Carlsbad and Del Mar are expecting to control the world's market for this crop this season between November 15 and March 15. Sixty-five growers, which is 97 per cent of the total in these sections, are included in the Carlsbad Vegetable Growers Association. Approximately 25 per cent of the membership is Japanese.

This coast section is practically the only one in the country to raise this crop in time to market it through the winter months. The acreage being planted this year is 900 as against 550 in 1919. The average New York market price last season was 18c per pound and the prospects are even better for 1920. The crop is packed in 40-pound wooden drums having a central iced compartment, and expressed to all eastern markets.

The land is a light, sandy loam and is under irrigation from the San Luis Rey Valley. The yield per acre averages 65 sacks, with a maximum of 120 per acre at an average weight per sack of 65 pounds. In the past years three varieties of peas have been planted: the Stratagem for its excellent appearance, the Telephone for its tremendous yield, and the Admiral (Senator) for its sugar content and general high quality. This season the Admiral will be the only one raised in order to standardize the pack.

Altho this association has been formed only to handle peas, its members raise every known variety of vegetable on a large scale and ship to local markets as far north as San Francisco. The entire section of 1,300 acres of vegetable land is double-cropped each season.

ARE YOU IN NEED OF
MACHINERY
WE CAN FURNISH IT
ANYTHING

FOR THE
Cutting and Working of Wood
Pumping of Water
Contractor
Power Plant

FOR THE
Working of Metal
MACHINE SHOP
GARAGE
BLACKSMITH

Also SMALL TOOLS and SUPPLIES of ALL KINDS

Harron Rickard & McCone
SAN FRANCISCO LOS ANGELES

Is It Advisable to Plant Apricots?

(Written for Pacific Rural Press.)

The question has been put up to the writer, Would you advise the planting of apricots?" We would say, Yes! Why not? The day of low prices for apricots is past. California has a "cinch" on the industry, being the only State that grows the apricot commercially. There are a few, however, grown in Arizona, but Apricot production in California is as a competitor, they are not in it. so arranged, largely due to climatic conditions, that there is no danger of overproduction conflicting with any one district. Winters and Vacaville, the earliest shipping districts, clean up on shipments before other sections, which take an occasional "flier" at the market, begin. In that case, there will always be a demand for shipping 'cots to the extent of what those two districts may supply. The tonnage they dry and ship to canneries does not interfere with those districts producing 'cots solely for that purpose.

Low Prices Will Not Return.

When we venture the assertion that low prices for apricots is a thing of the past, it is based on statistics compiled by the California Packing Corporation, showing that during the past 17 years, the low years on 'cots were 1903-'05, when dried 'cots sold at 5¼ cents per pound. From 1913 to 1919, inclusive, dried cots sold from 10½ to 20 cents, taking choice grade as a basis; however, in 1915, the market was 8 cents per pound. These were opening prices; in some instances prices went higher before the season closed. For the season of 1920 the California Prune and Apricot Growers, Inc., have fixed the price on choice grades at 24 cents per pound; extra fancy at 30 cents. Even the "slabs," that many seasons "went begging," are fixed at 20 cents. The standard is not overlooked, but offered at 18 cents. In 1918 the canners produced 2,233,314 cases; in 1919, 4,395,204 cases 'cots purchased at topnotch prices. The present season they are taking all they can get at prices from $80 to $110 per ton. The 'cots that have been shipped East have brought prices unequalled in the history of the business. The wide distribution of apricots by the fruit-shipping concerns has created a great demand that will annually increase.

Consider Varieties Carefully.

Now, can any theory be advanced against a continuance in the advancement of the apricot by increasing the acreage? If so, let us have it.

Those who contemplate increasing their acreage will necessarily have to be governed by conditions as to what varieties will do best in that section, as it is not advisable to plant a variety simply because it is a favorite with the orcharist in a locality whose unfitness would be against it. As nursery stock is scarce and high, no time should be lost in booking orders, for next season's planting.

Nevada City has made her debut in the fruit-shipping arena for this season. First car of pears sold for $2,054. Nevada pears have the reputation of carrying well. The quality and flavor are exceptionally good.

CAMPAIGN INDORSING CALIFORNIA OLIVES.

(Written for Pacific Rural Press.)

If there is a possibility of placing the olive industry of California on the map the National Canners' Association, the Canners' League of California, and the California Olive Oil Association will do so, as they have already spent $100,000 for scientific investigations of olive-curing processes, the result of which will form the basis of a nation-wide campaign to demonstrate that California ripe olives are the safest and most scientifically prepared food known, in addition to containing a larger proportion of nutriment than many other foods. The extent of the industry being advertised in the coming campaign is indicated by the fact that there are at the present time more than 40,900 acres of bearing olive trees and more than 3,000 acres coming into bearing annually in California.

Forty-two processing plants care for the output of these orchards, involving an investment of $25,000,000 and an annual production valued at $5,000,000. It has been estimated that since the beginning of the industry on an organized scale about fifteen years ago, 180,000,000 containers of ripe olives have gone upon the market and 9,000,000 were supplied to the epicures of the Nation during 1919.

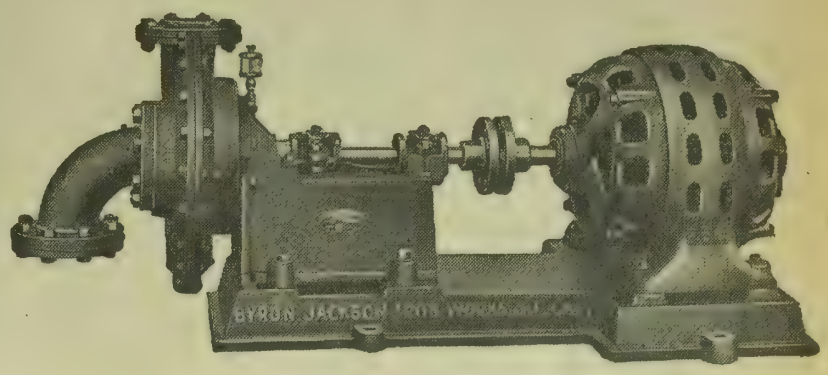
Many food experts and scientists have joined in endorsing California olives as food, as, for example, Professor M. E. Jaffa, consulting nutrition expert of the University of California, who declared, "Few foods can be consumed with as great confidence as the canned ripe olive."

California olive growers, in their campaign to make the olive a national food, are planning to give particular emphasis to the fact that all California olive packers sterilize the fruit in its sealed containers, either in steam pressure retorts or in boiling water.

UNCLE SAM DEPENDS ON YOU

Is your soil producing the maximum?

"BYRON JACKSON" PUMPS are built to meet every condition of "supply and demand" on your ranch.



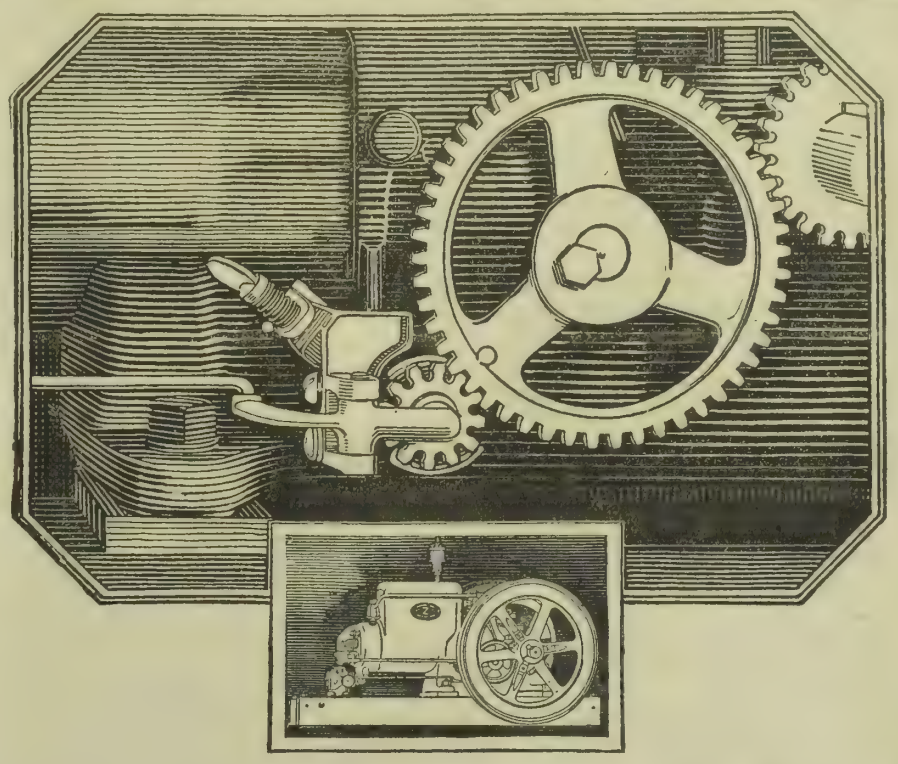
Write us your conditions.

New Catalog No. 60-A for the asking.

BYRON JACKSON IRON WORKS, Inc.

LOS ANGELES SAN FRANCISCO VISALIA

FAIRBANKS-MORSE "Z" FARM ENGINES



Throttling Governor Gives Steady Speed

Every "Z" Engine is equipped with a sensitive throttling governor. Regulates the amount of fuel and air admitted to cylinder—maintains uniform speed—summer or winter, regardless of work being done.

Throttling governor enables the "Z" to run on kerosene as well as gasoline—saves you money.

Governor is a complete, high grade assembly unit—not a makeshift device. Its case-hardened contact parts resist wear.

The throttling governor has mighty important duties: Helps maintain uniform cylinder temperature—gives smooth, steady flow of power that saves wear and tear on belts and the driven machinery.

Other "Z" features are: Bosch magneto, more than rated power, parts interchangeable; clean cut design; long life.

Go to your nearby dealer today and see the "Z." He will show you why you should have one.

PRICES { 1½ H. P. ..... $ 85.00; 3 H. P. ..... 135.00; 6 H. P. ..... 220.00 } All F. O. B. Factory

FAIRBANKS-MORSE QUALITY F M 100%

FAIRBANKS, MORSE & CO.

MANUFACTURERS — CHICAGO

Western Branches: Los Angeles; Portland; San Francisco; Salt Lake City; Seattle.

The BLASTER says=

"I use GIANT
It gets them out cleaner"

Professional blasters know explosives. They have tried all the different makes. Many of them say "Giant gets the stumps out cleaner." John Zurr of Santa Rosa, Cal., writes:

"From the beginning of the time I have been using powder for stump blasting and other agricultural work, I have found the powder made by The Giant Powder Co. to be the most satisfactory. Each certain percentage of Giant Powder is exactly what it is represented to be."

Tell your dealer you want the genuine Giant Farm Powders—Giant Stumping or Eureka Stumping. The Giant trademark on every box is your sure protection against imitations.

It will pay you to write today for our book, "Better Farming with Giant Farm Powders." It tells scores of money-saving ways of doing farm jobs—land clearing, ditching, tree planting, etc.

THE GIANT POWDER CO., CON.
"Everything for Blasting"

216 First National Bank Bldg., San Francisco. Branch Offices:
Butte, Denver, Los Angeles, Portland, Salt Lake City, Seattle, Spokane

GIANT
STUMPING FARM POWDERS EUREKA

Order your TREES now

MAKE SURE NEXT SEASON'S PLANTING
MANY VARIETIES WILL BE SCARCE

Orders Booked Now Will
Be Given Preference

WE ARE ALWAYS PLEASED TO ANSWER QUESTIONS REGARDING BEST VARIETIES TO GROW, SOIL, IRRIGATION, PRUNING, ETC.

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Here and There in the Fruit Business

All Fruit Sections Rushing.

In every section of California where grapes and prunes are produced for commercial purposes, the work of harvesting is now under full headway. Fortunately, labor is reported as plentiful. Some sections, such as Napa, Lodi, Vacaville, Suisun, and the San Joaquin Valley, are oversupplied. Henry Wheatly of Napa tells us that there is more help in that district than there are jobs. The contract for prune picking is $6 per ton with $1 bonus when the job is finished. Now that help is plentiful the grower must not lose sight of the fact that "loafing on the job" is a dangerous pastime, as we are liable to have a repetition of 1918 climatic conditions, too fresh in the minds of all grape and prune growers to be worth mentioning. Should a district be so unfortunte as to be held up by a band of migrating fruit harvesting grafters, rather than lose a crop of fruit, one will necessarily have to submit to their demands. However, it is to be hoped that they will not be encouraged in their nefarious practice.

Lodi Grape Picking Prices.

It is gratifying to note that the labor agitator will not control the wage scale for picking grapes at Lodi this season. The Shippers' League of Lodi has taken this matter up and set a satisfactory wage scale, same being 50 cents per hour, and at that jobs cannot be found for all applicants. However, the "Pacific Coast Labor Union," in a "Notice to Vineyardists," have created a wage scale to suit their convenience, which runs something like this. Picking $7 to $8 per ton, or 75 cents per hour, eight hours, and time and one-half for overtime. It is to be hoped that the Lodi grape growers may be successful in driving out this element, whose only stock in trade is to keep the labor situation in a turmoil. The leaders are not laborers, but impostors, drawing their livelihood from the poor fellow who actually does a day's work.

Sacramento River Shipments Over.

The 1920 fruit-shipping season on the Sacramento river is over, and it will go down into history as being the most prosperous yet recorded. While the tonnage was not up to normal and all of the fruit not up to standard, it is agreed that all are satisfied with results. There was a temporary slump in prices, caused primarily from inferior refrigerating facilities, and not from overproduction or poor quality of fruit. Some adjustments were necessary in shipments going to the canneries, but not of sufficient importance to cause rejections on occurrence that often took place before the advent of the California Pear Growers' Association, an institution that has done more to stabilize the Bartlett pear industry in California than all efforts heretofore attempted.

Napa County Wineries to Operate.

Practically all of the wineries in Napa county will be operated this season. In conversation with Theodore Gier, the wine king, we learned that he intends to manufacture wine at all of his wineries, which, of course, will be done under government regulations, the wine being for the purpose of medicinal and sacramental purposes. J. H. Wheeler of St. Helena expects to crush about 700 tons, the most of which will be made into juice and syrups.

St. Helena Wine Grapes Go East.

Preparations are being made on extensive scale to ship wine grapes from St. Helena to Eastern markets. Merriam and Carns, extensive buyers of wine grapes, have sufficient material for the making of 80,000 lug boxes, in which 1,200 tons of grapes will be shipped. The ruling price for wine grapes at that point is $75 per ton, with an advance of $5 to $10 per ton for choice lots of black grapes.

California Fruits Selling at High Prices

(Written for Pacific Rural Press by W. S. Killingsworth.)

From the day of the first shipment of deciduous fruit for the season of 1920, there has been no let up to fabulous prices that have been realized. Not only for the standard varieties, but for some that had been cast into the horticultural scrap heap, allowed to occupy space for home use only. The grower, who but a few years ago was out gunning with axe and saw to rid his premises of an unprofitable production, is now knocking at the door of the nurserymen for more trees with which to increase his acreage. This change of heart is due to the fact that the consuming public are demanding his products, and we are prone to believe that this demand is not a temporary flurry, but a fixture; while prices may not remain altogether at the present high standard, there will never be a return to the morbid red-ink days of but a few years ago.

Co-operative marketing is largely responsible for this wholesome change. Through the guidance and protection of these institutions, new markets have been opened up, people have been educated to eat fruit, not as a luxury or for medicinal purposes, but because it was plentiful and might be easily obtained by demanding that it be placed in their reach. Twenty years ago, when it was considered suicidal to ship a carload of fruit worth $1,000 to $1,500 per car, into a market of 100,000 people, today towns of 10,000 are consuming several cars each month at $1,800 to $4,500 per car—prices unheard of in the history of the business. Nor does it end there; this introduction into new territory will increase until there will not be a turn in the road where California fruits may not be found. Of course the larger markets will be relied upon to do their share, as they are doing in such splendid shape at the present time.

There are dull days, as may be expected, due principally to condition of fruit on arrival, but the old days of glutted markets are in the discard, as the various shipping organizations are vieing with each other to uphold the standard of good prices. There has been a serious slump in the lemon market, due largely to condition on arrival, as well as heavy foreign competition. The orange market has kept pace with the splendid prices ruling on deciduous fruits.

Now comes the unheard of prices that are being paid for canning stock —$100 per ton for Bartlett pears, peaches and apricots—more like a dream than real; another masterstroke in favor of co-operation. And what about dried fruit? Their remarkable elevation in price really seems too good to be true; raisins, in 1910, 3½ cents per pound; 1920, 15 cents. Apricots in 1915, 8 cents per pound; 1920, 30 cents. Peaches in 1915, 4 cents; 1920, 17 cents. **Prunes in 1915, 4 cents; in 1920, 11½** cents. With all that, the fruit growers of California have just cause to congratulate themselves that they are connected with an industry that has gained such prominence and bids fair to outstrip all other contenders in the agricultural and horticultural sweepstakes.

So great has been the increase in consumption of raisins since prohibition went into effect that the imports of Spanish raisins for the first six months of 1920 increased 1400 per cent. Nearly 8,000,000 pounds were exported from Malaga up to June 30, exceeding the total exports from that port from 1913 to 1919, inclusive. This would be 267 carloads of 30,000 ponuds per carload.

Fifth Annual Fair at Napa

(Written for Pacific Rural Press.)

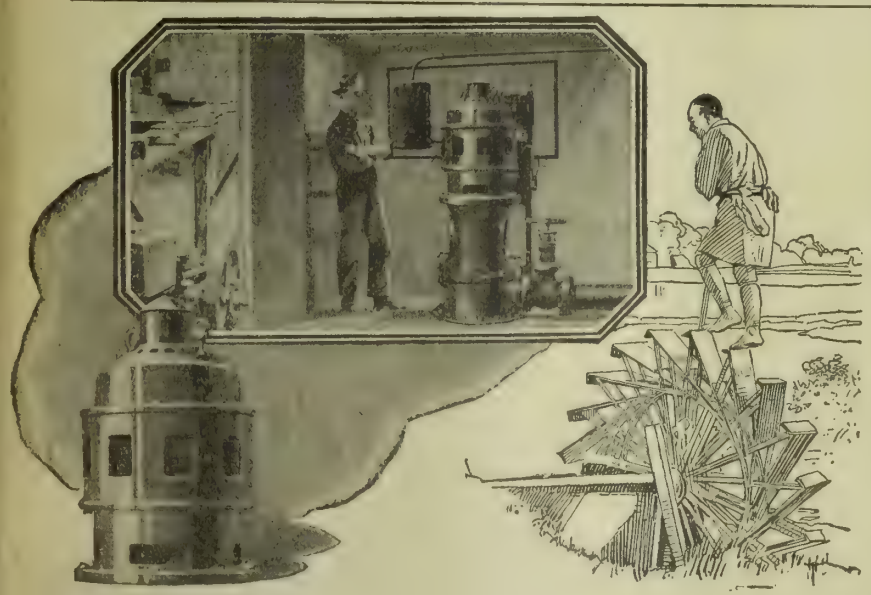
Under the auspices of the Napa County Agricultural Association, the fifth Napa County Fair was held August 19 to 22, inclusive. It was the writer's privilege and pleasure to attend and act with the Agricultural and Horticultural Committee in judging the orchard and farm products of the county. While in some instances the decisions on apples might not have been in accord with the views and wishes of the exhibitors, the committee acted within the power vested in them by the California Apple Standardization Act, and not from a prejudiced or arbitrary standpoint.

By way of explanation we will say that the rigid examination and decisions were intended as an object lesson, that the exhibitors might profit therefrom. There were many exhibits that would have scored the 500 points but for carless selection of even one apple, out of the plate of five, inhabited by worm, or showing worm sting, limb rub, loss of stem—with the exception of Gravenstein, etc., any one of which barred it as a "California Fancy" apple. The exhibitors were not familiar with the law governing the "quality, condition, color, size and uniformity of size, color and shape," but were advised to apply to Walter Schaefer, Napa county apple inspector, for printed instructions. We are of the opinion that this school of instructions will greatly assist in future exhibits, and as a guide in the grading and packing for commercial purposes.

Should such county fairs accomplish nothing more, it was time and money well spent in educating the growers to a standard that the horticultural law of this State is intended to accomplish. It was gratifying to note that the exhibitors took kindly to the decisions and suggestions offered by the Committee. Twelve Farm Centers and one Grange were represented. The booth of each was tastily arranged, many of which showed an artistic hand and the effects of much hard work, of special mention was the Oak Knoll, Canares, Mt. George and Brown's Valley. The livestock department was well directed by F. L. Gordon and W. W. Everrett. It was a most critical exhibition of which Napa county should feel justly proud.

The poultry, rabbit and pigeon department was presided over by W. T. Rutherford. There was a splendid showing of each. Special mention may be recorded of the poultry. Mrs. Paul R. Miller presided over the apiary products. W. H. Bradley over grain, beans, fruits and vegetables. Governor Stephens was present and addressed the meeting.

Napa county prune growers have agreed upon a wage scale to be paid for picking the fruit this season beginning August 20. They will pay $6 per ton with a bonus of $1.00 per ton to pickers who remain throughout the season. Five dollars per day will be allowed for an eight-hour day.



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This one pump, installed on a ranch at Santa Clara, Calif., is of ample capacity to irrigate 40 acres of prunes and in fact could easily supply 50 to 60 acres.

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SACRAMENTO, CALIFORNIA
SEPTEMBER 4 to 12, 1920

NINE DAYS AND NIGHTS IN WONDERLAND

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Eight acres of tents in which will be shown, tested and demonstrated every known type and make of power machinery used on the farm. Demonstrations in charge of PROF. L. J. FLETCHER, University of California, Davis.

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Kings County Fair

HANFORD,

September 20-25

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FARMERS FROM ALL OVER THE STATE

are cordially invited to see exhibit of products of one of the richest agricultural sections of California.

KINGS COUNTY FAIR ASSOCIATION

T. E. COCHRANE, Sec. HANFORD, CAL.

Significant Agricultural Pointers

When is a Vested Water Right?

Interference with vested water rights in the Sacramento Valley seems to be bearing its logical fruit in the San Joaquin; and there is no telling how much more chaos is coming. An injunction is now being sought by the San Joaquin and Kings River Canal and Irrigation Co. to prevent the James Ranch and other riparian owners along the Fresno slough which opens from the San Joaquin above the canal company's intake from pumping any water at all when the river flow goes below 1360 second feet at the intake. When the Railroad Commission can, on a strained technicality, take water from prior users and prorate it to new users and when water rights established by act of Congress years ago for an irrigation district can be threatened because big new projects want some of that water and when a $60,000,000 rice crop can be threatened by a city down the river, it begins to look as if anyone with enough influence can overturn the cropping plans and financial backing of any gravity water user. It is high time that somebody with more brains than political ambition be permitted to draw up a set of water laws and get it through the Legislature so it may stand the test of courts and enable farming interests to bank on their water rights.

Annual World Wheat Deficit.

World wheat production during the five war seasons, 1914-1918, averaged 98,300,000 metric tons of about 2204 pounds each, which shows a reduction of about 2,300,000 metric tons per year from world production during the previous five years, which averaged 100,600,000 metric tons as figured by the International Institute of Agriculture. The areas of production shifted greatly during the war. In spite of all bonuses and other governmental measures to keep up production of this, the most important foodstuff in the world, the area of wheat in Europe was reduced from an average of 52,000,000 hectares, 1909-1913, down to 41,600,000 hectares during the five seasons of war. (A hectare equals about 2 1-2 acres.) This was a reduction of 20 per cent in Europe. But North America's average during the same two periods increased from 23,000,000 hectares to about 28,000,000 hectares, Asia increased from 19,000,000 to 21,000,000, Australia from 3,000,000 to 4,000,000 and South America about the same increase as Australia.

Largest Irrigation Bond Issue

The largest issue of bonds ever authorized at one time for a single irrigation project in this state is the total of $6,180,000 for the Modesto and Turlock districts, including $500,000 of drainage bonds in the latter district, authorized August 13 by the State Bond Commission. Work on the Don Pedro dam will commence within two or three months. It is a three-year job.

Sorghums Use Less Water than Corn.

Kansas experiments on the amount of water used by Indian corn and the grain sorghums showed that in all cases Indian corn used more water per plant. This proved, however, to be due to their greater leaf surface. The experiments showed that most if not all of the sorghums transpired more water per square inch of leaf surface than Indian corn.

Sweet Potato Season Opens.

The sweet potato season has opened. The local market received its first car from Merced this week, and offered to the retail trade at 8 cents per pound. The Turlock district continues to make daily express shipments to San Francisco, which will increase to car lots within a few days.

Rice Freight Rates Wrong.

Ten railroads and six steamboat companies are charged with maintaining rates which discriminate against rice as compared with other grains in a complaint of the Pacific Rice Growers' Ass'n and several millers before the Railroad Commission. One traffic specialist testified that in some cases rice rates are 70 per cent higher than other grain rates. The rice men ask reductions approximating 25 per cent and putting rice transportation rates on a par with grain and beans.

A Misdirected Bean Crusade

A pitifully distorted misstatement of facts is being assiduously overworked in the city papers of recent date. The California Bean Growers' Association is being attacked by the attorney for one of its members who wants preferential treatment. The latter had a lot of teparies and other varieties in pools of recent years whose sales could not be completed and whose closing has been delayed by inability of the association to get certain papers from the plaintiff's banker with whom they had been deposited as collateral. Tepary beans should not be sold for human food anyhow, and humans have generally learned that fact. But the pool would have been closed some time ago if the plaintiff had released the necessary papers. He wanted complete settlement for the beans but would not perform the acts necessary to get them out of the warehouse. The attorney is quoted as saying that if he wins, "it will make it possible for other farmers bound by the same contracts to ignore them, and thus the acreage which should properly be devoted to bean culture in view of the market price and demand will again be planted." Similar absurdities comprise the text of one extended article recently published.

Potatoes Prevented from Shrinkage.

Potatoes in storage commonly lose 10 to 16 per cent of their weight, chiefly by sprouting, but largely by transpiration of moisture. Experiments carried out by Prof. O. Butler showed that at 48 degrees F. temperature the loss in weight continued rapidly, while at about 39 degrees the loss stopped after 120 days. But providing moderately dry air in place of very dry air reduced the loss in weight one and one-half times as much as the reduction in temperature mentioned. Keeping fresh oxygen from the potatoes had a remarkable effect in preventing sprouting or other loss of weight at 47 to 50 degrees. There are conditions where carbonic acid gas and air-tight storage compartments might be as effective and cheaper than cold storage now used to prevent sprouting of seed potatoes.

Crops Quadruple Cost of Dam.

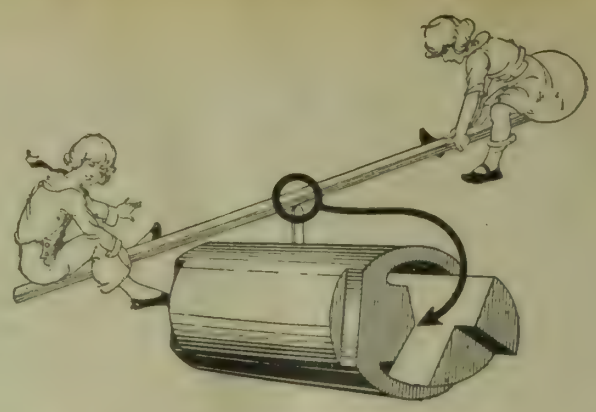
Gross value of the 1919 crops in the Salt River project of Arizona was nearly four times the cost of the Roosevelt dam and the rest of the project. Crop values are estimated at $45,000,000. The works cost $12,000,000. The project now includes 305,000 acres. Additional projects already in operation or being prepared for irrigation bring the total irrigated acreage centering around Phoenix up to 500,500 acres.

Start Napier Grass with Water.

Napier grass does not die easily; and when it does it is generally for lack of water, says Eugene Spencer of Los Angeles county, a veteran grower of this new crop. The plants or canes should be set in furrows and kept moist until they become established.

A crop valued at approximately $3,000,000 will be harvested from Yuba county hop ranches during the present season. Durst Bros. of Wheatland are reported to have the largest hop ranches in the world. Six hundred and sixty acres of hops in Yuba county this year are expected to yield 7,000 bales, and computing an average of 500 pounds to the bale, the yield would be some 3,500,000 pounds. The hops will be shipped directly to foreign markets.

Several carloads of light horses have been shipped from Kern county to the cotton fields of Texas. More shipments will be made in the near future.



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All the other features of the Best Tracklayer have been worked out with the same care, and are the result of long years of tractor-building experience. Motors are built in our own plant. 36 Timken, Hyatt and roller bearings reduce friction to the minimum and assist lubrication. Three-point suspension relieves mechanism of jolts and twists. Independently controlled tracks enable tractor to turn in its own length. Correct design gets power to drawbar with least waste. Working parts entirely housed and easily accessible. No belts or chains—all gears. Only 7 grease cups—10 minutes to grease-up.

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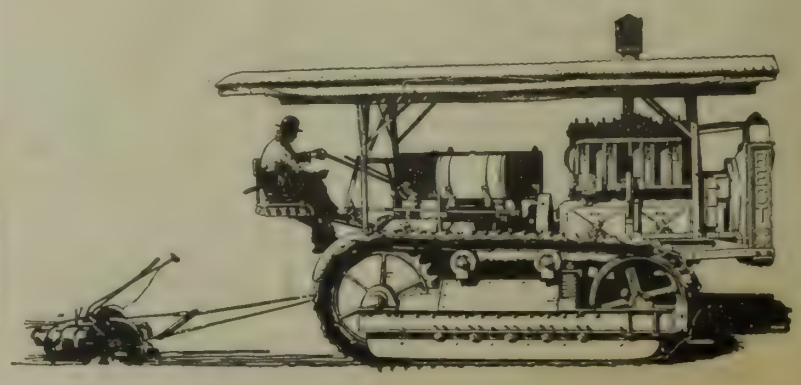
60 H. P. at Pulley
35 H. P. at Drawbar



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VENTILATED Sublimed Sulphur — Impalpable Powder, 100% pure, in double sacks, for Dry Dusting and making Paste Sulphurs.

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To create additional available plant food, and prevent smut in grain, drill into the soil 110 pounds per acre of TORO BRAND SPECIALLY PREPARED AGRICULTURAL SULPHUR or our DIAMOND "S" BRAND REFINED POWDERED SULPHUR. This soil treatment has increased various crops up to 500 per cent. Send for Circulars No. 6 and 7, and circular letter of information, "To Whom It May Concern."

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PIMIENTO INTERCROP $450 PER ACRE.

About 1,650,000 pounds of pimiento sweet red peppers were shipped out of the town of Garden Grove, Orange county, in 1919. Who in the world would eat that many peppers? Well, they go al lover this part of the world; for most of them are canned, along with similar peppers from neighboring districts.

A ten-acre orchard interplanted with pimientos even between the trees recently attracted our notice by reason of its well-nigh perfect stand and the uniformly thrifty appearance of the plants, which were about a foot tall and already beginning to bloom. They belong to S. C. Oertly, who prides himself on the good stand which makes all of his land produce.

Field Planting Beats Transplanting.

They had been seeded in field form five rows of peppers between each two rows of trees. They do better that way than to start them earlier in hotbeds. A plant four inches tall transplanted next to one an inch tall growing where it was seeded, will be later in cropping. With these peppers, the earliest bearing plants are believed to produce the biggest crops, for they continue to ripen fruit until frost whether they start early or late. Mr. Oertly used to start them in protected beds and transplant as soon as frost danger was past; but he found that it pays better to plant the seed in field form. Pimientos were selected because they do better on his rather heavy sediment soil, while the Mexican chilis do better on clayey soils.

A Planet Junior drill had planted about two pounds of seed per acre about April 1, after most frost danger was passed. At about four inches tall plants were taken from sections where they were too thick and transplanted to places where they proved too thin. This was done late in June. Never were more plants pulled than could be set out within an hour; and older leaves were trimmed from the larger plants. They were carried in a bucket with roots under water. The seedlings were set a little deeper than they were before, to get roots into cool earth. Water was supplied and the ground was hoed next day to break up any crusting tendency. If the seedlings were set too deep, they would lose time sending roots from each node into the upper surface soil where they would eventually do no good. Extra success with transplants is due to the extra work done, and it pays in making all of the land produce.

Thinning and Irrigation.

Seven to ten days after the transplanting when the resets seemed sure to grow, the peppers were systematically thinned out to 18 inches apart in the row. They should be farther on lighter soil to give more plant food and moisture per plant. About three weeks after transplanting the ground was still moist enough for original plants, but it was irrigated for the sake of the resets. Water was not allowed directly to reach the plants, but subbed across. A hundred miner's inches of water were turned into the furrows between about fifteen rows at once, and tampooned into another fifteen as soon as the water had gone one-eighth of a mile to the other ends. At this rate, the entire ten acres were irrigated in about fourteen hours, the aim being not to soak it over a foot deep. The first irrigation took longer. Later irrigations will soak deeper when plants are larger, and will come about ten days apart when the plants are heavy with fruit.

Contracted at $45 per Ton.

Picking begins late in August, only the red perfect fruits being marketable. They are firm enough to be pulled by hand and carried to the cannery in sacks. They are in cans twelve hours after picking, according to Mr. Oertly. Prices some time before the war were $22 per ton, but this year's crop was contracted at $45 and ten tons per acre is a reasonable expectation from this intercropped orchard.

Carcases of animals, dead of contagious or infectious disease, should be burned or buried, preferably the former; otherwise, dogs, coyotes, crows or buzzards may distribute pathogenic germs far and wide.

Cover Crops

Melilotus Indica
Common Vetch (vicia sativa)
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Our stocks of these are of the best quality obtainable. Our Melilotus is thoroughly scarified, insuring high germination.

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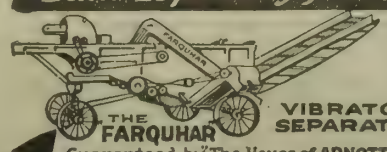

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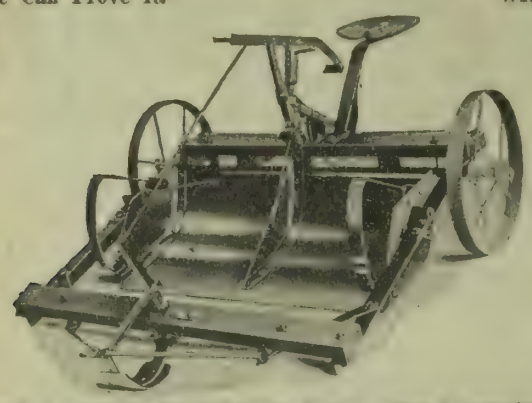

The above is a cut of the Famous Miskin Scraper, which in operation, easy draft, greater capacity, and better work, has many advantages over common Fresno and wheel scrapers now on market. Made in 2-horse, 3-horse, and 4-horse sizes. The four-horse size can be operated by small tractors from the tractor seat, by tractor driver.

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SEED WHEATS AND BARLEYS

From Farmer to Farmer

BUNYIP, BAYAH, and DART IMPERIAL SEED WHEATS

Hard White Australians; California acclimated; best milling; higher price for products.

MARIOUT and BELDI SEED BARLEYS

Large yields; quick growth; early maturity; more drouth resistant than other varieties known to us.

There is in California a very limited quantity of choice wheat and barley seed of these varieties. All our seed grown on new soils, one irrigation only. All water from deep wells; no Bermuda, Johnson or Morning Glory. Orders booked as received, shipments following consecutively.

We also have limited quantities Early Baart, Sonora, Diener's Hybrid-Baart and Diener's Hybrid Sonora Seed Wheats. This is our first year with last two varieties and data not yet sufficient to permit our making definite conclusions or recommendations. Both tiller well, permitting light planting, and neither shatters so badly as Sonora.

In our judgment Bunyip, Bayah and Dart Imperial wheats and Mariout and Beldi barleys yield more or less soil moisture and shatter less in wind than any grains we have grown.

We are also now booking cotton seed orders for late fall and winter delivery. Pure strains, Durango and Mebane, grown by us in selected, hand-rogued fields. We do our own ginning, carefully avoiding seed mixing. We invite trial of our seeds for results with less moisture.

Write for prices, stating quantity desired.

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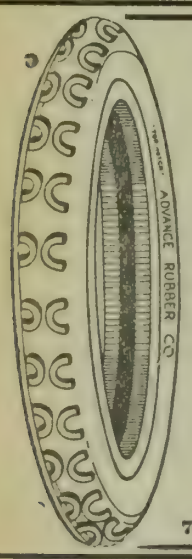

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Cost less than any other considering long mileage they give and the low prices charged. You can get any size tire or tube at the present time as we have just received a car load of odd sizes.

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Ed's Job Wins

"I've had three farms and two livery stables. Sold out. Had left—buggy full of debts. I wanted to be a salesman. John Manor said, 'Get a job selling Parks Bros.' Quality Groceries Wholesale to Farmers. Goods Guaranteed. Satisfaction or Money Back. I've used them myself, and saved 20 per cent. Now—debts paid. Family on Prosperity Road. Wife wears the smile she had when a girl. 'We've got the best job, and the best home we ever had.'" We can use another worker as good as Ed. Do you want the job? Full time work only. Write for Ed's proposition. Tell me your age, experience, occupation, for five years past.

J. C. H. HUNTTING, Care Parks Bros., Portland, Oregon

(Read "Mary's Man Wins," next issue.)

Your Soil Needs Humus and Nitrogen Bacteria

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Now is the time to plant it. Buy only seed that has a quality test tag on every sack. It protects you against seed of low germination.

Buy from your local dealer or from

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Look for the Tag LOS ANGELES, CAL.

Agricultural and Mechanical Service

Newcomer Grows Fine Blackeyes.

A. E. Bates is a newcomer to California. Therefore he is willing to learn; and therefore he has one of the finest blackeye bean fields in stand and growth noted by the writer in eastern Los Angeles county. He believed people when they said that most of the bean work should be done before planting; and he believed that beans, like oats, want firm footing. So, it was not unadulterated misfortune when the carrots he had planted on sandy loam in February were flooded out. Preparation for them had been good ground work for blackeyes. To get a firm subsurface soil he double-disked the carrot field, smoothed it, double-disked and smoothed it again, and finished preparation by harrowing. About 160 pounds of beans were planted on ten acres, three inches deep in rows 30 inches apart. After they came up, he stirred the ground with a four-tooth cultivator attached in front of a furrower, then irrigated and cultivated again with the same implement. Another irrigation and cultivation came about July 10 and this was followed with the furrower alone. Part of the first irrigation was run down alternate rows, soaking the ridges to the dry side. This proved economical, but the second irrigation went down every row the full length of the ten acres.

Tomato Blight Experiences Wanted

Probably five per cent of my tomatoes are blighting—the leaves turn yellow and there seems to be only a few roots.—J. J. M., Stanislaus county.

It is an old trouble much studied by our State Experiment Station with no very valuable results. A similar disease in the Northwest is caused by a root-infesting fungus which thrives in hot temperatures. Some investigators think they have prevented similar trouble by spraying with Bordeaux every week or ten days, beginning while the plants are in the seed beds. This, however, does not reach the roots, where the cause of your trouble probably lies. Readers of Pacific Rural Press who have tried various practices are invited to tell their results. Have you tried planting tomatoes extra deep or in lister-furrows? Do they blight as badly on heavy soil as on sand? Do they blight as much on subirrigated land as where it dries out frequently several inches deep? Are late planted tomatoes as much affetched as those planted early in the spring. Are intercropped tomatoes affected as much as those grown in the open field?

More About Big Barley Yield.

Regarding the barley crop of the Salinas Land Co. mentioned in your issue of Aug. 7: Was the field they plowed 10 inches deep previously subsoiled 24 inches? What variety of barley was used? What time was it sown? Would it be wise to follow their rule of deep planting, etc., being unable to give the land any 24-inch subsoiling?—P. C. D., Contra Costa County.

The field was subsoiled about August 1st and plowed later after the first rains. Common barley was drilled about four inches deep right behind the plow about 50 pounds per acre, thicker than it will be drilled in the future. Their success and the reasonableness of their methods indicate that a similar procedure would pay most anyone in similar California conditions. The subsoiling is not necessary; but gives a great advantage to the crop in storing moisture and providing a deeper feeding ground for roots; and was probably responsible for a large part of the increased crop raised under Manager A. G. Baker's supervision.

Pasture Rotation Increases Wheat.

The hill country south of Hollister lacks certain elements required to grow good crops of wheat, according to W. H. Best. Most people generally grow barley year after year. But Mr. Best raises about twelve sacks of wheat per acre averaging 140 pounds. The difference is due to pasture rotation which rests the land and enriches it. One year of pasturing does not help noticeably, but two or three years make a great difference in the wheat crop following; and five years of pasturing followed by two to four years of wheat pay still better.

How to Farm with 8-Hour Day

To the Editor: In answer to J. E. W., Paradise, in your issue of July 27, I will say that through all America today we find discontent. The workers in every organized industry are voicing demands for a greater share of the rewards of that industry—a cry for a fuller participation in the joy of living. Whenever the organized workers' conditions are improved the farmers' conditions keep pace and are also improved in different ways, especially when the young men that have left the farm to enter industrial work of different kinds return to the farm with a little knowledge of what is going on on the outside.

As to the eight-hour day on the farm, I will say that I worked on different farms about twenty years ago that worked the 8-hour day and there are farms all over the country that have adopted the 8-hour day for their ranch help. I would like to inform J. E. W. that you can work a farm on an eight-hour day just the same as you can run a railroad on an eight-hour day. A foundry that works day and night works on an eight-hour day, so why not a farm?

The retail merchants, like the farmers, used to think that their stores had to be kept open till 9 p. m., but now the mechants close up at 6 o'clock and still do the same business that they did when they kept all hands on deck till 9 p. m.

If J. E. W. will let me know what kind of a farm he is thinking of running I would gladly write him out a schedule of how to run it on an eight-hour basis I would also write him out a few conditions that he seems so anxious about that will benefit the farmers in general, and with his help I am sure that the H. C. L. bogy will have disappeared into the scrap heap. There is something funny about these H. C. of L. investigations. They all come to the same conclusion, and that is, that the living is still going up, but they can't find a way to stop them. It may be up to the farmer and worker yet to figure out what should be done, especially if we can get a few farmers that are willing to lay that prejudice feeling aside long enough to talk things over for the benefit of all concerned.—C. E. Moisan, 2020 Cedar St., Berkeley.

[It does not occur to us that it would require any great amount of ingenuity to lay off the work of any farm in 8-hour shifts, providing men are at hand to fill them. It would make a lot of extra trouble for the farmer to get efficient continuity, but so far as laying off the work it could be done. by any farmer for himself to meet his own conditions. That is not the essence of the problem, which is to get enough work from a man to earn what he demands as a day's pay and to get enough out of a crop to pay the added cost of it. As to a man's doing as much work in eight hours as he does in a full day, that is an old-fashioned notion which does not come through. The man does not desire to do as much and doing it would therefore be by accident, not by design. The modern idea is not to do all that a man reasonably can for his job, but to do as little as he can for his pay. Such a change of heart and attitude is the chief difficulty.—Ed.]

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A FOUR-DAY RACE MEET
$5,000.00 PURSE . . .

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RICE LEADS TOWARD FRUIT DEVELOPMENT.

(Written for Pacific Rural Press by President Wm. Durbrow, Glenn-Colusa Irrigation. Dist.)

I hear often and from many sources criticisms of rice as a crop for the Sacramento Valley. I believe that, as the world markets demand it, California's valleys will produce more and more fruit, and that the raising of fruit is the highest purpose to which the valley land can be put. However, it has been extremely difficult to get the grain farmers to put their lands under an irrigation system for the purpose of raising irrigated crops. It was not until the rice crop developed, attracting the grain farmer because of its likeness to his previous farming operations, that he was willing and clamored for water. This, to my mind, was the great step for the future of the Sacramento Valley. With water resources developed, rice will be eliminated and alfalfa and fruit will take its place when the time justifies.

Comprehensive Water Development

The Valley has gone through a series of extremely dry years, culminating in the season of 1920, the driest, which I believe, the Valley has known. It seems now the psychological time, at the close of a season in which the Sacramento river has been practically pumped dry, to start an enterprise for the progressive development of all the storage facilities of the Sacramento Valley, to be undertaken by the Valley as a whole, and under some plan of legislation to be worked out before the meeting of the next Legislature. The Association of Northern California Irrigation Districts at its recent meeting in Colusa, initiated such a plan. At a meeting of the Sacramento Valley Development Association August 4 the plan was discussed and a committee named by President Marshall Diggs was created to investigate and make such recommendations as may seem proper.

FEDERATION OF AMERICAN FARMERS.

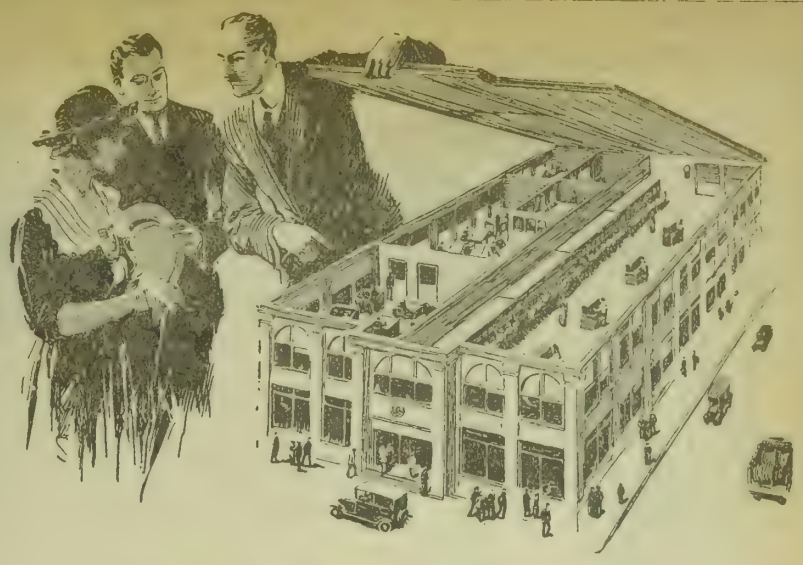
(Written for Pacific Rural Press.)

A meeting of the State Federation Directors was held in Stockton August 19th.

The Federation has received letters from Montana and Oregon offering to pay expenses for an organizer to go there and start units to affiliate with those in California.

State Secretary-Treasurer W. V. Dennis, who is chairman of the Calaveras county unit, is proud of the fact that his newly formed organization has over 60,000 acres of land signed up and is growing rapidly.

The farmers of Lake county are getting together to form a unit of the Federation of American Farmers. Some of Lake county's problems differ from those of many sections of the State. The county has no railways nor State highways, and the transportation of crops to market is a pressing vexing problem. The $40,000,000 State Highway Bond issue provides for highways into the county from Yolo and Napa counties and one has been mislocated but never built in from Mendocino county. A farmers' organization may get something started after the counties are relieved at the coming election from paying highway interest on mileage within their borders.



The Public Confidence

An important part of the management of the Bell System is to keep the public informed concerning all matters relating to the telephone.

We consider this an essential part of our stewardship in the operation of this public utility. It is due not only the 130,000 shareholders, but it is due the whole citizenship of the country.

We have told you of new inventions to improve service, of the growth of service, of problems involved in securing materials, employing and training workers, of financing new developments, and of rates necessary to maintain service.

You have been taken into our confidence as to what we are doing, how we do it, why we do it. You have been told of our efforts to meet unusual conditions; of how we have bent every energy to provide service in the face of storms, floods, fires.

It is an enormous task today to provide adequate service in the face of shortage of workers, raw materials, manufacturing production and transportation.

Nevertheless the service of the Bell System has been improved and extended this year. Over 350,000 new stations have been put into operation. And the loyal workers of the Bell System are establishing new records for efficiency and will establish new records for service.

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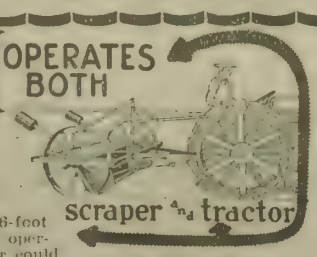

YOU CAN DO THE SAME—"I am using a 6-foot Compton Scraper with Cletrac. One man operates both. I do not believe any other scraper could be used in this heavy sod. I can move as much dirt as three four-horse Fresno Scrapers in the same length of time. (Signed) C. B. BROOKS, R1 A, Kerman, Cal". See the Compton at the State Fair. Write for Booklet.

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The range of performance of the Fageol tractor is ever widening. Grain lands are now extensively worked with them. Farmers find that, with several of these small tractors aggregating the same total power as one large machine, they require fewer high-priced mechanics, lose less operating time, get better net results.

For a fleet of, say, twelve Fageols, using one mechanic, one good driver and ten common laborers, at least 90 per cent of the outfit will be constantly at work.

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Increase their operating range
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See your local dealer immediately. He has a new plan that will make delivery when you want it certain

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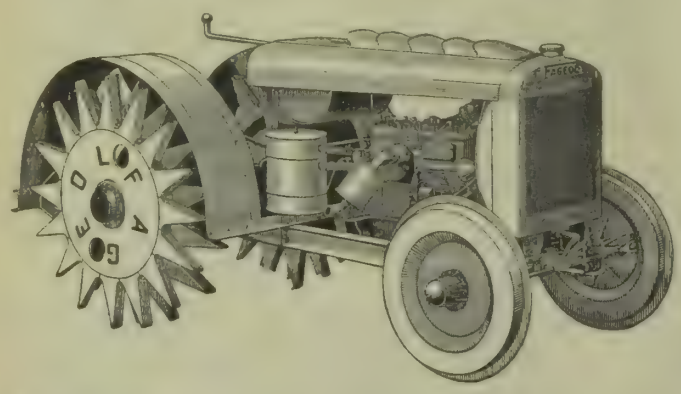


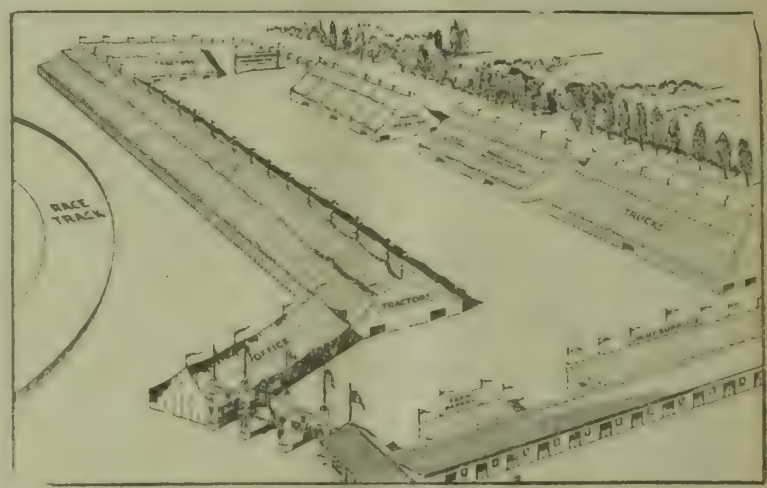
Cafeteria Instruction in Power Farming

(Written for Pacific Rural Press by N. C. Wilson, of Calif. Tractor and Implement Assn.)

THE tractor, truck, harvester, farm lighting, stationary engine and pump manufacturers and dealers have combined on one big "Power on the Farm" exhibit at the California State Fair, September 4-12. The combined exhibit will be unusually instructive.

Power farming can be taught by the cafeteria plan, says Prof. L. J. Fletcher of University Farm. The Davis expert is chairman of the exhibit and demonstration committee, California Tractor and Implement Association, under whose auspices a half-million-dollar display of power farming machinery will be presented at the California State Fair, September 4-12. Prof. Fletcher has succeeded in enlisting the big manufacturers without difficulty, and they will provide him with a complete staff of practical service men—professional mechanics—to help handle the crowds who will visit the Fair at Sacramento this year.

George Collins, executive secretary of the California Tractor and Implement Association and manager this year of the combined "Power on the Farm" display, is having a big tent, 70 feet square, erected for Professor Fletcher inside the power-farming enclosure. This will bear the banner, "Repair and Adjustment of Power Equipment." It will be railed off into about a dozen compartments, each of which will contain some troublesome piece of gas engine machinery, and over each of which there will be a competent, practical service man in charge. As far as possible, charts and diagrams will visualize the instruction.



STATE FAIR MECHANICAL "POWER ON THE FARM" EXHIBIT

Never before have the exhibitors of so many kinds of mechanical power been grouped together as will this year join forces in the "Power on the Farm" State Fair quadrangle. The biggest tent in the world, 100x600 feet, will house the tractors, for which the space is all taken. Farm electric generating plants and the machinery to be used with them have been shown previously all over the Fair grounds, but this year they will be collected in the tent labeled "Dairy Supplies" in our picture of the quadrangle. Motor truck exhibitors will be there more numerously and systematically than last year, and will have a big tent all their own. Irrigation machinery will receive more exclusive attention than ever before and separately unto itself. A long trench has been dug to enable pumps to be shown in action. Power on the Farm Instruction will be dispensed cafeteria style in its own sanctum by specialists sent by the various companies and by Prof. L. J. Fletcher and assistants from University Farm. Tractors, implements, and big farm machinery of all kinds will be handy for application of the lessons.

The plot will proceed about like this: visitors to the Power on the Farm exhibit with its eight acres of tractors, trucks, pumps, stationary engines, dairy supplies, harvesters and threshers, implements, farm lighting plants, and the like—after filling their eyes with the sight of so much splendid machinery, will drift over to Prof. Fletcher's tent for a little practical instruction.

The tent will be wholly non-commercial. In fact, as Prof. Fletcher puts it, it will strive to be positively homelike. In the center will be chairs and tables, and the farm publications spread out for inspection. Around the walls will be charts and diagrams showing each step of the instruction that may be had for the asking.

Suppose the visitor wants to learn how to time a magneto. He will fall into line, and in a few minutes will be included in the batch of students who, surrounding a service man, will be told exactly how to get dead center on the engine, how to learn the firing order of the cylinders, how to place the magneto in retard or firing position—each by easy steps of patient instruction and demonstration. Then attachment of magneto to motor through the timing couplings will be shown. And so on, up to the last step of distributing the current to the proper cylinders.

Or, suppose the visitor wants to learn the latest wrinkles in the handling of low-grade fuel on tractors. He will find ready for his study practically all the special manifolds, fuel converters, and other devices together with a patient, cheerful and entirely competent instructor in charge. Farmers who have taken part in any of the recent University short courses in gas tractors will be glad to hear that Prof. Fletcher will have not only the service men from the factories,

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To supply you with implements and equipment that exactly fit your requirements, we carry in stock for immediate shipment tractors, plows, etc. of standard make and known worth.

Our field men are ever ready to help and advise you. You can buy through our dealer in your territory—or direct from us.

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Implements
Everything for the modern farmer.

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but also two of his staff assistants with him at Sacramento.—J. D. Miller and H. C. Birkett. Mr. Miller, who has been with Prof. Fletcher through three short courses, is one of the best men in the State on the care and adjustment of carburetors. If possible, every make of carburetor on the market will be at hand for him to demonstrate. Birkett is also a real expert in this line. The two, with Miller in immediate charge, will be prepared to take up any and all ignition troubles —how to determine when the motor is not working properly, how to locate the trouble, whether in plugs, wiring, or magneto; how to remedy the matter, or what kind of service to call for.

The grinding of valves, adjustment of valve clearance, and general information on valves is to be dispensed in another compartment of the instruction tent. Fitting and adjusting of bearings will be demonstrated. Students will be given a chance, as far as possible, to do this work themselves. If the groups are too large for such handling, the work will be demonstrated over and over again by the mechanics. Piston ring fitting will be given a place. Visitors will be shown how to save oil consumption by proper fitting. The adjustment of clearance between the ends of the piston rings to prevent scoring of the cylinders will be demonstrated.

Plow and hitch adjustments, discussion of moldboard and disc plows, the lacing and caring for belts, how to get the right diameter pulley for the particular engine—these, too, will be explained.

FINDS TRACTOR BEST MEDICINE.

"I could give you medicine till you couldn't pay for it; but you must get out and dig in the ground, or some one else will dig a hole in the ground for you." 'Twas an honest and a wise doctor who expressed these sentiments to C. E. Bean, designer for Killefer heavy tractor tools in Los Angeles. So Mr. Bean moved to a small ranch in the same county, bought a tractor designed to take the place of a horse, and has so far recovered that he recognizes the beauty of moonlight as a time to cultivate the place. "It's a beautiful time to work," he says, "and I've been caught out driving the tractor at sunrise, too. I frequently turn the crank after the evening meal and come out to cultivate the tomatoes or the potatoes or the vines or trees. Here is a half-acre of tomatoes and garden that I cultivate with the tractor twice a week; and there's an acre of potatoes that I'll plow out tomorrow. I planted and cultivated them with the little engine. I plowed and cultivated the two-acre vineyard and the 45 fig trees and their intercrops with it.

"The tractor does four times as much work as a horse. It snakes me around a-flying if I give it the gas. No horse could keep up that gait. Gas and oil don't amount to enough to notice. I can go into a corner and turn as short as any horse could turn, for it is short-coupled to the implements and can be pivoted on one wheel with two fingers."

Mr. Bean surely has regained health and optimism following the little tractor this season and making things grow instead of grouching his time away in a sick-bed.

SUPPLEMENTARY AIR-CLEANERS INSTALLED.

Garden tractors are built so low that they inhale an undesirable amount of dust, even with air clarifiers. The H. V. Carter Motor Co. is overcoming this fault on Beeman garden tractors by running a large flexible tube from the intake of the centrifugal air cleaner to a point above the engine where an additional cleaner of their own make is installed. This is a wire gauze cylinder filled with oil-saturated hemp through which the air must be drawn. To clean dust out of it the hemp is soused into gasoline a few times and then dipped in oil for further use. The new cleaner has been on the market only a few weeks. It comes in response to numerous requests from tractor users. The Carter Co. has also installed for E. Bonzi, of Napa county, another oil-type air cleaner between the centrifugal cleaner normally installed on Allis-Chalmers tractors and its carburetor.

A Belt for Every Purpose

Whether it is for turning a churn or transmitting power to a thresher—for light or heavy duty—your Test Special Belt is always dependable.

You can throw on the power with the utmost assurance of maximum power transmission and freedom from aggravating and costly delays.

This is the big, distinguishing feature of the Test Special Belt.

"Test Special" is guaranteed to give better service than any other rubber belt if used under same conditions.

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WRITE TODAY, giving R.P.M. and diameter of the driving pulley—also driven pulley and distance between centers of same; also give the rated horsepower of your motor or engine, and name kind of machinery you are operating. We will reply immediately giving you our recommendation as to kind of belt to use.

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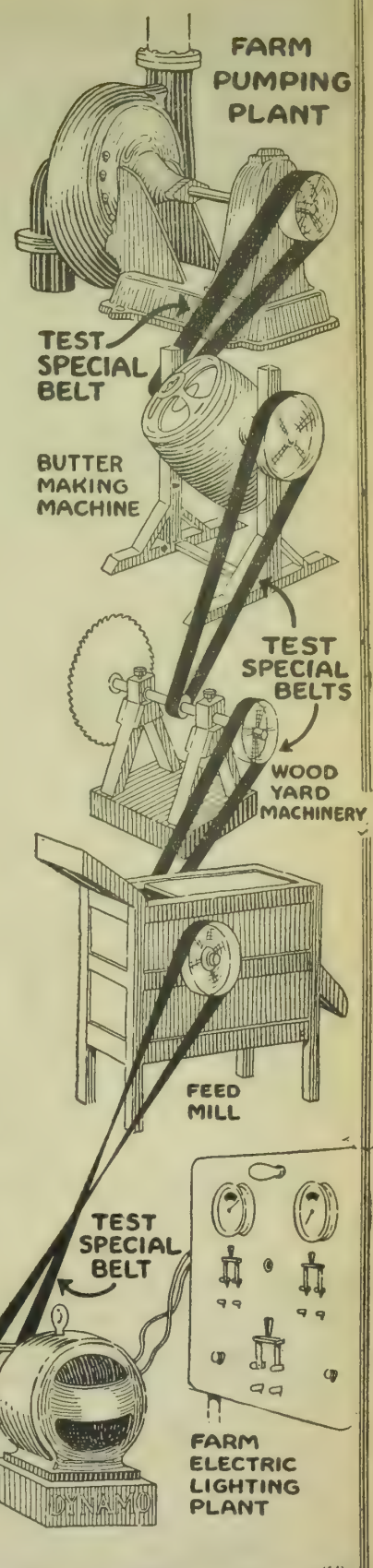

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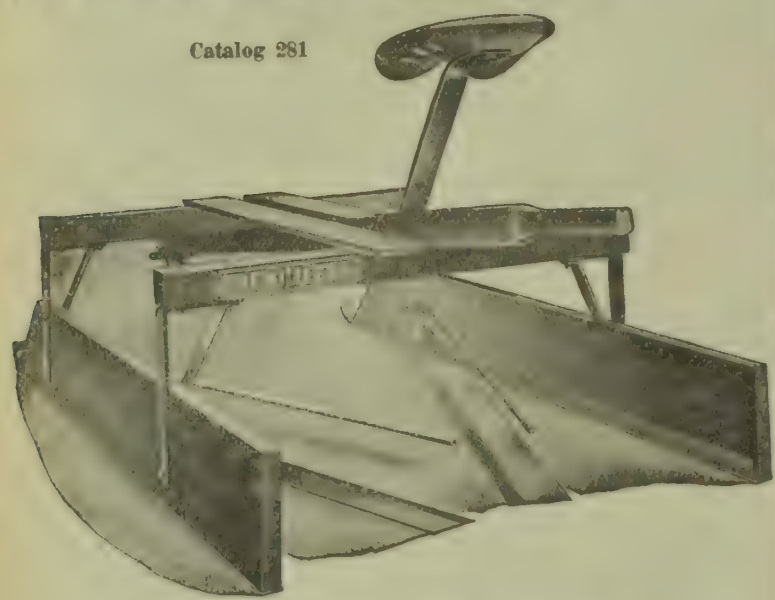
Catalog 281



IT IS TIME YOU WERE ORDERING THAT BEAN CUTTER

We build two weights of sled cutters. The above cut shows our No. 281 wood frame cutter. For heavy ground, where a stronger cutter is needed, we make a steel arch frame cutter at a small additional cost.

We have a limited number of extra bean blades, which we are selling at the same price as last year, $12.00 per pair, but the price will go higher as soon as the present stock is gone, so it behooves you to get your orders in as soon as possible.

If your dealer cannot supply you, order from us direct.

State Fair at Sacramento

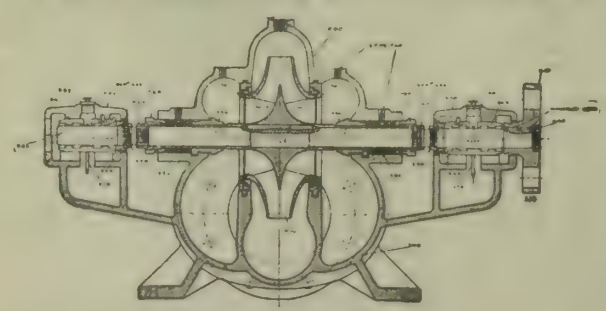
Our full line of farm power tools will be exhibited. We shall be glad to meet you at our booth and answer any questions you may have to ask concerning them.

Write for Catalog No. 1

The Killefer Manufacturing Co.

2209-21 SANTA FE AVE., Box 156, Arcade Station P. O., LOS ANGELES, CAL.

DE LAVAL
IRRIGATION PUMPS



High Efficiency Saves Power

The above illustration shows a cross section of the De Laval double suction single stage irrigation pump. Each separate part bears a symbol or number. These numbers are stamped on at factory.

All parts are interchangeable and bothersome misfits are eliminated. In ordering parts for a De Laval all that is necessary is the part's symbol.

This is another of the many points of De Laval efficiency.

This is one of a series of advertisements explaining the different parts of the De Laval Irrigation Pump.

Write us and learn what can be saved with High Efficiency Pumps.

HERZOG ELECTRIC & ENGINEERING CO.

179 STEUART STREET, SAN FRANCISCO

BORROW MONEY TO BUY PUMP NOW.

There seem to be plenty of pumps of most irrigation sizes in stock now and ready for immediate delivery. This is a significant statement for those who raved for a pump last spring and were unable to get delivery. There will be a tendency for people again to gamble on rains and hold off their orders for irrigation equipment until everybody else is in a hurry. If a man feels sure that he will want a pump for next season's irrigation, it seems likely that it will pay him to borrow the money and pay interest on it for an extra six months rather than wait until spring and pay the higher price that is likely to be set on the pumps late this fall and even then let his crops suffer for want of prompt delivery. We are told by one pipe supply house that they have enough pipe for most demands now, but the cost to them will go up this fall and their prices also will have to rise with a jump. A pump manufacturer says that just now the most difficult thing to get is iron and steel irrigation pipe.

TRACTOR LAMPS POPULAR

Tractor dealers remark that shortly after they sell one good tractor spot-light in any territory, the orders come in bunches. Lamps not only permit tractors to be driven night and day in rush periods, but they also permit the rancher in hot weather to work at night and rest in the day time. This also avoids flies and dusty wind.

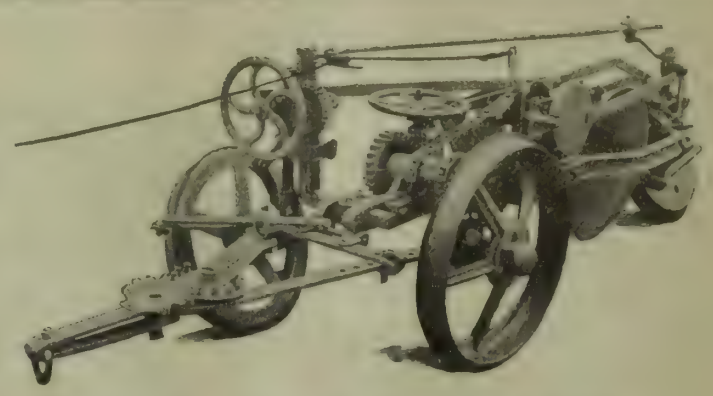
EASIER STEERING FOR TRACTOR.

Larger front wheels on a tractor make turning easier. For this reason, the new type Advance-Rumely tractors have much larger front wheels than the older ones. But this improvent interfered with the belt used for stationary work. The tractor belt-wheel could not be changed because it is fastened direct to the crank shaft and contains the transmission clutch. So a rack and pinion were put between the center of the front axle and the center of the frame whereby the front axle may be set over about six inches. This gives clearance for the belt and more clearance for the wheel on that side in turning short corners. For straight tractor work where turns are likely to be made either way, the rack and pinion hold the frame centerly, but if all turns are to be in one direction the frame is set over away from that wheel. This feature is made possible by the adoption of the automobile type steering rather than the old chain and pivot system.

AUTOMOBILE ECONOMY CONTEST.

The most efficient automobile driver in the Sacramento Valley who enters the State Fair Economy Run, September 5, will receive a $50 silver cup, offered by Secretary Chas. Paine. Promotor Will Simonds reported 28 entries August 21, and he was expecting as many more. The contestants start from the Capitol Park extension 6 a. m. September 5, cross the river west of Chico, and return to Capitol Park via Woodland, averaging 25 to 30 miles per hour. Economy of oil, gas, and water will determine the winner. Several other valuable prizes will be awarded.

There were 60 families on the Fernley project in Nevada last spring and they were operating 66 automobiles! Last year this district shipped out 10,000 tons of alfalfa and expect to do the same this year.



THE NEW "KNAPP"
Tractor Disc Plow

The only tractor disc on the market with an ADJUSTABLE "A" HITCH, which enables the operator to throw the plow to either side, and always pull from the center of the tractor. No side draft. Furrow wheel automatically adjusts itself and is held straight ahead at all times regardless of the plow position. Has Knapp Power Lift, extra wide clearance, and many other advantages. Built in 2-, 3-, and 4-disc for all types of light tractors.

WRITE FOR DETAILS

SEE THIS TRACTOR AT THE STATE FAIR

KNAPP PLOW COMPANY, Inc.
PLOW MANUFACTURERS
4th and Margaret Sts. San Jose, Cal.

IS A TRACTOR MOWER PROFITABLE?

We found J. H. Hardy cutting thick alfalfa over knee-high for W. H. Rough of Riverside county, with a six-foot mower attachment on a two-wheeled tractor of an old model. It was actually doing not a great deal more than a team would do and was rather hard to handle, because the clutch and brake band were worn. On this account, he usually turned a circle to the left at each corner, in order to get a good square start, though occasionally he would just back up enough at a corner to get the sickle into position. The machine was using over $2 worth of gasoline and about 40 cents worth of oil per nine-hour day, so 'twas a question whether the old machine paid better than horses. Horse feed, seven days in the week for six days' work, plus the extra care they require and the harness expense, as well as veterinary expenses, should be compared carefully with fuel and maintenance expense of the tractor. If the latter does not prove more economical than two horses, its use on two-horse jobs is hardly to be advocated except for special reasons. However, it has much more power than was required on the mower, and if there were much of heavier work to do, it could be used occasionally on the mower cheaper than horses could be maintained for such work alone.

POWER NOTES.

The Gray Tractor Co. of Minneapolis will exhibit at the State Fair this year. Their tractor has not yet been put on the market here.

The entire increased output of the Advance-Rumely tractor factory for 1920 was taken some time ago by dealers whose own stocks are low.

The orchard model Allis-Chalmers two-wheel tractors described in a previous issue, could not be delivered to California until the present time. A special shipment is being rushed for the State Fair Power on the Farm exhibit

A State Immigration and Housing Commission report is quoted as saying that 650,0000 California homes are wired for electricity. Every user of household electricity rapidly finds new uses for the juice and becomes its ardent devotee.

The Oliver Chilled Plow Works at South Bend, Indiana, have reserved 4,000 square feet of space for their exhibit at the First National Implement and Tractor Show at Glendale, Cal., Sept. 20 to 26. Their California representatives have reserved 1,000 feet additional.

A mowing machine attachment for the Fordson Tractor operated by the driver with all kinds of adjustment for position and height is now working. The advantage lies mostly in the speed of the tractor and slight extra length of sickle so the tractor and one man easily mow as much as three teams and three men.

The automobile dealers decided recently not to exhibit at the State Fair on account of the rise in rates charged for space, but when it was explained to them by one of the directors of the Fair Association, they quickly reserved all the space available. The automobile tent will be in its usual place near the main entrance.

The Avery Co. will show at the State Fair its full line of tractors for every-sized farm, including the six-cylinder, 7-14 horsepower tractor. They have this spring undertaken the production of implements and motor trucks, and will show Avery power lift moldboard plows, Avery disc plows and power-adjusting disc harrows at the Fair.

A power lawn mower recently put on the market by the H. V. Carter Motor Co. has had a rather surprising demand. A two-horse-power engine is geared to a roller above which it rides. The mower knives operated by the roller and in front of it cut a strip about three feet wide. The operator walks but does not push. The roller packs the sod but cuts no ruts.

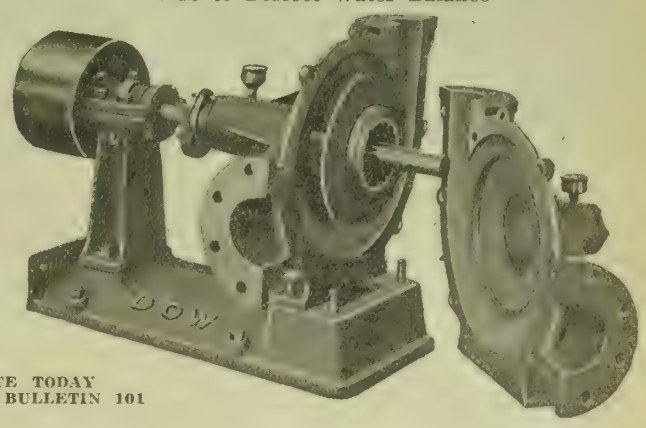
CO-OPERATIVE PICK-UP BEAN THRESHER.

The latest in labor-saving machinery on the bean harvest is employed co-operatively by growers on some 1300 acres in Orange county. These growers, according to W. C. Jerome, have entered an agreement to use a harvester built over by J. H. Pankey to pick up beans fom the windrows, where they will be placed by side-delivery rakes, which proved highly satisfactory here last year. All fork work will be avoided and probably more beans will be saved. Whereas it would cost at least 75 cents per hundredweight to have the beans hauled to a stationary thresher and threshed, members of this agreement expect to cut the corresponding cost to 25 cents. They will get first use of the machine and Mr. Pankey is justified in advance for remodeling the thresher. The separator of the remodeled machine is practically the same as that of a stationary thresher, only heavier, but is run by its own gas engine. Feed and speed can be regulated for thick or thin vines. The outfit is to be pulled by a 75-horsepower tractor, and it is expected to work only on reasonably level ground.

IRRIGATION PUMPS

Double Suction *Highest Efficiency*

HANDLES LARGEST QUANTITY AT LOWEST COST
Due to Perfect Water Balance



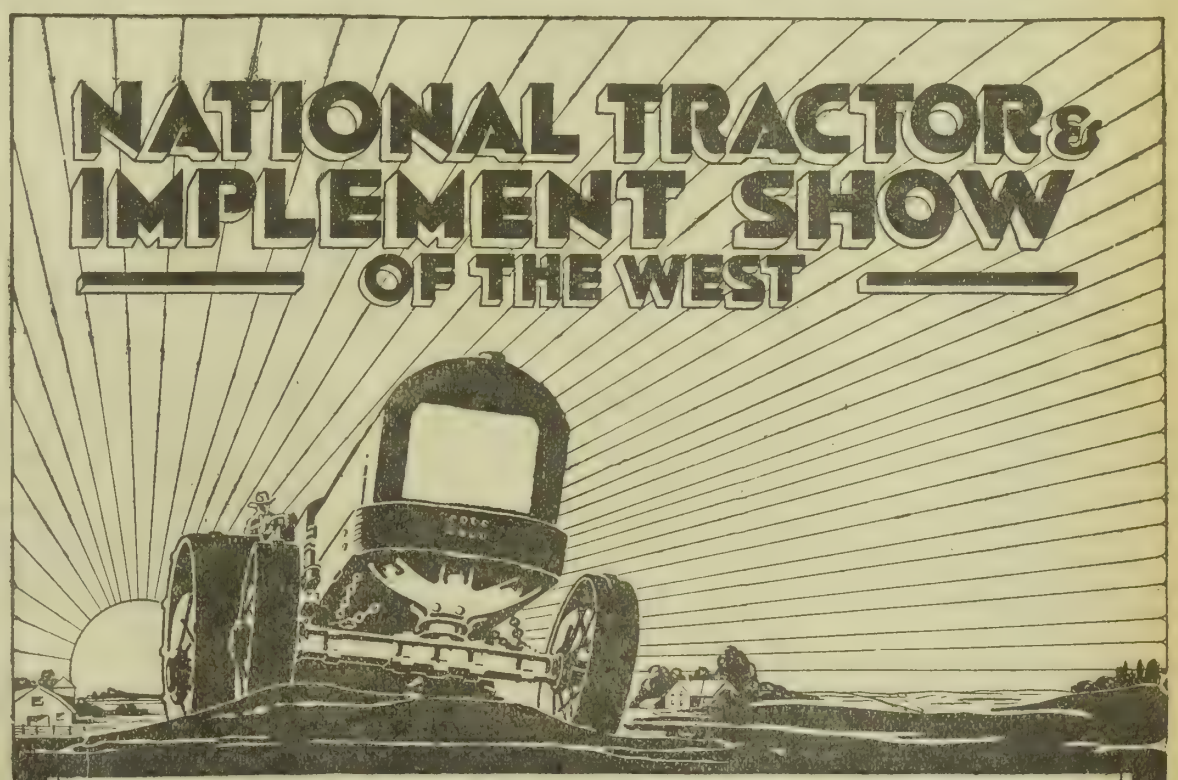
WRITE TODAY
FOR BULLETIN 101

GIVING YOUR REQUIREMENTS. WE CAN SAVE YOU MONEY.

DOW-HERRIMAN CO.

142 HOWARD STREET, SAN FRANCISCO

NATIONAL TRACTOR & IMPLEMENT SHOW OF THE WEST



Verdugo Woodlands

(Glendale)

Los Angeles - September 20 to 26

A GREAT BUSINESS SHOW YOU CANNOT AFFORD TO MISS

Displays of the latest, most improved tractors, trucks, implements and power farming machinery of all kinds. Many interesting and valuable accessories. Entertaining features for visitors.

More than 300,000 square feet of exhibits, including 30 or more improved tractors never before exhibited. It will be the first show of national scope ever held on the Pacific Coast. Thousands of visitors are expected.

The National Tractor & Implement Show of the West will be the great market place for buyers of modern power farming equipment. Make your plans now to be there. Enjoy the big show and the unequaled recreational advantages of Los Angeles and vicinity—combine pleasure with business.

Inquiries regarding hotels, rates, etc., gladly answered by the Secretary of the Association. **Free Camping Grounds at Verdugo Woodlands.**

UNDER DIRECTION OF

TRACTOR & IMPLEMENT DEALERS' ASSN. OF SOUTHERN CALIFORNIA

GUY H. HALL, Mgr.

Poultry for Profit

EGG-LAYING CONTESTS AT THE STATE FAIR.

(Written for Pacific Rural Press by Henry Washburn, Manager.)

Interest in egg-laying contests throughout the United States is on the increase. They are becoming more popular each year. There are thirty-five states now represented in seven large egg-laying contests in America, together with fifteen pens from England and twenty-four pens from Canada. California has the reputation of being the most favorable State in the Union for poultry raising. The Poultry Division and the Santa Cruz County Farm Bureau aims to make the California Farm Bureau Egg-Laying Contest the best in the United States.

The main exhibit will be an exact replica of the national California Farm Bureau Egg-Laying Contest now being run at Santa Cruz. This is the only official egg-laying contest in California, and is being conducted by the Poultry Division of the University of California. The Santa Cruz Chamber of Commerce has put up $10,000 for the purchase of a new site and the erection of new buildings, which the model is taken from. Work has already commenced on this new contest. The contest year will start November 1, 1920, and will be open to entrants from any part of the nUited States or Canada.

The capacity of the new contest will be a total of 1200 birds. Entrants will be allowed to enter pens of ten birds each, with two alternates. The entrance fee is $2 per bird, and entrants will have the privilege of entering one or more pens. The records made by the California Farm Bureau Egg-Laying Contest for the first seven months of the present year are ahead of some of the biggest contests in the United States.

The attendant at the State Fair will describe how the Egg-Laying Contest is run, what the birds are fed, climate under which they are working, and the records made for this present year. The Poultry Division is hatching some baby chicks which will lend color to the contest model at the Fair. The exhibit of the model will occupy a space 16x9 feet and will be set on a table two feet from the floor, all decorated with redwood greens and bark from our mountains.

FOXTAIL IN TURKEY'S EYE.

To the Editor: What should I do to cure "canker" that has been in one of my turkey's eyes for three weeks? It was caused by a foxtail getting under the lid of the eye and developed quite badly before I noticed it. I have swabbed it out with roup medicine with very little effect. The turkey is still in good health.—L. R. S., Turlock.

It is evident the entire foxtail has not been removed. When this is accomplished the trouble should end in a short time. Place the turkey in a grain sack, allowing the head to protrude from the opening. Wrap the sack snugly about the bird and secure it so that it cannot struggle. Wash out as much foreign matter as possible by syringing the affected part with lukewarm solution of boracic acid. Use a soft-pointed syringe and be gentle and patient. This treatment will at once greatly relieve the bird, should enable one to see the foxtail, and make it possible to carefully remove it entirely.

EGG BREAKAGE ELIMINATED.

A number of officials from various roads in the country were in Petaluma last week to witness the loading of a car equipped with the Cutler-Monesmith device to eliminate the breakage of eggs in transit across the continent. The car was loaded with the eggs at the plant of the Poultry Producers of Central California, Inc. It is stated that thousands of dollars are lost annually by the breakage of eggs, and it is expected through this device to eliminate this loss.

FOWLS BECOME CRIPPLED.

To the Editor: About two months ago two of my White Leghorns became weak and crippled in their feet and legs, and finally got so bad they could not walk at all. I killed them. Now I have three more in a similar condition. Have bathed their legs with liniment, but it doesn't seem to do any good. We have one of their lots in a young orchard planted to corn. Have irrigated it several times, letting the chickens run while irrigating. Would the water and damp ground cause this trouble? I keep the egg mash by them all the time. I feed wheat at noon and Kaffir corn at night—more corn than they eat up—and green stuff morning and evening with oyster shell, grit, and charcoal by them.—Mrs. J. H. S., Porterville.

We think the trouble may be due to a lack of bone-forming material in connection with a too liberal proportion of grain and too little mash. Owing to the liberal feeding they have probably grown very rapidly. It is an excellent rule to keep a constant supply of crushed bone before fowls of all ages in order that they may eat it at will.

WIND PUFF IN CAPONS.

To the Editor: I am becoming interested in capons. Have experimented on a few young roosters lately, and would like to ask a few questions concerning them. My fowls all seem to puff more or less. My instruction book says it is caused from the wound healing too rapidly. Now this is not the trouble with mine: they puff while the wound is still open. Aside from the puffing they seem to recover. All of mine operated on were stunted in growth, being hatched in February and March, although in size and development are just now in right stage to caponize. Will fowls in this shape make good capons?—R. H. S., Turlock.

It is not uncommon for capons to "wind puff" for ten days or two weeks after the operation, regardless of the condition of the wound. The fowls should be carefully watched and when the puffing is observed it should be relieved by pricking the skin with a needle or knife and pressing out the air. The stunted fowls will very likely make capons of very desirable size, but they cannot be expected to grow as large as those that develop properly.

BLOOD CONTAMINATION.

To the Editor: If Black Minorca hens are permitted to run for several months with White Leghorn roosters, and if said hens and roosters be then separated and kept separate for several months, and then if the hens be mated with Black Minorca roosters, will the offspring be pure Minorca stock or will they have been contaminated by the previous White Leghorn mating?—M. S., Los Gatos.

A number of years ago there was much discussion of this subject. Many breeders contended that once a hen was mated to a male of another breed the blood of all of the future offspring of the hen would be more or less contaminated. However, the results of careful observations seemed to practically disprove this theory, and it is now generally acknowledged that it is safe to consider the eggs as purebred when the hen has been removed from the male of another breed, and after remating to a purebred male of the same breed as the hen for about the same length of time.

CRACKED RICE FOR POULTRY FEED.

To the Editor: Would like to know if cracked rice would be good to feed chickens if mixed with other grain.—Mrs. H., Napa.

If the cracked rice is sound it is good grain feed for poultry, but as it is very starchy it must be fed in limited quantities with a variety of other grains.

POULTRY PRATTLE.

After the eighteenth day do not open the incubator door until the chickens are hatched.

Old hens require a much larger amount of feed of all kinds than do pullets to produce a dozen eggs.

Chicken mites do not feed to any great extent upon other hosts when chickens are at hand. They are carried about chiefly by the interchange of poultry and in crates and boxes in which fowls are shipped.

The supply of shell for the poultry is decreasing. Oysters are not being raised as formerly in the West. Supplies coming from the East in refrigerator cars are not sufficient to keep up the supply of shell demanded. Poultrymen should not look for any lowering in the price of shell.

Poultry Breeder' Directory

Rate 3½ cents per word each issue.

WANTED TO PURCHASE — One to two 4 to 6 months old white Leghorn pullets. One thousand or more young turkeys. About one hundred this year's breeding turkey hens. Five thousand Leghorn Rock or Red baby chicks on first of each month—October 1st to and including January 1st. One hundred or more Pekin ducks, selected breeding stock. One thousand baby ducklings each month—October 1st to January 1st. California Hotel Farm Company, 130 East Colorado Street, Pasadena, California.

BARRED PLYMOUTH ROCKS — Nothing Better in Poultry. Wonderful layers. Choice hens and pullets for sale; also fine cockerels that will improve your flock. Now booking orders for hatching eggs. I have made a specialty of Barred Rocks for over twenty-two years. That's why our birds win at all the leading shows. Catalog free. Chas. H. Vodden, Box 3, Los Gatos, Calif.

SANTA CRUZ CHICKS are in demand. Our hatchery will run full blast this fall, supplying Leghorns, Anconas, Minorcas, Rocks, Reds, and Orpingtons. We also offer W. L. Hyde's cockerels from Pen 1, with trapnest record 236-284 at $5.00. Write for folder with chick price list. B. W. Archibald, Soquel, Santa Cruz Co., Calif.

PETALUMA HATCHERY — Established 1902. If you want good fall layers, get chicks in the fall. We guarantee satisfaction. There will be but few chicks hatched this fall. The wise ones are buying. Send for prices. L. W. Clark, 615 Main St., Petaluma, Cal.

ATKINSON'S PEERLESS ANCONAS lay more and eat less than other breeds. 50 big husky cockerels, $5 and up; 200 pullets, trios, and pens for sale. Hatching eggs. Catalogue free. J. W. Atkinson, Box B, 130 Willard St., San Jose, Cal.

WHITE LEGHORN BABY CHIX from heavy-laying Hoganized Stock. Safe arrival of full count, live, strong chix guaranteed. Price list and interesting literature on application. The Pioneer Hatchery, 408 Sixth St., Petaluma, Cal.

RAISE FALL CHICKS—We will have them every week. R. I. Reds, Barred Rocks, White Leghorns. Write for special circular. See why they pay. Stubbe Poultry Ranch and Hatchery, P. O. Box 67, Palo Alto.

BABY CHIX—Order now for September delivery from our selected, bred-to-lay Hoganized White Leghorns, Barred Rocks, R. I. Reds. Maxwell Hatchery, Madera, Cal.

BARRED ROCK, White Orpington hatching eggs, now $1.75 and $3.50. Breeding Cocks, Cockerels, Hens, Pens. R. P. Lutzi, 1217 20th Ave., S. F. Yards at Los Altos.

GOLDCROFT BUFF ORPINGTONS, Columbian Wyandottes and White Leghorns. Heavy laying strains. Breeders and young stock. Samuel Abrams, Box 13, Los Altos.

RHODE ISLAND REDS.—Improve your color and egg capacity. Breeding stock now ready for shipment. Wm. Larm, 3915 39th. "Hal's Win Out," page 247.

FOR SALE — R. I. Red Cockerels. Fine utility stock, bred from selected layers. No culls. $3.00 each. Mrs. Stephen Blacet, Jr., Orland, Cal.

CHICKENS, DUCKS, GEESE, GUINEAS, Pea Fowl, Pigeons. Wm. A. French, 545 W. Park St., Stockton, California. Stamps.

BUFF ORPINGTONS, BUFF DUCKS, BOURbon Red Turkeys, White Guineas. The Ferris Ranch, R. 2, 144 D, Pomona, Calif.

BABY CHICKS from selected S. C. White Leghorn hens. Write for prices. Tupman Poultry Farm, Box 7A, Ceres, Calif.

WHITE LEGHORNS, White Orpingtons, trapnested. Mabel Smith, Hollister.

HELP HENS THROUGH MOLTING—PUT THEM TO WORK REVIVED and HEALTHY

LACTEIN, through its extraordinary tonic and food values, its absolute health producing virtue, is the requirement your hens need during the molting season — LACTEIN revives the hens, puts new life and industry into them—gets them through the period of rebuilding their systems quickly and efficiently. LACTEIN gives the flock the vitality that means short "lay-off" and quick "come back"—and an investment of POULTRY PROFIT. Start TODAY, if your flock is not LACTEIN-fed.

Get LACTEIN from Your Dealer Today

LACTEIN CO. Main Office and Factory MODESTO, CAL.

THE HOME CIRCLE

LOVE.

"Love ever gives,—
Forgives—outlives,—
And ever stands
With open hands
And, while it lives,
It gives.
For this is love's prerogative,—
To give,—and give,—and give."

WHEN THE SHAWL WASN'T WORN.

Laura does not always do exactly what is right, neither does her little sister Mary Anna; but grandma is so good and loving and kind it doesn't seem possible that she ever did wrong even when she was a little girl. She says, though, that once when she was little she did something worse than Laura or Mary Anna ever did in their lives. The little sisters love to hear the story, so grandma has to tell it over and over every time she comes visiting.

It seems that a long time ago, when grandma was not more than six years old, she had to go alone to Sunday-school one Sunday morning. It was the first time she ever went alone, and she was glad she was big enough to go, if necessary, without her mother or her grandmother. Mother and grandma both helped get the little girl ready for Sunday-school. She had her bath Saturday night, so there was nothing to do Sunday morning but curl her hair and put on her best little petticoats and dress.

Soon the little girl that grandma used to be was ready to start for Sunday-school. She could repeat the verse in the Bible that says, "Be sure your sin will find you out." The little girl said that verse over and over; she sung it, and whispered it, all for fun, although she didn't quite understand what it meant until afterwards.

At the last minute, as the little girl was going down the garden path, her grandma said, "I think that child ought to wear something around her; the air is chilly. Come back, Nellie." Grandma's name was Eleanor, but they called her Nellie. "Come back, dear, and I will let your wear my best shawl."

"I am not cold," the little girl answered, and she would not have come back, only her grandma said she must.

When grandma tells the story she always says she can't remember whether she cried or not when her grandmother wrapped the shawl around her, but she does remember that she thought it was a dreadful thing to have to wear an old lady's shawl to Sunday-school.

The little girl grandma used to be walked slowly away from the house feeling cross and miserable. She went down the garden path, through the gate, and began her walk along the country road. She had not gone far before she thought of something that frightened her at first. Then she decided to do the thing that had come into her mind. The little girl gazed toward the house, and when she was sure no one was looking, she took off the shawl. Then she rolled that shawl in a tight bundle and tucked it under the tall grass in a fence corner.

"No one will see it," said grandma to herself, "and when I come back from Sunday-school I will put it on again." But she didn't; she forgot all about the shawl; and her grandmother forgot about it too, because company had come to dinner.

A week passed, and then one day the little girl's grandmother said, "I wonder where my shawl was put away last Sunday?"

That was a dreadful minute for the little girl who had done wrong. She knew where that shawl was put away and she ran to the field hoping to find it safe and unharmed. Oh, how she wished she had worn the shawl to Sunday-school and home again, no matter how much the children had laughed! What if some one had carried it away! What if the dew had spoiled it! What if—

But the shawl was in the fence corner, looking at first as if nothing had happened to it. The little girl's delight was quickly turned to sorrow! Her sin had found her out! When she lifted the shawl she found it full of holes made by the crickets! Crickets had ruined grandmother's beautiful shawl!

Tears didn't do a bit of good; the little girl could think of nothing to say when she carried the shawl to her grandmother.

The dear, good grandmother didn't scold when she saw what had happened, but this much is certain; the little girl never forgot that long-ago summer Sunday, and how she hid her grandmother's best shawl in the fence corner when she was told to wear it to Sunday-school. She has remembered it until now she is a grandmother herself, telling the story over and over again to Laura and Mary Anna, Bible verse and all.—Frances Margaret Fox, in the Sunday School Times.

CALIFORNIA'S WHITE SAND DUNES.

California's white sand dunes, with delicate drapery of green sand verbena, or Abronia, dotted with bloom of yellow, rose, or magenta, bid fair to become as prized as artist's studies as are the gondolier of Venice or the many-patched, wooden-shoed fisherfolk of Volendam.

Sand Dunes with Sand Verbena Tracery, Pismo, Cal.

These decorative sand verbenas have a place in our state history. While the weak Louis XVI tried to avert the coming Revolution, his subject, Collignon, pioneered botanically along our Monterey coast. His artistic Gallic eye was charmed by the dainty tracery of the sand verbenas. Gathering seed, he sent it to Paris, where it was planted in the Jardin des Plants. Having germinated, the resulting plants bloomed while the guillotine was dropping bloodily.

This is our Abronia's modern-day history. It is unfortunate we have not found its prehistoric record, written in the rocks, as we have that of the reptilian bird, Hesperornis, of the saber-toothed tiger, and of the sequoias, whose fossil cones are found not only in the Kansas Cretaceous, but also from Greenland to New Zealand. The Abronia is a close relative of the verbena of our gardens, which latter is found wild in Alabama. Very different, however, are the leaves of the garden verbena and of our sand verbena. The Alabama genus through the ages has grown in swamp soil in the moist Gulf heat. Ours has long reacted to a sandy environment. If we had the fossil record of the generalized ancestor of Verbena and Abronia, we would find it as interesting as was the latter's journey to the Jardin des Plantes. The leaves of our sand verbena therefore more nearly resemble those of the African Mesembryanthemum, in water-storing, draught-resisting ability, or even the cactus, than they do those of its Alabama cousin.

Several centuries ago the verbena had a strange place in medicine. Guesswork prescriptions were then in vogue in Britain. In those days, for example, a bowl of water in which a live mouse was made to swim was a famed cure for the "falling sickness," because the mouse did not go to the bottom. In those days, when, also, "yellow jaundice" was "cured" by a decoction of yellow lichens, the verbena native to England had a great reputation as a remedy for defective vision. Think of such a substitute for our spectacles of today!

Those who enjoy linking the treasures between book-covers with the treasures of the out-of doors will be pleased with Miss Chandler' story of the sand and verbena's glue, in her "Habits of California Plants." Suggestion as to other Nature books may be had at any of the branches of the California County Library System.

We are still enjoying the "Sunset Picnic" season. It is a tragedy to permit children to grow up without fostering in them a love of California sunsets. They rival the famed ones of the sand deserts of Jaipur, of Chihuahua, of Arizona, even those of the Garden of Allah in the Sahara. — From California Nature Study League, care of C. M. Goethe, 720 Capital National Bank Bldg., Sacramento, Calif.

REFINISHING FURNITURE.

If furniture is badly scratched, the scratches should be gone over with a stain of the right color, then apply a little shellac, then rub well with a little oil on a soft cloth.

If very much disfigured by abuse, varnish remover may be used, and the entire surface refinished. This means that after the varnish has been removed, the cleaned surface must be rubbed down with sand paper, then a coat of filler mixed with the required stain applied and then after rubbing down again, two coats of hard drying varnish are applied. After the last coat, rub down with pumice stone and rubbing oil for a dull finish, or with oil applied with rubbing felt for fine polished surface.

PENNSYLVANIA CORN PIE.

One pint can corn, 1 hard-cooked egg, 1 cupful milk, 1 tablespoon margarine, 1 teaspoon salt, 1 tablespoon flour, ¼ teaspoon pepper and pastry enough for two crusts. Line a baking-dish—not too large—with pastry, put into it about half the corn, drained, then the egg sliced, then a sauce made as follows: melt the margarine, add the flour, salt and pepper. Cook until bubbling, add the milk gradually, and cook until thickened. Then spread over the rest of the corn. Cover all this with pastry in which several dents have been cut. Bake in a hot oven for ½ hour, or until the crust is well browned.

THE FARM AFRAID OF THE CHILD LABOR LAW.

(Written for Pacific Rural Press by Ralph Newman.)

Last week black headlines proclaimed: "Children Toiling in California Fields; Law Broken, is Claim." It set us thinking again along a line harped on before and that needs often to be harped on. But don't misunderstand. The writer of this is enthusiastically in favor of the various agricultural club ventures for country boys and girls. He rejoices every time he bumps into an educator with breadth of vision enough to see that the school theories of agriculture can do the most good when they are translated into practice by the actual work of the students on actual farms. Moreover, he believes that one great advantage of the country over the city as a place to rear children is that on the farm there is always something children can do and ought to do to keep in exercise and out of mischief. Nobody is going to complain when a wise teacher or parent maps out useful work for children to do on their own home farms, for it is part, and an important part, of the child's training. Neither are reasonable people going to object if in the long vacation, children of suitable age and suitable looked after, work for money in the fruit or elsewhere at such tasks as children can perform to their physical and financial benefit. They might much better be thus employed for reasonable lengths of time than allowed to work off surplus energy getting into mischief if nothing worse.

But that is plenty far enough to go, and we should go that far, not for what the child can earn in dollars and cents, but for what training for life he may receive. When it comes to exploiting the toil of children or attempting to face any agricultural industry down onto a basis where the unpaid toil of children must be used to reduce production costs, you may expect no quarter from this pencil with a reasonable degree of assurance that you will get what you may expect.

Are we exploiting child labor and are we holding down production costs with it in California? Maybe not widely. Maybe not with malice aforethought in many cases, but if you travel much through rural California with open eyes and a human heart normally beating, I fear you will discover something of both evils.

A prominent woman, working in California during recent months, thinks she has seen child exploitation, and has had the courage to speak right out in open meeting. Miss Emma Duke, representative of the National Child Labor Committee, in a recent interview, declared that in rural California, the child labor law is being violated on a wholesale scale. She is quoted as having said, "Child labor exists upon a surprisingly large scale in the big agricultural projects of the Imperial Valley and the delta region. During the greater part of the school year many hundreds of children to whom the California laws have guaranteed educational rights and a childhood free from toil, are laboring day in and day out. These children are picking cotton on ranches owned by British and American corporations. More than a hundred children are drawn annually from a single school to labor in the asparagus fields of the delta. Asparagus is usually considered a hundred-day job, but children are working there from February to July." Miss Duke pointed out what many of us perhaps know, that while many of the laborers are Oriental, fully a fourth of them are white families with children cheated of the rightful inheritance of childhood as they toil in the stifling heat of the low lands.

So much for that. Now Miss Duke, if she hasn't already done so, should take a trip through at least four dairy districts this side of New York, not to be too definite, and get another slant on this child-labor business. Perhaps it wouldn't come within her province though, for here children are not working for wages, and usually their

boss is their dad. So long as they drag their weary bodies to school the required number of days in a year, perhaps it is none of her business what happens in the early morning and dewy eve. Not being a lawyer, the writer does not know whether the letter of the law is being violated or not. But he does know that the spirit of it is being crucified on many dairy farms every morning and evening of every day (Sunday included) in the year.

Now here is where the different slant comes in. If not for Miss Duke, then it is something for Housewives' leagues to think about. What are a few children more or less so long as we get cheap milk. That question is harsh or unjust, is it? Well, now, you listen a minute. The dairy industry of this State is already sustained, to a larger extent than city people can possibly realize, by the unpaid toil of women and children. Students of conditions rather than theories have remarked the fact that in rather extended districts dairies are more and more being operated by nationalities where large families are the rule and where everybody works. Nothing is paid out for labor, a bank account slowly accumulates, and they are considered prosperous. They beat the game. How? By using the labor of childhood and not charging it into the cost of production. There is danger right now that in several districts an industry as basic as the dairy will soon rest on a foundation like this. And every time a clamor for milk at a price below a legitimate cost "plus" goes up, we draw nearer the time when men who will not sacrific children on a barnyard altar as the sun rises and sets, must quit the field and leave it to those who will.

A while ago the writer stood in a barnyard as night was settling down and talked with the dairymen. He told me that his milk check was so much that he "put by" much of it each month and was therefore making money. On one side of him was a twelve-year-old boy and on the other a frail-looking little woman in dirty overalls, and all of them were milking to beat the band. I said, "What you put by is about what you earn by milking a string yourself, isn't it?" He answered, "Yes; just about." "How many cows does your son milk?" "Thirteen, night and morning" (that's half a string). "And how many does your wife handle?" "Oh, she's some milker; she milks as many as I do." Then I took a chance on being kicked over the corral fence and asked, "How much do you pay them?" He never batted an eye. The logic was too subtle for him. "Pay them! Say, if I had to hire these cows milked, the bank would sell me out in about three months. I couldn't make any money at all."

No; it isn't an isolated case. It is typical in some places. It might easily become universal. Maybe the law will not reach the barnyards. The children of the cow stable do not work for pay. But in the name of rural childhood something, somebody ought to reach them.

VEGETABLE CHOWDER RECIPE.

Vegetable chowders offer a good way of using up vegetables and skim milk. It is best to learn the type of dish and not be confined to any definite recipe, say food specialists of the United States Department of Agriculture, for materials are often wasted thereby, which should be used. The following typical recipe is a good one and suggestive of the kind of dish one can easily make: ¼ pound salt pork or bacon, 1 onion, 6 medium-sized tomatoes, or 1 pint stewed tomatoes, 1 green pepper, 4 medium-sized potatoes, 3 carrots, 2 cups skim milk, 2 tablespoons flour, 2 teaspoons salt.

Put the bacon or pork, onion and pepper through the meat chopper and cook carefully about five minutes. Add the water and tomatoes and cook until the vegetables are tender. Cut the potatoes and carrots into small pieces and cook in water until tender; drain and add with the skim milk to the other ingredients. Thicken with the flour mixed with a little cold milk.

FEEDING BOTTLE BABIES.

At three months, the child will require about thirty-two ounces of diluted milk daily. To sixteen ounces of milk, add sixteen ounces of water and three level tablespoons of sugar of milk. Dextrimaltose may be used in the proportion of one teaspoonful to each feeding bottle instead of sugar of milk. This is given in six feedings at three-hour intervals during the day and one feeding at night about 10 p. m. The 2 a. m. feeding is discontinued at the third or fourth month.

At six months, the average baby will require thirty-six ounces of diluted milk. To twenty-four ounces of milk add twelve ounces of water or barley water and three even tablespoons of sugar of milk. This is given in five feedings.

At nine months the average child requires forty ounces daily. To thirty ounces of milk, add ten ounces of water or barley water and three even tablespoons of sugar. This is given in five feedings.

Boil a pint of water every morning and put in a clean bottle. Keep in a cool place. Offer the baby plenty of water between feedings, beginning with one-half ounce twice a day during the first few days after birth. The quantity should be increased until the infant is taking from five to six ounces of water daily.

It must be remembered that the infant cannot ask for water and that he is apt to become thirsty more often during the summer months than in the winter.

After baby is six months old, barley water may be used to dilute milk instead of plain water. Add one-half level tablespoon of barley flour to one pint of water and cook for twenty minutes. As it boils, keep adding enough water to make one pint; strain and cool.

Not later than one month after being put on the bottle, or at any time from three months up, the infant should be given orange juice, beginning with one tablespoonful mixed with equal quantity cooled boiled water and gradually increasing the quantity to two or three tablespoons. The best time to give orange juice is just before the bath in the morning. Strained tomato juice may be given in like proportion when oranges are not available.

At six months, small amounts of barley or oatmeal water may be given with the milk; when the teeth begin to appear, a cracker or a piece of zwieback may be allowed. In addition to this, a little cereal jelly without sugar may be given once a day, preferably in the morning.

At nine months, a baby may be given a half cup of plain bouillon or beef or chicken broth or vegetable soup once daily. He should have a small piece of toast, zwieback, or crust of bread on which to chew, after each feeding.

TO AVOID JAR BREAKAGE.

Do not place hot jars in cold water.

Do not place cold jars, either filled or unfilled, in hot water.

Do not allow draft of cold air to strike jars when they are removed from the canner.

The wire bail should not fit too tightly or the jar will break when the lever is forced down.

Do not overpack jars which are to be processed. Some products, like corn, pumpkin, peas, lima beans, and sweet potatoes, swell in processing. Pack jar only to within one-half inch of top.

All new jars should be tempered before using. To do it, put them in cold water sufficient to cover them and bring to a boil.—United States Department of Agriculture.

PICKLE RECIPES.

Editor Home Circle: Will you kindly furnish me with a recipe for dill pickles?—Mrs. O. D. P., San Jose.

Wash cucumbers of the desired size and pack in jars with dill at the bottom and some on the top.

Bring to a boil 1 gallon of water, one small cup of salt and one large cup of vinegar. Pour this boiling hot over the cucumbers and seal tight. Keep in a warm place for a few days and then put them in the cellar and they will keep indefinitely.

SOUR MILK SPICE CAKE.

Take 1 cup thick sour milk, 1 cup brown sugar, ⅓ cup butter or crisco, ½ package raisins, ½ cup chopped walnuts, a little citron cut fine, 2 cups flour, 2 tablespoons chocolate, 1 teaspoon soda (level), 1 teaspoon mixed spices. Add the soda to the sour milk and then the sugar, then the melted butter. After adding the chocolate sift in the flour and add spices, nuts and raisins. Bake in a loaf in a slow oven for ¾ of an hour

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OLIVES MUST BE STERILIZED.

(Written for Pacific Rural Press.)

That the California olive industry has suffered somewhat by the number of deaths throughout the United States from botulism contracted from eating ripe olives, there is no doubt. In order to correct the damaging reports that have gone broadcast, these olive growers of the state have appealed to the proper authorities to lend whatever assistance might rest in their power to save the industry from disastrous losses. As a result Governor William D. Stephens intructed the California State Board of Health to take the matter in hand with the view of the removal of this menace to the public health. A board of investigation, consisting of Dr. E. C. Dickson, of Stanford University Medical School; Karl F. Myer, University of California Medical School, and Major J. C. Geiger, United States Public Health Service, have fully investigated the subject of botulism poisoning, its causes and prevention. Also Professor W. V. Cruess, of the University of California, has conducted an investigation from a commercial standpoint regarding the effect of various methods of sterilization of ripe olives against botulism. Their findings have been fully investigated and concurred in by the California State Board of Health.

Their decision was, that ripe olive poisoning is due to botulim resulting from contamination of the olives with Bacillus botulinus. It has been found in refuse in and around olive packing plants, and from all accounts it must be strictly at home in a warm climate as it will resist 212 degrees Fahrenheit for five hours. Cleanliness is about the only antidote for Bacillus botulinus in handling of ripe olives from the time they leave the tree until placed in containers for commercial use. The decision of the Board of Health was, that ripe olives shall be deemed adulterated within the meaning of the California Pure Food Act unless, before being offered for sale or consumption, all picking, handling, cooking and other preparation of the product shall have been carried on in strict conformity with the Food Standardization Act, Sections 1 to 8, inclusive.

Ripe olives shall also be deemed adulterated within the meaning of the Pure Food Act, unless the same shall have been sterilized at a temperature of 240 degrees Fahrenheit for a period of not less than forty minutes by means of a retort controlled by an automatic self-recording thermometer device in proper working order. It is within the power of the Bureau of Food and Drugs and California State Board of Health to seize and quarantine all ripe olives which are not produced in conformity with these regulations, and institute action for their condemnation and destruction. With these investigations the State Board of Health feel that the enforcement of these regulations remove all danger from ripe olive poisoning.

HOUSEKEEPING HINTS.

Blades of knives and scissors that have become rusty may be cleaned to look like new by rubbing with fine sandpaper. Rub until every vestige of rust disappears.

When washing vegetable greens, as lettuce, spinach, dandelions and cress, add a tablespoon of salt to the water and small insects that otherwise might not be reached will quickly rise to the top.

When peeling oranges, save the peelings and parboil until clear and tender. Then preserve in a rich syrup and put away in a glass jar. Ginger cake, cookies and many other things are improved by the flavor of the rind or the syrup.

A very easy method for washing the clothesline is to simply wind it around the lower part of the wash board. It then fits conveniently into the tub or boiler and can be scrubbed with a brush, rinsed and set in the sun to dry. When dry, it is easily wound into a ball from the washboard and in this way does not knot as when put loosely in a tub and washed.

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How Shall We Market Hogs?

Written for Pacific Rural Press by Thos. F. McConnell.

This is a question that has been agitating the minds of those who grow hogs for market ever since the grunting, devil-possessed animal outgrew Mosaic ban and commenced to be a factor in the food supply of the world. At first it was a simple problem. No one had a large number of them to dispose of and even those of us who have followed this business more or less intimately for the past fifty years can hardly realize the changes that have taken place in this past half-century, so gradually have they come about.

No one can say who sold the first hog for food purposes in the United States. The business has gradually increased from nothing until now hogs are slaughtered by the thousands every week. At first it was a retail business carried on by the farmer, who slaughtered hogs during cool or cold weather in the northern United States. In the south each plantation raised hogs, mainly for their own use only. In the north the farms were smaller and the surplus food stuffs, especially hogs, were marketed after slaughter in the winter. Where accessible the pineries were an outlet that absorbed many hogs, but it was an individual problem just the same, as each farmer slaughtered his hogs and freighted them to his market, perhaps trading for lumber of some description.

Chicago the First Market.

Early in the business the Windy City became the center of the pork-packing business, even before the railroads were such important feeders as they are now. Freight rates were high and facilities for handling livestock were lacking, so men who lived close enough to Chicago commenced to drive their hogs to market. While so doing some of them bought hogs from farmers along the road on a speculative basis usually, although some commenced to do so for a percentage or on a commission basis. These drovers therefore were the precursors of both the stock buyer and commission man of later days.

The grower was even more at the mercy of the man who handled his hogs as a drover than later, when the papers, telegraph and later the telephone, were sources of information as to prices to be obtained at the central market. Then, as now, the small grower was the greater sufferer from lack of remunerative prices as those who had a large number to dispose of would either drive to market or later ship his own hogs, but even then he could not sell without the assistance of a middle or commission man.

Improvement Slow.

Methods of marketing or selling livestock have showed but little improvement, but methods of handling have shown vast change. From the time the animals reached the railroad point until the last squeal was recorded at the slaughter house methods of handling have kept pace with the times, but the same percentage or a higher one (due to the war) has been exacted by the local buyers and the commission men.

California Conditions Worst.

The man who grows but a few hogs, one to ten say, was and in many places still is laboring under a great disadvantage. He either has to sell to a local butcher or slaughter them himself. The local butcher will pay only what he wishes to pay, and climatic conditions are against slaughtering on a farm more than one or two at a time with danger of loss from tainted meat before they could be disposed of to advantage. Such conditions obtain in some districts where there are no local buyers who ship to coast markets.

Farmers or ranchers who make a business of raising hogs for market in large enough numbers can ship directly to some firm engaged in the meat-packing business and receive the market price. The man who has not more than a few head at a time to sell, no matter where located, has been and in some places still is at a disadvantage as he has to depend on the local buyer or butcher.

Local buyers and butchers are generally good business men, and as such wish to hold their business and retain their customers, but they also must have their profit, therefore "err on the side of safety" by leaving a wide margin for profit.

The Worm Turns.

The farmer is always getting "the short end" of everything, even in the years like those when the old fellow complained, in the season of a bumper corn crop, "there are no nubbins to feed the calves." The profits from products that would otherwise yield a handsome return are all eaten up by the system of marketing them. This has been true of many things besides livestock and by a combination and co-operation, the producers have been enabled to arrive at a method whereby not only their produce has been disposed of to advantage, but it has been so standardized and improved as to be worth considerably greater sums.

About two years ago some of the men connected with the Farm Bureau movement in the upper San Joaquin Valley decided to make an effort at selling market hogs co-operatively. Geo. W. Kreutzer, since superintendent and manager of the State Land Settlement at Durham, worked up a market hog auction at Wasco, Kern county, which was a success. Mr. Kreutzer travelled around the country and got the farmers who had hogs ready for market to bring them in on a certain day. He also arranged to have buyers from various meat-packing firms attend. The result was a successful sale.

This was a start and an organization was formed called the Farm Bureau Marketing Association, with H. G. Hull of Wasco as president, W. J. Fulgham, Visalia, vice-president, and D. H. Bitner of Bakersfield as secretary-manager. This association at first included the counties of Kern, Tulare and Kings, and it has been a success from the beginning. We don't mean to say that every patron has been entirely satisfied every time, but practically every one realized that they had found a better way to dispose of their fat hogs.

Sales Intermittent.

At first no regular dates for holding sales were adopted, but each sale was worked up in the locality where it seemed there was the most available material. Manager Bitner, who had had 13 years' experience in the Union Stock Yards of Chicago, is an enthusiast, and he kept working with the idea that a regular schedule of sales could be held. Two sales a week were attempted in the three counties first included in the association and successfully carried through.

It was a busy job getting things running smoothly and then keeping them going that way. As it was a farm bureau organization it was early decided to sell hogs only for members so every time a man was found who had hogs to sell he was urged to list them at one of the sales and told that it would only cost him two dollars to join the farm bureau, which would be taken out of the first check he received for hogs sold. This seemed fair to most of those solicited and the result was a steadily increasing membership among the hog-raisers.

Business Increases.

The Farm Advisors in counties to the north and others interested spread the good news and Fresno, Madera, Merced and Stanislaus counties were soon clamoring to be taken into the fold. This was good news to the promoters and they were soon holding sales in some of these counties. It was found necessary to increase the working force, so an assistant manager was appointed, Lloyd C. Trewhitt of Hanford being selected for this position.

Manager Bitner saw the necessity with the enlarged territory of having more sales, and he worked out a schedule of from four to five auctions a week. The ground, according to this, would be covered in about three weeks. Some places, however, where there were the most hogs, would have sales more often than where the material was scarce.

The top carload of hogs at the Farm Bureau market hog auction at Dixon. D. H. Bitner of Bakersfield, Farm Advisor J. U. Mills and T. A. Kilkenny discussing market hog auctions.

To properly get this schedule before the swine-raising public the management issued a very attractive calendar, selling enough advertising to pay for it, and everywhere this calendar will do any good it will be found. If a farmer wants to know when the next sale in his vicinity will be held he has only to consult his calendar. If he wants to know when to put his hogs in the feed lot the same oracle will tell him.

Where the Buyers Come From.

The counties in this association are favorably situated, it is true, as all are within easy shipping distance of both the San Francisco and Los Angeles markets. Buyers from the Western Meat Company, the Virden Packing Company, the Cudahy Packing Company, Wilson and Company, and smaller houses, generally have representatives at all these sales. Manager Bitner has looked after this part of the business very closely and has established such a reputation for fair dealing that at times he has received orders from some of the packers to buy hogs for them when their representatives were not in the field.

It should be noted here and especially emphasized that in order for such sales to be successful that buyers, both local and from a distance, should be encouraged to attend. Local buyers and those for the smaller packers should receive particular encouragement for it should be the effort on the part of the management

of sales in new localities to induce all the competition possible.

Grading the Hogs.

Those who know market hogs understand there are several grades from hard, grain-fed of just the right weight, 175 to 225 pounds, down to the rough, heavy stuff. Assistant Manager Trewhitt is the official grader for the association and has many times a difficult task to place the hogs all in their proper lots and have the consignors understand why their hogs are not always "tops." If the grader does not put the hogs where they belong, then the packer soon realizes that he is not getting what he has bought and will not send a representative to future sales. Therefore, it is absolutely necessary to have each hog go into his proper grade.

Properly graded hogs at such auctions are an education to the grower in many cases. Many who raise hogs do not know just when a hog is a "top," but after witnessing the grading at such sales they become educated and continue to bring better stuff to market every time. The statement has been made by the manager of one of the largest packing houses on the Pacific Coast that hogs from the upper San Joaquin Valley have improved 100 per cent since the farm bureau sales of market hogs began.

A word of caution right here about grading. Suppose, Mr. Grower, that you have just about a carload of "top" hogs weighing 200 pounds average, hard and smooth, and you have two or three not so good. It seems as though one piggy sow, one stag, or one cripple could not make much if any difference, but it will. Suppose again you should buy one hundred eggs as strictly fresh, and you should break one and it was "bad," how much would you give for the other ninety-nine. What impression would a buyer get of your carload of hogs if the first one he saw in the lot as he came to it should be a thin, coarse animal? He will be looking for defects and he will receive a mental impression similar to that made by the bad egg. Therefore, the grader has to put the inferior ones in the lot where they belong. If they are yours make them right next time.

Proper Management.

The association mentioned in this article is a non-profit concern. The aim is to market hogs for the members not to make a profit for the organization. There are three salaried officials, the secretary-manager, the assistant manager, and the bookkeeper. A charge of 1½ per cent is made on the gross receipts of each sale to pay the running expenses, and this is all the expense there is for marketing. The price paid is for the hogs as they are received at the shipping point—not as they land at the packing-house—and generally this price has been equal to that paid in Chicago at the same time.

The manager should understand what he is doing. It is necessary to have the hogs listed at least 5 days previous to the sale so that proper arrangements can be made for cars and to notify buyers. If only a small number of hogs are listed and two or three times as many show up, cars will not be available and possibly no buyers. Then the right kind of manager will "pull the chestnuts out of the fire" by having the knowledge of how to get cars in an emergency, and take the responsibility and ship the hogs for the consignors to some reputable packer.

With a business approaching, and will no doubt exceed, the two-million-dollar mark before the second year of the existence of the association has passed into history, other communities are trying to get in line with sales of the same kind. The latest was an auction of three carloads of stubble hogs at Dixon in Solano county under the management of the farm bureau. It was a successful sale and as the management donated their services in this case the amount received was net to the growers. The two top loads sold for $15.30 to the Virden Packing Company of San Francisco, which was only $1.70 under the price for top hogs in "South City" on that day. The third load feeders and went to the local packer, C. B. Mace, for $14.05. The cut shows some of the hogs in the one of the top carloads and the consignors took home the $13.50 per cwt. net, which they readily brought.

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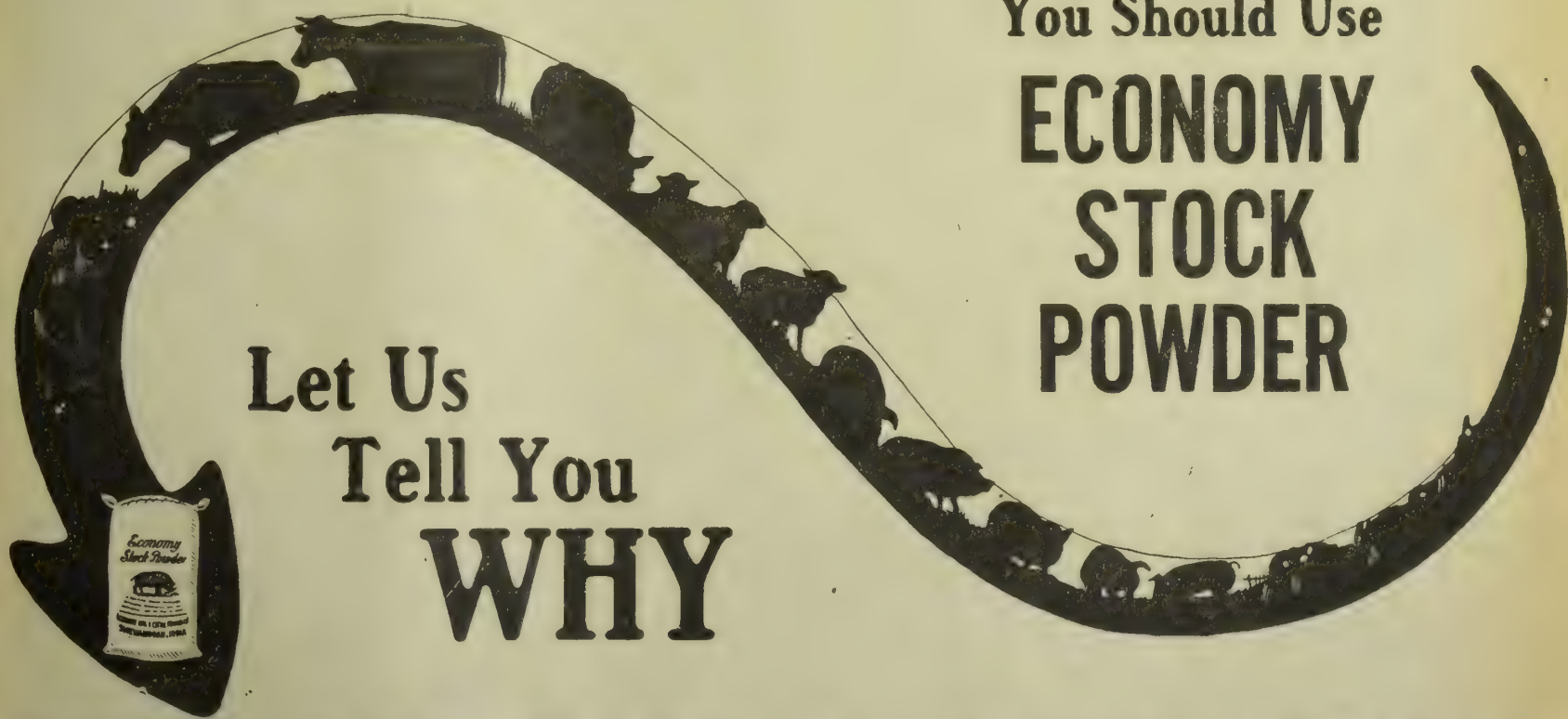

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Housewives' League Again on War-Path

(Written for Pacific Rural Press by Ralph Newman.)

According to press reports, the Berkeley Housewives' League ordered another boycott, effective August 1st, when the price of milk was advanced. The statement issued runs about as follows: "The milk producers raised the price of milk to 10c a pint and 17c a quart. They did it without first consulting the League and therefore the advance is not justified. It follows that no one in Berkeley should buy any milk except for infants and invalids until the League lifts the ban." They cap the climax by promising an investigation of the rumor that women have been offered pay to talk to women's clubs, etc., about the value of milk in an effort to secure greater consumption, and then they knock the cap off the climax with a proposal to establish a goat farm.

And This Comes Out of Berkeley!

One at all familiar with actual conditions in the dairy industry can only stand in open-mouthed amazement before this declaration. We had hoped that just a little of the truth about the critical condition of the dairy situation had, by this time, penetrated to the minds of these good women, but evidently it has not. Here are children playing with fire and they don't know it. That such a declaration should have come out of Berkeley! Berkeley, the seat of a great agricultural college! Berkeley, where some of the stored-up knowledge of economic conditions affecting rural life may be supposed to have percolated through the community to some extent at least.

So little do these women really know, and so little effort have they made to be fairly informed that they see no distinction between milk dealers and milk producers. They say "the producers" raised the retail price of milk in Berkeley. By using the telephone for five minutes they could have learned that this statement is utterly false. The milk producers have nothing whatever to do with the retail price of milk. On August 1st the producers raised the price to dealers 5c a gallon, and that is all they did. Whether the retail price advanced more than that or didn't advance at all, is none of the producer's business. "The Milk Producers" have nothing to do with the retail price of milk. Can't somebody get that elemental fact across to these women, and while he is at it, can't he make them understand that milk producers' associations are groups of farmers' and not bunches of city milk dealers?

Not Taken into Confidence.

The women complain because they were not consulted about the price by "the producers." Well, well! Did the shoemakers consult with them before they trebled the price of baby's shoes? Did the clothing manufacturers call them in solemn conclave before they quadrupled the price of baby's blanket? Did the glass-blowers come seeking counsel from them before they shot skyward the price of baby's bottle? Then why should the men who fill baby's bottle with life be set apart as those who, before they move, must seek counsel of baby's ma, or some babyless busybody assuming to speak for her?

Why should farmer producers consult with city women about the price of anything—milk any more than bulls or barley? They don't deal with city women; they deal with city dealers as our economic system is now organized. Perhaps what the women meant when they said "producers" was dealers, but they didn't seem to know of any distinction, thus betraying an ignorance that is inexcusable in those who set themselves up as mentors over the most vital and fundamental industry on the face of the earth.

Still More Comes Out of Berkeley!

These women serenely say, buy milk for babies and invalids, but stop there—not another drop! Now, mind you, this profound order didn't come out of Stockton or Napa, but out of Berkeley. Suppose that sort of boycott could be made effective over the whole State. Berkeley alone wouldn't make much of a riffle. A few milk dealers would be ruined, but the producers wouldn't miss the highbrow town so very much. But just imagine that boycott effective over the whole State! Two things would inevitably happen!

Milk distributors would speedily be driven out of business and financially ruined. If they could sell only what milk is used by babies and invalids, they couldn't begin to keep their equipment busy and their overhead would eat them up in a very short time. Then there would be no one to pasteurize, bottle and deliver milk "for babies and invalids."

An All-Inclusive Kind of Wisdom.

Milk producers would also be driven, at least out of the market milk end of the business, probably in time to assist in finishing off the dealers. These women, in the all-inclusiveness of their knowledge, ought to know that market milk production is a specialty in the dairy industry. Special equipment, special labor, special inspection, special expense are involved in its production. Milk produced to meet the rigid sanitary requirements of city trade is too costly to be diverted to manufacture, and, hence, surplus has always been a tough problem in the milk trade. The dairyman must equip to produce and and sell to capacity, or his overhead will eat him up and do it in mighty short order. No sane dairyman would dream of running his plant for a single month, turning out a few gallons for babies and invalids and throwing the rest to manufacture. Faced with a serious curtailment of his market he would almost instantly be forced to one of two courses. He would have to quit milking altogether, or he would have to grease and store his equipment, fire a lot of his help, let down on sanitary precautions and go to producing cheaper milk for manufacture. What this action would do to the whole industry is not up for consdieration here, though it would result in dire calamity without a doubt. The point now is that because of his being forced out of market milk production, there would be no milk for city babies and invalids unless the very few certified dairies could weather the storm and secure some make-shift delivery and collection system. Without a doubt most of them would quit rather than go against a retail proposition, and if they all survived they couldn't keep alive a tenth of the city babies.

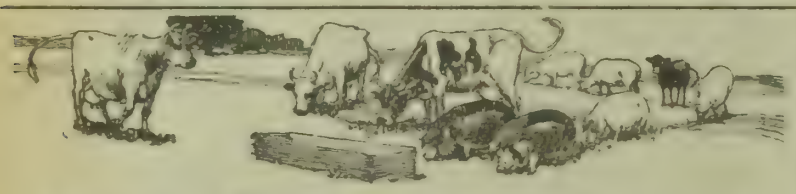
But What's the Use!

If the crude, thoughtless, ignorant and utterly mistaken notions of these good women could take effect, millions of dollars would be lost, swarms of babies would die—or, what's the use! Women cannot throw straight, so there isn't much danger that the Housewives' League monkeywrench will get into the machinery, but it is blamed exasperating and somewhat dangerous to have it flying about promiscuously.

And they are going to look into [illegible] folks the importance and economy of [illegible] pick on milk? Women are paid to demonstrate to city women the wonderful qualities of Dr. Paintemup's nose powder or Oathull's breakfast food, and not a murmur from these self-constituted keepers of the people's rights. If the Dairy Council sees fit to employ experts and send them out to teach ignorant mothers the absolutely essential need of milk and more milk for growing children, said council is doing humanity a splendid service, and we prophesy that, League inquiry or not, they will go right on doing it. And if dairymen want to contribute to that work, no league of anything is going to stop them.

Who's the Goat?

And that goat farm! When the dairymen and the milk distributors are all killed off the Housewives' goat will save humanity. Doesn't it strike you that these city friends of ours need something worth while to take up their time? Perhaps we country folk couldn't do a finer thing just now than to donate a large and energetic flock of goats (including a few billy goats with good, stout horns) to the Berkeley Housewives' League with the stipulation that they shall care for and milk said goats themselves.



Do you feed ten head of stock?

If you feed ten head of stock you are paying for a silo whether you build one or not. Authorities everywhere agree on this point.

"At the present price of hay," says E. L. Westover, Oregon Agricultural College Silo expert, "any silo will pay good interest on its investment to anyone who is feeding ten or more animals."

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LIVESTOCK AT MT. EDEN COMMUNITY FAIR.

Mt. Eden is the township in which Hayward is located, and while not the center of attraction in the livestock industry at the fair held last week, the farm animal exhibit was not lacking in variety and in some cases did not lack in quality. Ed F. Smith, owner of the Valley View herd of Jerseys, may well feel proud of his showing. His herd is headed by Goldie's Nehalem Gold, a very prepotent young bull, judging from the few of his calves already existent. A young cow, Katherin's Girlie of R. S. M., of Conant breeding, and 2 heifers from Guy H. Miller's herd, sired by Altama Interest, are females that would look well anywhere. W. R. Cook showed Holsteins.

The beef classes were represented by a few animals from the Hereford herd of S. R. Crowe.

Hogs of almost all breeds, both in purity and mixtures, were shown in ordinary farm condition.

The exhibit, educational in character, put on by the California Dairy Council and under the management of their efficient secretary, Sam H. Greene, is well worthy of comment. As an inducement to get people to join a cow-testing association, several cows were on exhibition with their records for the past year, showing whether they were profitable animals or not. Such exhibits will be held at various fairs throughout the State wherever the cows with records can be obtained. The booth, in charge of Mrs. J. Koughan, was an education in itself as to the value of milk as a food compared with other staple articles.

Wool should be clipped from round the eyes of young sheep before foxtail gets dry, because in sticking their heads into alfalfa or other forage to eat, their eyes often catch dried foxtail if wool is close around them.

Get into a cow-testing association and find out how many boarders you have.

MISCELLANEOUS.

BUTTE CITY RANCH
SHORTHORN CATTLE SHROPSHIRE Sheep, Berkshire Hogs, Shetland Ponies, [illegible] W. B. Dwyer and W. S. Guilford, Box P, Butte City, Glenn [illegible]

ONE REGISTERED GUERNSEY Bull Calf 3 mos. old. Well marked and from a good [illegible] of the [illegible] Dairymen's [illegible] His dam a first-class heifer is going to make a good record as a two-year-old. H. O. Mohler, Ripon, Cal.

50 HEAD GOOD DAIRY COWS for sale. For further information, write, Box 573, Oakdale, Cal.

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FIFTY DUROC-JERSEYS — Mostly bred sows and gilts. Some small pigs. Three service boars and five March boar pigs, grandsons of Mary Jane Pathfinder, the five pigs sired by Lord's Orion Cherry King. One son of Orion Cherry Pathfinder, out of Lamb's Model Lady. Elmer Lamb, Ceres Calif.

DUROCS—BIG-TYPE—HIGHEST QUALITY—popular blood lines. Herd headed by Johnson's Defender, Jr., and Western Pathfinder Bred sows and gilts and young boars for sale at moderate prices. Greenwood Farm, Witherow & Stafford, Live Oak, Cal.

BOYANNA BIG-TYPE DUROCS—Buy Durocs now. We offer bred and open sows, gilts, service boars and weanlings—all of excellent conformation and breeding. Write us and get get good ones. J. Boyd Harrold, Dixon, Cal.

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JACK LONDON RANCH, Glen Ellen.—Exceptionally good weanlings. Bred sows and gilts. One good yearling boar and one fall boar. Prices reasonable.

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ROCSTEIN RANCH DUROCS headed by Lord's Orion Cherry King. Breeding stock for sale at all times. W. M. Way & Son, Rt. 1, Box 320, Modesto.

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DUROC-JERSEYS — Fine big-type gilts, tried sows and boars, Eastern and California bred. H. P. Slocum & Son, Willows, Calif

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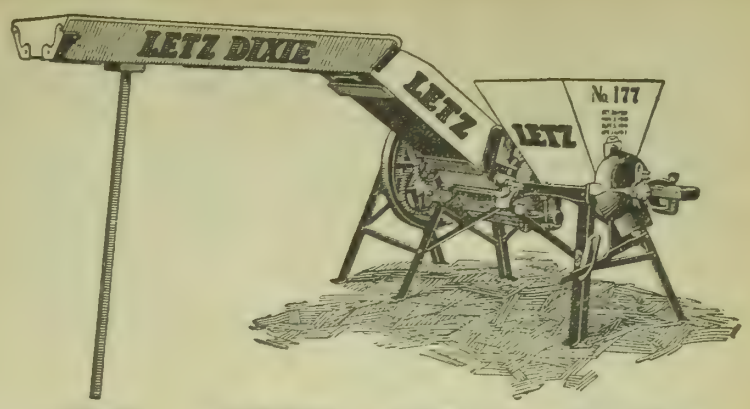

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THE NEVADA HEREFORD RANCH—Jno. H. Cazier & Son Co., Prop., Wells, Nevada. Reg. Hereford cattle. Breeding stock for sale.

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REGISTERED HEREFORDS—H H Gable, Diamond G Ranch, Esparto, California.

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FOR SALE—Rambouillet rams and ewes—purebred; the very highest grade of large smooth body; heavy shearers; the wool and mutton type. Immediate delivery of individual or carload lots. You can find none better or of higher grade. Address Glenn, Cal. Location, 8 miles south Hamilton City, 1 mile west Ordbend. Windell Orchards Co.

F. A. MECHAM ESTATE, Petaluma, Cal.—Breeders and importers of Shropshire, Rambouillets and American Merinos, both sexes. Also Red Polled cattle. Take electric car at Petaluma or Santa Rosa for Live Oak Ranch.

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SNAP FOR SALE.—1,000 head ewes. Will sell in lots to suit. Chas. G. Owens, Livermore, Cal.

H. G. BROWN, Dixon.—120 Choice Rambouillet yearling rams for sale. Price reasonable.

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STATE FAIR COUNTY EXHIBITS

"I have traveled Europe and Asia, and I can say that no products are grown there that cannot be grown in California," said President Geo. C. Roeding of the State Agricultural Society, addressing the annual convention of county supervisors. "The same thing cannot be said of any other State. To the wise men of our Eastern States, California is the land of promise.

"By exhibiting our resources we can increase such a sentiment and attract new population to the State. We can also compel public notice of new ideas that make life more worth while and make a living easier. Only once a year do we have the opportunity to exploit products of our farms, our livestock, and our industries all together to give a comprehensive survey of the State and to show what we are accomplishing in the various counties. That is at the State Fair, to be held this year, September 4 to 12.

"Some people object to spending county money for exhibits at the State Fair because they have their own county or district fairs. But they can't exploit their own counties in their own counties to people generally from the rest of the State.

"Last year eighteen counties exhibited at the State Fair. It was one of the most successful California State Fairs ever held, even though the fleet was in San Francisco and the rail strike disorganized all plans. This year it is greatly desired that 58 counties shall obtain the widespread benefits of an exhibit of their resources there. Last year the Exhibitors' Association was formed after the Fair was over, and they have agreed to confine their exhibits to smaller space so the other counties may enter, especially the counties of smaller resources. These will be especially welcomed in 1920; and they will gain more by entering than will the larger counties whose resources have already been so well exploited. They will get even more consideration from State Fair officials than the larger, richer counties; for this is no county fair—it embraces the entire State. The Board of Directors represent every section of the State, and only one of them lives in Sacramento county. They serve without pay and for only one purpose, to promote the welfare of the entire State by showing the best resources of every county to the people of every other county and of other States and Nations.

"Last year the State Fair had as livestock judges some of the most prominent men from the East. They said the California conditions, soil, and climate were so favorable that livestock men in the East were going to come to California to improve their occupations, and to enjoy living. They admitted that many of our livestock exhibits were superior to those at other State Fairs, and said that as a result of the exhibits at our State Fair, our livestock had advanced more than $10,000,000 to values of the State.

How far this has proved true, and how many of the counties have responded to the opportunity will be shown best at this year's Fair. Certainly the livestock breeders will be there to let the world know their accomplishments. We have asked those in charge of county exhibits to sketch the main features they expect to show. Their replies are condensed below in notes which do not include the varied exhibits in each."

Northern California Counties Association (Modoc, Siskiyou, Trinity, Lassen, Shasta.)—Products classified in the exhibit: (1) Recreation; (2) Mining; (3) Lumbering; (4) Agricultural; (5) Home work; (6) Dairying. Out-of-door vacation life is suggested, gold nuggets and platinum are shown galore, and the ice cave of Modoc county.

Kings County.—Over 20 varieties of peaches commercially packed in exhibit with plums and prunes. Commercial packs of grapes in star shape with fresh grapes hanging from star above peaches. Another star made of grains.

Placer County.—Tower covered with grains and crowned with huge clay urn made in county. Tower contains fruits and pictures. Mining and lumbering also featured.

Colusa County.—Williams features rice, Maxwell lemons, Arbuckle almonds, Colusa prunes, etc.

Stanislaus County—Modesto features beans and milk products, Turlock cantaloupes and sweet potatoes, Patterson alfalfa and prunes, Oakdale almonds and olives, Waterford grain and tomatoes, Hughson sorghums and plums, Denair pumpkins and watermelons, Ceres grapes and figs, Riverbank rice and field corn.

Tehama County.—The Iron Canyon irrigation project will be the outstanding feature, and W. A. Beard will be on hand to answer questions. Tehama fruit will be distributed free.

Sacramento County.—Represents a 9x16-foot model the new $10,000 site and equipment for the National California Farm Bureau Egg-Laying contest now being run at Santa Cruz, the only such contest in California.

Sacramento County.—Rrepresents herself as the red-blooded heart of California, from which a horn of plenty is distributing fresh fruit. Enlarged photographs show her livestock and water resources.

San Luis Obispo County.—Presents a county map with statistical information supervised by the Goddess of Plenty. Dehydrated fruits and vegetables also are featured.

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Sheep Showing, Past and Present

(Written for Pacific Rural Press by Thos. F. McConnell.)

Forty-five years ago in the Middle West practically all exhibits in the sheep departments of fairs were made up of Spanish or American Merinos, as they were beginning to be called. Neither was there any classification as to type as there was in later years, when the wrinkly ones were kept in one class and the big smooth-bodied individuals were shown together, with still another class for the Delaines that had practically no wrinkles at all. Fine wool and and all the grease that it would hide were the principal qualifications. At that early date, however, the animals exhibited must be purebred and registered. Not much fitting was done except to have the animals in good flesh with the natural color and bloom due to blanketing and close housing.

All animals were shown with only a growth of wool from the time of a public shearing held in the month of May to the dates of the fall fairs. None were shown carrying the fleece of a full year. It was not considered possible to carry one sheep through the summer in full fleece, let alone an exhibition flock. Much stress was laid on the weight of the fleece grown in one year, and to determine this, public shearings were held, generally in the month of May, with exact records kept of weight of fleece, registered number and name of the animals shorn. Committees of reputable and unprejudiced men had the work in charge, so that fraud would be eliminated. This then brought all sheep into the show-rings in the fall with about four or five months' growth of wool.

Trimming, as practiced in the mutton classes of today, was unknown, although before the public shearings became popular what was termed "stubble" shearing was practiced in some cases, with the result that some flocks were shown with fleece of much longer staple than others, and it was these evident attempts to deceive that led, among other things, to the establishment of the public shearings.

Mutton Sheep Not Popular in Early Days.

Mutton sheep were not popular for many reasons. To begin with, the demand for the flesh of the sheep was not evident. Its place was filled to a great extent by the flesh of the wild game so abundant on the outer edge of civilization. The state fairs had classes for the breeds that were not of the Merino type, but the county fairs paid no attention to them except where some pioneer in their breeding had influence enough with his local fair management to induce them to make a place for his favorites. They ranked high as an attraction, as they were so different from the Merinos that every one interested would want to see them, but owing to the great difference in type from what was commonly known as sheep, interest would flag when curiosity was satisfied.

The exhibition of purebred livestock in those days at some of the county fairs that were started in the newer parts of the country at that time carried with it some amusing features to the exhibitor. The Merinos, some of them at least, were very wrinkly, and at one fair at Steven's Point, Wis., an Irishman, upon seeing one for the first time, was moved to remark with some emphatic prefix: "—— luk at the one wid the sthripes on him!" Many, very many, too, had never seen sheep with horns and expressed much surprise when seeing the Merino rams for the first time. The writer has often wondered what would have been the result if they had seen a flock of Horned Dorsets, or Blackfaced Highlands, where both sexes are horned.

Importance of Purity in Breeding.

Much emphasis in those days was placed on purity in breeding, and in many places the Merinos must be registered in the Vermont Merino Sheep Breeders' Association in order to compete for prizes. Many other associations soon came into existence, however, in this class of sheep. The difference in type began to develop and at the time of the slump in the wool production business in the late '80s and early '90s, their name was legion. Before this depression the average price of yearling rams in carlots to breeders was about $35 per head f. o. b. cars in Wisconsin, but this dwindled to $2 or less per head in Chicago stockyards. This latter price put the "kibosh" on the Merino sheep business for some years. Then, when the revival in the sheep business commenced with the election of McKinley in 1896, other breeds came along with it, owing to a demand developing for fat lambs and good mutton in the Chicago and other eastern markets.

Sheep and wool growers on the great western ranges commenced to experiment with crossing mutton-bred rams on their Merino grades. This created a demand for such rams and every fair commenced to show a list of mutton-breeds with the tidy, compact, well-wooled Shropshire leading and acquiring a lead which any one breed has found it difficult to overcome.

Other breeds there were and among

RAISE KARAKUL SHEEP

Competes with any goat, Produces fur, wool and mutton.

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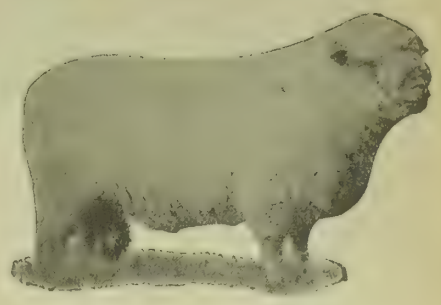

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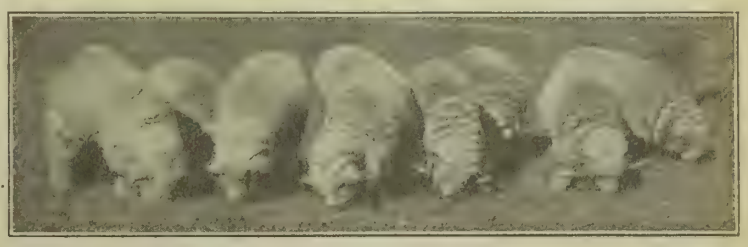

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60 Head of Three-Year-Old Merino Rams

Pure Bred. Bullard raised.

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them the long wools, including the Cotswolds, English Leicester and Lincolns, some of which were seen at the best of the county fairs. The small fairs did not usually have all three of these breeds on their premium lists. One breeder, with a small but good flock of Cotswolds, exhibited at a circuit of county fairs in his State, and it so happened that sometimes Cotswolds would be listed and sometimes one or the other of the long-wooled breeds. There was no competition and his flock of Cotswolds were shown as specimens of whatever long-wooled breed happened to be named on the list. People were not familiar with the different types, and as long as competition was lacking, no one asked for certificates of registration and the deception was carried out.

The Mutton Sheep Arrives.

The advent of the mutton sheep brought with them the trimming and fitting so dear to the heart of the shepherd. Weight of fleece ceased to be a leading qualification, and flocks of Rambouillets and Merinos commenced to be shown at fall fairs, with a fleece of full 12 months' growth. Trimming is also practiced to some extent. An oil dressing is also applied to most of the sheep of Merino descent, be they Rambouillets or American Merinos. The old American Merino, if kept well blanketed and housed, did not need the dressing, and most of them would show a wonderful bloom without. The Rambouillet, not having the yolk with the characteristic of flowing so freely, had to have an oil dressing to give them the bloom of their predecessors.

The registration of even "show" sheep has, until late years, not received much attention in California, but now the demand for registered sheep is increasing, more attention to this point is being paid at the fairs.

Fire destroyed a large acreage of hay on the farm of the California Polytechnic School last week. It is thought the fire was set by a northbound freight engine.

Ranch San Julian and Shorthorns

(Written for Pacific Rural Press by Thos. F. McConnell.)

One of the old time ranches of California situated about midway between Las Cruces and Lompoc in one of the most beautiful regions of the world where almost everything that is worth while grows, makes a specialty of Shorthorn cattle. Thirty excellent breeding cows in the registered herd and some 2,000 cattle on the range comprise what must be one of the most satisfactory cattle holdings in California. A principality in itself. It is a beautiful road getting to it, a pleasure to stay there and difficult to decide to leave.

John Troup, the superintendent, and Herdsman Ernest Reynolds, certainly endeavor to make a visit pleasant, first by filling the eye and mind with so many good Shorthorns and Clydesdale horses that it would take nothing short of a book to tell it all, especially if the good points were all mentioned.

The show herd this year will be all of their own breeding and consist of 11 head. The bull at the head of this list is Baron Lancaster, a white Senior yearling sired by Hallwood Flash, with plenty of substance and constitution. If the other breeders show herds of their own breeding or otherwise that are equal to that of the Rancho San Julian in quality, type and numbers we will have a Shorthorn exhibit second to none .

Bashan Augusta, the grand champion Shorthorn bull at Sacramento last year, will not be shown this year. He has many excellent calves, some of which will creditably represent their sire in the show ring both this year and future ones.

Imp. Cecilia, 28th, bred by Lad Gordon Cathcart of Clunie Castle, has a white bull calf by Imp. Grand Gallant that looks a winner. Seldom do we find a youngster that pleases like this one and if any one favors Scotch breeding it would be hard to find better.

Last year when the writer was at San Julian Mr. Troup was in the east and as we all know brought back the cow Imp. Bright Bess of Collynie, bred by Wm. Duthie, and she is the only Duthie bred cow on the Pacific coast. This cow's pictures hardly do her justice, certainly none that the writer has seen. To say the least she is a very satisfactory animal. One of the few animals that it is not difficult to remember and she has to be seen to be appreciated. A red bull calf at foot by Imp. Grand Gallant promises size, conformation and constitution, a sure enough herd header.

Herdsman Reynolds in talking about the registered herd said that the 30 cows produced 29 calves this year and all except one were growing nicely and that one died while Mr. Reynolds was absent.

Silage is used extensively as there are six large silos on the home ranch, which are filled chiefly with Indian corn. The corn is used as soon as large enough as a supplementary green feed for the show herd.

Some first crop alfalfa containing considerable foxtail grass was ensiled this season but has not proved a satisfactory feed. It had the appearance and odor of good silage but the nurse cows would not eat it unless starved to it. The beards of the foxtail, however, had lost their disagreeable characteristics.

Clydesdale horses of the type that meet the approval of such an expert in horse judging as Dean Curtiss, of the Iowa Agricultural College, must indeed be good. The mare, Bonnie Bloom, owned by the Dibblee estate, that was placed first and grand champion at the California International last Fall, was good enough so that Dean Curtiss urged Supt. Troup to send her to the Chicago International to compete for further honors, but it was not thought advisable to do so. She has lost nothing since and still looks every inch and motion a champion.

Large quantities of hay, range feed and grain were destroyed in a fire that swept over 20,000 acres in San Benito county last week.

The Missouri mule is the favorite of King Hussein of the Hedjas, who is the Moslem ruler of the far-famed city of Mecca.

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For information on Shires, write W. G. Lynch, Secretary, The American Shire Horse Association, Tonica, Illinois.

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STALLIONS AND MARES—YEARLINGS TO FIVE-YEAR-OLDS
A FEW PROVEN BROOD MARES
A CHOICE LOT AT ATTRACTIVE PRICES
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BEST QUALITY
At the 1919 California State Fair and at the California International Livestock Show my stallions won more prizes than those of all other exhibitors in the stallion classes combined.
LARGEST SELECTION
I have on hand at the present time the largest collection of registered stallions west of the Mississippi river.
Come where you can get the best quality and the largest selection.
Will show 18 head at the California State Fair, Sacramento, Sept. 4-12.
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Importer and Breeder
Patterson : : : : : California

THE PATTERSON FAIR

(Written for Pacific Rural Press by Ralph Newman.)

A very successful county fair closed at Patterson last Saturday. Doubtless the other features were up to par, but the outstanding thing was the display of Holsteins.

There were several good showings of Durocs by Way and Sons, Dixon & Dixon and Ordway & Snyder, and of Berkshires by Geo. M. York. There was one fine entry of draft horses by N. W. Thompson of Patterson and two small Guernsey herds were entered by C. E. Fisher and Modesto Guernsey Farm. Not a Jersey on the grounds! There are some mighty fine Jerseys in Stanislaus County, for all some of their owners seem to try to conceal the fact. How in time is a fellow going to write about Jerseys at the Patterson fair with not a single Jersey in sight?

But such an array of Holsteins for a county fair! 107 of them, not the best in all the world, but many of them exceptional animals, and all of them conditioned and groomed to perfection. G. E. Gordon of the Los Angeles Farm Bureau, who judged the Holsteins, said he had never seen at any fair a more uniformly good or better fitted lot of stock—and nobody took issue with him. (They seldom do.)

The Calf Club.

The sale is reported elsewhere. The place of honor here goes to the Stanislaus County Holstein Breeders' Association Calf Club. Some time ago we reported the formation of this club and mentioned the fact that, for all the breeders made a sacrifice, probably the highest recorded prices for calf-club calves had been paid by these boys and girls, the average being $318, with some as high as $500. Maybe they don't know it yet, but when the Stanislaus County Holstein Breeders' Association sent Bibens, Cornwell and Holmes out with a bunch of boys and girls to select calves for this purebred club they were making Holstein history for their county.

The Calf Club Awards.

In an open class of 14 senior calves, including entries from some of the best herds in this state—or any other state for that matter—the calf owned by Clay Stammerjohan of Turlock, calmly walked off with first honors—and she never stopped chewing her cud to do it. Manuel Azevedo took third in this same class.

When the calves of the two sections of the club, one called Stanislaus and the other Patterson, were judged for place they were classified as junior and senior, and five awards were made in each class. The judge, who was universally proclaimed a good one, had some job on his hands, but finally lined them up as follows:

Senior Heifers: 1st. Clay Stammerjohan, Turlock; 2nd. Manuel Azevedo, Patterson; 3rd. Adelbert Renoit, Modesto; 4th. Everett Fox, Crows Landing; 5th. Wilhelmina Fox, Crows Landing.

Junior Heifers: 1st. George Stammerjohan, Turlock; 2nd. William Stammerjohan, Turlock; 3rd. Katie May Stammerjohan, Turlock; 4th. Smith Bibens, Modesto; 5th. Linnie Cornwell, Modesto.

The prizes offered were $15 for first and $10 for second best calf.

The County Farm Bureau, co-operating with the Holstein breeders, also offered some trips to the University Farm as additional prizes. The winners have not yet been announced.

STANISLAUS HOLSTEIN BREEDERS SALE AT PATTERSON, AUGUST 21ST.

It was a notable sale in several respects.

First, there was stock worth selling and buying. Many animals came into the ring with ribbons won the day before in strong competition. The judge had said that he never saw, at any fair, a more uniformly good or better fitted lot of stock; a noted breeder stated that he had never seen a better lot of animals, as a whole, offered in any sale he had ever attended; and the auctioneer of national reputation, stated that reputation on the statement that no state fair he had ever atended displayed, for the number, a finer lot of Holsteins than these were.

The bankers of Patterson appeared in person in the ring, explained to farmers why purebreds were a good asset, and wound up by offering to loan money at 6% to any of their patrons who wished to invest in the offerings.

The sale was held under the management of the Stanislaus County Holstein Breeders' Association, A. M. Bibens, president and E. M. Morrow, secretary, and once more demonstrated the fact that an association of, by and for actual breeders, and breeders only, can pull off a great sale.

There was a new face in the box, a new voice heard crying a sale. The association secured the services of George M. Gue of Yakima, Washington, who with Col. Cy. Clark in the ring, conducted the sale. Col. Gue is known to all of us by reputation as we have followed his work in the great national sales, and the breeders were glad to meet him face to face and welcome him to California. He proved to be not only a master auctioneer, but as well, a man deeply versed in pedigrees and Holstein history—knowledge which, through his winning personality, he used with telling effect.

The sale was a real community builder. Very little was bought by the old, established breeders. Several new herds of purebreds got their start here and a number of fine young bulls went to grade herds.

The prices were good—very good. Only five mature cows were offered in a total of 38 sales. Ten of the 38 were mere calves, the balance ranging from one to two years old, eight of these being bulls. The lowest price, $105, was paid for a six months old bull calf. How it happened nobody knows, for the buyer was offered $150 for his bargain as soon as the calf left the ring—and refused it. A Bridgford heifer topped the sale at $875, going to M. T. Ruddy of Modesto, while another from the Holmes herd followed at $800. The average for thirty-eight head for $380. This beats the average for the United States last year by $19, and, considering the large number of calves, makes a very creditable showing.

THE RIVERSIDE FAIR

The Southern California Fair at Riverside continues to grow in popularity among breeders and exhibitors generally. The cause for this popularity undoubtedly comes from the fact that the Southern California Fair is in very truth a "farmers' fair." The president of the Farm Bureau of Riverside County, who is a well known breeder and exhibitor, is president of the fair.

The livestock show this Fall will be the largest in the eight years' history of the fair. The livestock buildings, which were doubled in capacity last year, have been equally enlarged this year. The exhibit of dairy cattle reflects the steady growth of this industry in the south, with splendid representation from the leading dairy herds of the State. The swine display is another strong feature of this fair. Exhibitors find that the crowds which visit the show pens are made up very largely of real farmers and stockmen, men who are judges of livestock and vitally interested in what they are looking at. For several years Riverside has staged one of the leading swine shows in the state, and this year the best herds on the coast will be represented by their best individuals.

This Fall the goat display will be much larger than last year and doubtless maintain its lead as the greatest goat show. Poultry has also always been a strong feature and the show this Fall will be put on under the directions from one of the best known poultry showmen in the state, and he promised the biggest show in the history of the fair.

The racing program is a strong one. There will be six days of racing and the speediest horses on the coast will be in the going. The track at Riverside has the fastest record in the state, and racing men are looking for some interesting events this Fall.

STATE FAIR PRIZES FOR DAIRY PRODUCTS.

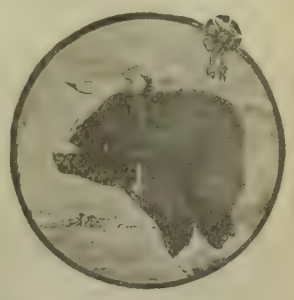
The California State Fair is offering medals and cash prizes amounting to $1,000 for exhibits of creamery butter, cheese, market milk and cream this year. Special prizes are also given to milk dealers and dairy inspectors.

Milk and cream exhibits must be shipped on August 30th and sent express prepaid to Director in Charge of Dairy Exhibits, Consumers' Ice and Cold Storage Company, Sacramento. The Butter and Cheese exhibits must be shipped express prepaid to Director in Charge of Dairy Exhibits, Dairy Building, State Fair Grounds, Sacramento, and must reach the Fair Grounds by 6:00 p. m. September 3. All exhibits should be carefully packed to withstand warm weather, and the milk, cream and butter exhibits should be packed in ice for shipment.

E. PETERPOSTEN
HUGHSON, CAL. ROUTE 1, BOX 135
BREEDER REGISTERED HOLSTEIN CATTLE
Bull Calves from A. R. O. Dams for Sale

Lone Oak Holsteins
AT THE STATE FAIR
See some of the animals that will be sold later in my
DISPERSAL SALE.
J. W. BENOIT
MODESTO, CALIFORNIA

HOME OF THE ORMSBYS
The Highest Testing Family in the World from One Dam
Herd Headed by King Korndyke Hengerveld Ormsby 7th
His daughter won first and Junior Champion in class of 14 at Patterson Fair.
40 of his Daughters included in our
Big Dispersal Sale to be held this Fall
Watch for announcement of date and full particulars.

Senior Sire—Grand Champion
KING KORNDYKE HENGERVELD ORMSBY 7TH

KOUNIAS REG. STOCK FARMS - Modesto, Cal.

Livestock Queries and Replies

Bitter Butter.—Butter made from cream not over 3 days old is bitter. The cow is young, healthy, and has been fresh but one month. Feed is wheat and alfalfa hay that is of good quality and free from weeds. Conditions are of the best. Can you suggest a remedy?—G. J. P., Hayward.

A bitter characteristic that develops after the milk is drawn is due to bacterial contamination. It may take place at time of milking. The rejection of the foremilk or first milk, drawn when commencing the work by milking the first few streams from each teat upon the ground, or into a separate utensil may eliminate the undesirable bacteria. If this does not prevent the trouble, then it may gain access to the milk from dust from hay fed at milking time or some utensil with a crack or neglected place where the germs live and inoculate each batch of cream or milk. Try the rejection of the foremilk. This has proven to be the cure for this trouble more than once.

Orphan Pigs.—What would you advise as feed for pigs one month old deprived of their mother's milk? How about using condensed buttermilks, such as are so widely advertised? No milk obtainable.—G. A. C., Marina.

Little pigs of this age need especial care and feeding often. Keep all feed dishes clean. No doubt a small amount of the dried or semi-liquid buttermilks could be used to advantage in feeding the little animals. The milling companies are furnishing calf and pig meals that can be used to advantage in feeding pigs deprived of their natural food. Milk is almost indispensable in very young pigs, but it is possible to raise them by using the prepared mill feeds if the animals are considered of enough value to give them the attention necessary.

Feeding Value of Sudan Grass.—What is the feeding value of sudan grass compared with alfalfa as a green crop, as silage, as hay, and as pasture for dairy cattle?—F. A. P., Corcoran.

Sudan grass has much in its favor. It is, however, an annual and has to be planted each year. As it belongs to the sorghum family hard frosts will kill it so it should not be planted in the spring until danger of such frosts is over. It will grow several crops of hay during the season, and is drought-resistant to a degree. Cattle like it as pasture or hay and it makes good silage. Sudan hay carries less than one-third as much protein as alfalfa hay, but contains more carbonaceous material, making it a much wider ration. To produce the most milk it should have some balancing high protein concentrate, like cocoanut meal, cottonseed meal, or wheat bran, fed with it. If it is to be used for silage some whip-poor-will cowpeas, or velvet beans, may be sown with it which will make a silage ration that is much better balanced. After all, if land has water on it, alfalfa will grow more milk-producing food than any other crop, everything considered.—Livestock Editor.

Cooked Beans. What is the feeding value of cooked beans and prunes for hogs?—M. S., Los Molinos.

Prunes in quantity give an undesirable quality to pork. It requires over 400 pounds of beans when fed alone to produce 100 pounds of rather soft pork. Fed in connection with barley, corn, or molasses, excellent results would be obtained. A ration composed of one part beans to 2 parts barley would give excellent results. The beans should be salted when cooked.—Livestock Editor.

Barley for Dairy Cows.—I have 20 acres of good barley, and as the alfalfa crop will be short I wish to know if barley is a desirable feed for dairy cattle. My neighbors tell me it will dry up my cows.—S. S. C., Patterson.

Alfalfa is especially productive when fed to dairy cattle. If cows are taken off alfalfa and put on barley hay they would fall off in milk production. Cattle do not like barley hay nearly as well as the alfalfa, and will not eat so much of it, therefore the milk machine (cow) is not supplied with the necessary feed that she likes and the milk yield decreases. The best way to feed the barley would be after it was threshed and rolled or ground, feeding one pound of the ground barley to each cow for each 5 pounds of milk produced. This grain ration, if fed in connection with, say 20 to 25 pounds, of alfalfa hay per day per cow—the results in milk production would be very satisfactory.—Livestock Editor.

WHERE'S THAT SIGN, MR. BREEDER?

Time and time again your attention has been called to the importance of having signs up to let the public know where that purebred herd of yours may be found. Still your place is unmarked. Driving around hunting breeders, one might think the average breeder had done something wrong and was trying to hide, so hard is it for a stranger to find the place. Maybe you are like the grocer who quit carrying a certain article. He said folks ran after it so much they bothered him. If you are breeding stock just for your own amusement, all right; but if you really want to sell animals, why not do as other business men do and let the public know where you are by putting up a good-sized sign where the wayfaring man, though a fool, cannot fail to see it.

The National Holstein Breeders' Association realize the importance of the above suggestion. They have a neat metal sign bearing the likeness of an ideal Holstein and below that the legend: "Holstein-Friesians on This Farm. The Stanislaus County Association is moving to place one on every Holstein farm in the county, with the addition of the breeder's name. Every breeder of everything ought to follow suit. Let us know where you are.

Breed for BUTTER FAT

The 20 Daughters of Dutchland Sir Pietertje Creamelle

in my herd are all high testers, averaging well over 4 per cent and they have records at two years or younger, averaging over 20 lbs.

Have for sale a few of his sons out of good producing cows, also bulls out of his daughters, sired by KING KORNDYKE SADIE VALE.

F. Stenzel
San Lorenzo, - Calif.
Breeder of High Test Holsteins.

CLARK, HUNTER & CLARK
LIVESTOCK AUCTIONEERS
915 I St., Modesto, Calif.
Registered Hog Sales a Specialty

Holmes Stock Farm

Segis Pontiac Abbekerk 227213
My herd sire—brother of dam of $41,000 bull

I am giving him a chance to make good the wonderful production and breeding represented by his pedigree by breeding to him the great cows in my herd, including Ida Lotta Winifred Burke, Eldorado Winifred, Winifred Hotaling 2nd and Mona Fabes 2nd, with records from 30 to 34 lbs. in 7 days and now on yearly test and going strong.

See Him with My Show Herd at the Fairs

R. L. HOLMES
MODESTO, CALIFORNIA

REGISTERED
Holstein Bulls
FROM 14 GALLON MILK STRAIN
At FARMER'S PRICES

Now is a good time to purchase your fall herd sire while the selection is choicest.

M. M. HOLDRIDGE, San Jose, Cal.
R. F. D. A, Box 437. *One and one-half miles north*

THE VICTORY HERD OF HOLSTEINS
Holsteins of known value, headed by Sir Piebe De Kol Segis Pontiac, a son of King Segis Pontiac Count, acknowledged one of the breed's greatest sires, and our junior herd sire, King Pontiac Alcartra Prilly, whose dam made 36.61 lbs. butter out of 805 lbs. milk in 7 days, now on yearly test. A young bull from this herd is a profitable investment.
HILLCREST FARM, H. E. Spires, Mgr., Caruthers, Cal.
Duroc-Jersey Swine of Highest Quality

DIGESTER TANKAGE
Send for Sensible Folder on Feeding Hogs
WESTERN MEAT COMPANY
Animal Food Dept. 704 Townsend St., San Francisco

Dairy Cattle Exhibitors at the State Fair

M. Fortini Jersey breeder of Orland, who made such a sensation last year by the exhibition of one supreme animal will come back this year with seven head. At that rate the two million dollar parade ought to be a reality. With the 7 head Mr. Fortini will fill many of the classes.

Guy H. Miller of Modesto with his Venadera herd of Jerseys will show 16 head if he can get help enough to do so. Let us hope he will. He will fill nearly all classes with the usual or even better quality stock. He will show get-of-sire by Jap's Perfection Owl and also by Altama Interest. Wanda's Altama Interest will show as senior yearling.

Four animals from H. E. Cornwell's of Holsteins will be shown and his son and daughter will each show one as members of a Calf Club.

King Segis Alcartra Prilly the grand champion Holstein bull last year will again be shown by the Bridgford Holstein Company of Patterson who are coming out this year with a show herd composed of the above named bull and 9 of his get. Coming from this noted show and production herd we all look forward with interest for this exhibit.

This may be a Jersey year at the State Fair as J. E. Thorp owner of the Mossdale Herd of this breed at Lockeford will have 18 head to compete for high places. He will enter nearly all classes with two in each of some classes. Mr. Thorp will show an excellent bunch as he always aims to have his exhibit a little better than the previous year if that be possible.

Todos Santos Ranch owned by E. D. Barry Jr. at Daggett has 8 Holsteins entered.

R. L. Holmes of Modesto swells the Holstein-Friesian list by 17 and if they are even in their usual condition they cannot help but attract attention. Mr. Holmes is rapidly coming to the front as a Holstein breeder.

Allana Farm of Dixon, has 8 head of Holsteins entered. J. P. Phillips the owner knows and shows good cattle always.

Anderson and Fogarty enter only three but will try quality against quantity and it usually wins in the showing.

Another southern California Holstein representative is the California George Jr. Republic of Chino, eight head is their quota this time.

Heading the 24 head of Holsteins coming from the Santa Anita Rancho owned by Anita M. Baldwin is the $41,000 bull purchased at the Minnesota Guaranty sale. This herd will be a Holstein show in itself.

An exhibit of high quality will be that of J. W. Benoit of Modesto. His herd is headed by Lonoak Terjool Korndyke a bull of marvelous quality.

Dean Beeman of Woodland is making his first exhibit of Holsteins at the State Fair this year. His entry of 7 head was the first on the books this year. Mr. Beeman's cattle combine utility and beauty.

R. C. Gruhlke of Dixon is another new exhibitor in Holstein classes this year. He has 2 head entered.

Dr. E. J. Weldon of Sacramento has 6 head of Holsteins entered, but he has leased his herd and deponent sayeth not whether they will be exhibited or not.

C. E. Barrows likes Bershire hogs but he has 3 Jerseys entered. It is safe to say Charlie will have good ones in line.

H. G. BALL PLACE TULARE CAL.
Breeder of
Reg. Holstein Friesians and Big-Type Polands
Best Blood Lines
H. G. BALL, Prop.
Tulare, California

THAT SPEEDY LAMB.

The smart young city feller had been engaged by the dyed-in-the-wool old farmer to help out for the summer, and the latter was determined to show the durn dude where he got off.

"Go out on the meadders and round up all the sheep and bring 'em in," he ordered.

The city-born hick returned in three hours panting and disheveled, but with all his charges safely in tow. The farmer was somewhat mollified.

"Pretty good," he commented, "but what's the idea of the jack rabbit?" pointing to a white, furry object that lay on the ground even more exhausted than the farmhand.

"Good Lord, is that a rabbit?" ejaculated the green hired man. "I thought it was a lamb. That's the one it took me so long to catch."

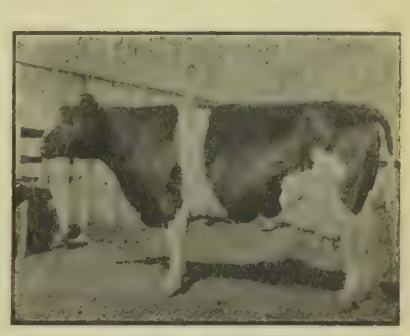
Sunnybrook Ranch Holsteins
H. H. SISSON WILLITS, CALIF.
SIRES IN SERVICE
Ensign Korndyke Model Pontiac
Son of "Chimicum Spring Farm King Pontiac," and "Korndyke Model Hartog 2nd," butter 3 years 27.45 lbs., half sister to the new world's record 3-year-old "Lady Aaggie Echo Hengerveld."
Riverside Segis Pontiac Burke
Son of "Segis De Kol Pontiac Burke" and "Lady Pontiac Ardsa Hengerveld," a daughter of "Ardsa," butter 24.22 lbs., and granddaughter of "King of the Pontiacs."
You would want one of our young bulls if you saw them.

J. M. CAMPBELL
Escalon, California
Member Escalon Holstein Breeders' Association.
HERD SIRE--Prince Gelsche Walker 11th
Son of Prince Gelsche Walker and out of dam who made 563 lbs. butter in 1 year at 2½ years of age.
FOR SALE
Young bulls from my herd sire out of large producing dams.

HOLSTEINS for TYPE and PRODUCTION

NATTALENE WALKER
Record at 3 years, 4 months:
7 days: Butter 34.316 lbs.; milk, 818.2 lbs.
30 days: Butter 134.76 lbs.; milk, 3319.9 lbs.
Both 7 and 30 day milk records are world records.
Thirty-day butter record is California record for age.

OUR HERD SIRE: KING SEGIS ALCARTRA PRILLY.
Grand Champion at California State Fair, both 1917 and 1918.
His get one first as get-of-sire, first calf herd, junior champion female, first and second junior heifer, and first and third senior heifer.



ADIRONDACK WIETSKE DAIRY MAID.
Record at 6 years, 9 months.
7 days: Butter 41.016 lbs.; milk 831.7 lbs.
30 days: Butter 158.31 lbs.; milk 3603.1 lbs.
60 days: Butter 304.95 lbs.; milk 7242.2 lbs.
Her 7, 30 and 60-day records are Pacific Coast records for both milk and butter. Her 30 and 60-day records are United States records for combined milk and butter.

Leading Winners of the California 1919-20
Largest Prize winners of any herd in California for butter and milk production for 1919-1920. Won 6 firsts out of 14 won by California cows, including 4 world's records.
YOUNG BULLS FOR SALE
From prize-winning dams and sired by our three times Grand Champion bull, KING SEGIS ALCARTRA PRILLY, or our senior sire, KING SEGIS ALCARTRA ABBEKERK, whose 12 only daughters to freshen average on official test over 22 lbs. butter in 7 days at an average age of 2 years old.
See Our Exhibit at the State Fair, Sacramento, September 4-12.
BRIDGFORD HOLSTEIN COMPANY
PATTERSON, CALIFORNIA

AUCTION SALE

—OF—

Registered Holstein Herd

HENRY VAN TIGER, Auctioneer,
Will Sell at Public Auction, on

Thursday, September 16, 1920

at 10:30 a. m. sharp on the premises 12 miles southwest of Marysville, 1 mile southeast of Tudor, on the River Road, Sutter Co., Cal., the property of

MRS. CORA HAGUE

DESCRIPTION OF PROPERTY

120 head of registered Holstein dairy cows, among which are 65 head of high grade young registered Holstein cows, all registered Korndyke; a number now springing; 46 head of 1 and 2-year-olds; 15 head of choice selected large heifer calves; 2 registered Holstein bulls, 2 and 3 years old; 13 head of beef steers; cream separator, cans, pump and everything that goes with a high-class dairy; 1 10-25 new Samson tractor; 1 new set of plows, 12-inch bottoms; new set of 8-ft. double discs; 1 5-ft. mowing machine; 1 self dump hay rake and many other articles.

The above is a choice herd and the registry papers will be given the buyer on day of sale.

SALE POSITIVE. GOOD LUNCH.
TERMS—CASH

MRS. CORA HAGUE, Owner
HENRY VAN TIGER, Auctioneer
Office: Western Hotel, Marysville, Cal.

HOLSTEIN BREEDERS' ASS'N STANISLAUS COUNTY

A. M. BIBENS, President
E. M. MORROW, Secretary
Modesto, Calif.
See Stanislau Co. Holsteins at State Fair

"ORMSBY"

Means Quality and Production.
Get a young bull sired by King Korndyke Hengerveld Ormsby 7th
KOUNIAS REG. STOCK FARM
Waterford Road
P. O. Box 296, Modesto

HOLMES STOCK FARM

Modesto
REGISTERED HOLSTEIN-FRESIANS
Prize-winners at all Shows.
Inspection invited and satisfaction guaranteed. Write for prices.
R. L. HOLMES, Prop.
See Us at the State Fair.

BRIDGFORD HOLSTEIN CO.

Patterson
THE CHAMPION SHOW HERD
The herd of high records.
STOCK FOR SALE.
Visitors Welcome.
See Us at the State Fair.

WALTER K. ADAMS,

Rte. 1, Box 245, Modesto
BREEDER OF REGISTERED HOLSTEINS AND POLAND-CHINAS

A. M. BIBENS,

Modesto
BREEDER OF REGISTERED HOLSTEINS
Some fine young bulls for sale.

BULLS AND BULL CALVES

Sired by SEGIS DUTCH ORMSBY
My 32-lb. Herd Sire
Out of A. R. O. dams.
JOHN SAXER, - Modesto, Cal.

H. E. CORNWELL

MODESTO - - CALIFORNIA
Prescott Road, 1 mile from Highway
If you want to see some of the best Holsteins in the State, visit my herd.
YOUNG STOCK FOR SALE
See Us at the State Fair.

R. H. DAVIS

REGISTERED HOLSTEINS

Route C. Box 196, Modesto, Cal.
Animals of both sexes for sale.
Herd tuberculin tested.

BULLS FOR SALE

From 1000-lb. sire and high-producing dams that carry same blood as Belle Fasko DeKol Witkop the highest prize winner in the Holstein Friesian Association of America last year.
FREEMAN (E. E.) & EDWARDS
Modesto, Calif
See Us at the State Fair

LIVESTOCK AND DAIRY NOTES.

Dr. L. J. Anderson of Eldorado County has been appointed Field Secretary by the Duroc-Jersey Breeders' Ass'n and will travel the State in the interests of the red hog.

The greatest ram sale of the West, the Salt Lake City Sale, is scheduled for Aug. 30 to Sept. 2 inclusive. Over 2,000 Rambouillets, 850 Hampshires and many other breeds will be offered.

R. L. Holmes of Modesto, proprietor of Holmes' Stock Farm, has with buying and breeding gotten an excellent herd of Holsteins together. He will take some to the National Dairy Show in Chicago in October.

The Pino Vista Ranch, owned by H. C. Baum of Placerville, will have an exhibit of Duroc-Jersey swine at the State Fair. Mr. Baum breeds good stock and some blue ribbon winners will undoubtedly be shown.

Nine carloads of hogs will be sold this year at the second annual Pork Day at Hanford. Carloads are entered from Corcoran Island, Lemoore, Paddock, Hanford, Grangeville, Armona, Hardwick and the Boys' Pig Club.

Ensley & Sons of Charleston, Ill., are coming to the California State Fair with a large exhibit of Hampshire hogs. These gentlemen are among the very oldest breeders and boosters of the belted beauties in the world.

The Spencer Ranch Co. of Cranmore have entries in both the purebred and range divisions. They will show Romneys in the purebreds, longwools in range classes and entries in the "medium wool" and "grades and crosses" fat classes.

E. E. Greenough, Jersey breeder of Merced, sold 6 bull calves to the Petaluma Calf Club in July, and a letter acknowledging receipt of them by W. B. Hopkins commented on them as being satisfactory and that they were received in good condition.

J. W. Benoit, owner of the Lone Oak Farm herd of Holsteins at Modesto, announces the complete dispersal of this excellent producing and show herd at public sale October 15th under the management of the Stanislaus County Holstein Breeders' Ass'n.

The ram sale that perhaps approaches the nearest to the Salt Lake sale is the one held at Filer, Idaho, this week under the auspices of the Southern Wool Growers' Ass'n. They offered 2,000 head of the various leading breeds of sheep Thursday and Friday of this week.

Secretary Meredith under the authority conferred by the Food Control Act ordered licensed commission men at the principal stockyards to discontinue the schedule of increased commission rates put into effect on August 2, 1920. The commission men were given until Aug. 21st to comply with the order.

At a meeting of dairymen held at Fresno, Aug. 11th, the practice of winter dairying was advocated to eliminate the glut of milk and butter markets during the spring and early summer months. H. E. Vogel follows this system and he is satisfied that cows freshening in the fall will produce more than if allowed to freshen in the spring.

The annual meeting of the California Poland-China Breeders' Ass'n will be held on the evening following the Poland-China judging at the State Fair. This meeting will be held in the Association Building just completed at the Fair Grounds. Election of officers and transaction of other business. Every breeder of Poland-China hogs is urged to attend.

The John Lynch Ranch, breeders of Milking Shorthorns, writes they have sold a splendid lot of registered Shorthorns recently. A 10 months' bull, Count Wapsie, went to J. C. Burriss of Lakeport; a 9 months' bull to R. A. Nelson of Sisson; Wildwood Lass 6th, a 6 months' heifer, to Thos. E. Perry, Pine Creek, Oregon; Sir Oxford, a 6-month bull calf, to Mrs. J. L. Aldrich, Ryde, Calif. This ranch is well known for its fine Milking Shorthorns.

Santa Anita Rancho

ANOAKIA BREEDING FARM

KING KORNDYKE PONTIAC ACME
OUR JR. HERD SIRE

HE IS the World's Greatest Long Distance Bred Bull and may be seen at the Sacramento State Fair with 23 other representatives of our herd. He will be glad to meet you there and so will we.

Only a few approved cows will be booked for breeding to "King Korndyke Pontiac Acme."

PRINCE WALKER CORNUCOPIA
OUR SR. HERD SIRE

Sire—
PRINCE GELSCHE WALKER
Dam—
ALBIA SADIE CORNUCOPIA CRETIA
Butter, 7 days, 3618
Butter, 338 days, 866.
Milk, 338 days, 18,639

"Prince Walker Cornucopia" will be represented in our Show Herd by his sons and daughters. We are mighty proud of the type and producing quality of his get.

Owing to the fact that he has sired a greater percentage of heifers than bulls, we only have a few of his sons for sale, out of A. R. O. dams, backed by 7 days and yearly records.

GUARANTEE.

We guarantee every animal sold to be a breeder—free from tuberculosis and subject to 60 days retest.

If unable to visit us—write. Your correspondence will be answered promptly.

SHOW HERD

Our Show Herd will be exhibited at the following Fairs: State Fair, September 4-12; Tulare Live Stock and Agricultural Show, September 14-18; Ventura County Fair, September 22-25; Los Angeles Live Stock Show, October 2-10,; So. Cal. County Fair, Riverside, October 13-19.

ANITA M. BALDWIN
OWNER
SANTA ANITA, CALIFORNIA

Penobscot Ayrshires

Pure bred Ayrshires for sale at reasonable prices. Our herd is founded on imported Canadian stock.

We are nine miles from Auburn. Visitors welcome.

The Penobscot Farm
Cool, Eldorado Co. Calif.

LEONARD FARM JERSEYS

Bulls from register of merit cows.
Write for prices and pedigrees.

ALSO

DUROC-JERSEY SWINE

W. J. HACKETT : : : : CERES, CAL.

REGISTERED JERSEYS

4 HEIFERS FOR IMMEDIATE SALE

D. F. CONANT

Route B. Box 231 MODESTO, CALIF.

BREED FOR

BEEF and MILK

DAIRY

SHORTHORNS

SUPPLY BOTH.

Authorities admit they are the greatest dual-purpose breed

Santa Rosa Stock Farm

HERD HEADED BY

Count Tickford

Junior Champion 1919 at California State Fair and Portland Pacific International

CHOICE BULLS FOR SALE
Call and see them, or write

THOMAS HARRISON, Prop.
SANTA ROSA, CALIFORNIA
See me at the State Fair

INNISFAIL

Dairy Shorthorns

We will show 19 head, including the great show bull

Westward Ho

SEE OUR HERD

Notice the type and study the blood lines. Built up from the leading milk-producing strains of the breed. Young stock for sale out of large cows of big milk production.

Entire herd tuberculin tested.

J. D. ROWE & SONS
Davis, California
Also Breeding Duroc-Jersey Swine.

REGISTERED

Dairy Shorthorns

FOR SALE

Bulls and Heifers from good producing dams.

Herd sires are Oxford Duke 2d, No. 396933, and Frantic's Royal Type, No. 792550.

The JOHN LYNCH RANCH
P. O. Box 321, Petaluma, Calif.

BEEF CATTLE EXHIBITORS AT STATE FAIR.

Jas. T. Marwick, owner of Braemer Ranch at Santa Barbara, will have four of the five Aberdeen-Angus he imported from Scotland recently, in line for the blue ribbons.

Among the Hereford breeders exhibiting will be H. M. Barngrover of Santa Clara, with 14 head from Veramont Farm in Plumas county. Last year this herd made an excellent showing and without question it will come back stronger than ever. Nearly all classes will be filled.

San Diego county Herefords are coming to the State Fair this year and D. H. Ogden of Alpine will have 9 head in line for prizes. Steers from Mr. Ogden's ranch topped the California market for April, May and June this year. The senior herd sire is California Real Beau Rupert.

Ormondale Ranch, Redwood City, of which Jas. McDonnell is superintendent, will have only four of their Shorthorns in competition this year. A young bull by Hallwood Villager, Little Sweetheart 2d, a full sister of Little Sweetheart and Ormondale King, a full brother to the grand champion, are among those to line up for the approval of the judge.

Twelve Shorthorns from Blackhawk Ranch at Diablo, owned by Easton & Ward, are entered and will materially help to make the greatest Shorthorn exhibit ever staged at Sacramento.

Seventeen head of Shorthorns will comprise the list shown by Thos. Harrison, the well-known Milking Shorthorn breeder of Santa Rosa. Count Tickford is the herd sire and will be a very strong competitor. Mr. Harrison will fill all classes except aged herd.

A new exhibitor in the Hereford classes will be Romie C. Jacks of San Francisco and Chualar with his Imperial herd filling all classes, except "young herd." With six bulls, young and old, and 8 females, this new herd, with Jas. Price as herdsman, will be strong competitors for the highest honors.

The Diamond G Herefords, owned by H. H. Gable of Esparto, will show 8 head this year, but none of the herd sires are in the list. Mr. Gable writes he has a very excellent lot of calves by Don Perfect 2d this year.

Wm. Bond of Newark will show 9 head of Shorthorns, nearly all sired by his great bull, Sir Type. It is getting to be quite a fashion to show California-bred stock, which fashion we prophesy will increase with this years.

J. D. Rowe & Sons of Davis, lessees of the Innisfail herd of Milking Shorthorns, will fill all classes. Westward Ho, Innisfail Favorite and Westward Clay are the bulls that are on the show list.

Hillcrest Stock Farm, Davis, T. S. Glide, owner, will make their usual strong showing in the Shorthorn classes. Little Sweetheart, grown out and developed to grand championship form at this farm, will be shown with a beautiful heifer calf at foot by Diamond Count. The show herd consists of 14 head, filling practically all classes.

Seven Shorthorns from the Brighton Farms herd of Perkins will be at the State Fair to compete for first honors. They have a nice bunch of young heifers and bulls, some of which will be at the State Fair.

Chas. Rule of Duncan's Mills, and owner of the Golden Rule herd of Herefords, will show only two head. From all reports these will be strong bidders for supreme honors.

Pacheco Cattle Company of Hollister will show 14 head, and it is safe to say that Norman Hale will have a finely fitted bunch in the line-up. Among others that are good is a young bull that ought to be a very strong bidder for the topnotch if he has kept coming as he promised.

The Nevada Hereford Ranch at Wells, owned by Jno. H. Cazier & Sons Co., have 13 head entered this year and will fill all classes except aged herd and 2-year-old heifer class. One herd sire, Beau Blanchard 76th, will be shown.

(Continued on page 290.)

Ormondale Shorthorns

HEADED BY

GOLDEN GOODS, JR.

By Golden Goods, out of Roan Marble 3rd, tracing back to Imp. Gem by Beaver. Golden Goods Jr. sired Little Sweetheart, the World's Champion Shorthorn cow.

JUNIOR HERD SIRE, BOQUHAN GUINEA STAMP

the great $12,000 imported young Broadhooks bull, won second and third in leading Scotland shows as a yearling.

OUR FEMALE HERD comprises the very best Scotch breeding, tracing to Imp. Sorrel by Roan Gauntlet, Imp. Volumnia by Cumberland, Young Mary by Jupiter, Imp. Orange Blossom 31st by Roan Gauntlet, Imp. Sunray by Stockwell, Orange Lassie by Orangeman, Queen's Generosity by Royal Duke, Ramsden Queen by Roan Winner, Roan May by Golden King, Snowball by Bessie's Count, etc.

We are offering for this season some fine yearling bulls and senior bull calves, out of our best cows by Golden Goods Jr. and Hallwood Villager. Fit to head any herd.

SEE OUR SHOW HERD AT THE STATE FAIR

Ormondale Ranch

JAMES McDONNELL, Supt. REDWOOD CITY, Rt. 1

HILLCREST STOCK FARM

Home of Little Sweetheart, World Champion Shorthorn

Shorthorn Cattle

Shropshire and Merino Sheep

RAMS AND BULLS FOR SALE

Single or in Carload Lots

See Hillcrest Shorthorns at the State Fair

T. S. GLIDE, Prop. DAVIS, CALIFORNIA

The Brighton Farm Herd of Shorthorns

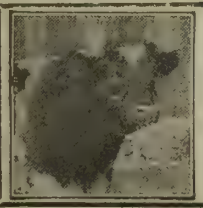
OFFER FOR SALE

10 HEIFERS—10 WEANLING CALVES

See our Stock at the State Fair

VISIT OUR FARM, 4 MILES EAST OF THE FAIR GROUNDS

H. L. & E. H. MURPHY
Perkins, California



SHORTHORN CATTLE MAKE GOOD

The good-milking, well-fleshed Shorthorn cow is the popular favorite on the farms. Shorthorn steers are continually selling at the top of the markets. Shorthorn cows are making milk records far in excess of many strictly dairy-bred cows. Use a Shorthorn bull and put in two or three well-bred Shorthorn females.

AMERICAN SHORTHORN BREEDERS' ASSOCIATION
13 Dexter Park Ave. Chicago, Ill.

Kansas Financing Community Breeding

(Written for Pacific Rural Press by Ralph Newman.)

The other day, on "the friendly road," an auto tourist from Fort Scott, Kansas, told the writer of a plan adopted there to get a wider distribution of purebred Holsteins among the farmers of Bourbon county. I jotted down the facts as he stated them and I am sure he had them on straight for they are now beginning to appear in Eastern dairy papers.

A Distributing Stock Company.

The scheme is embodied in what they call the Bourbon County Holstein-Friesian Company, organized to promote the community breeding of the best Holsteins. My informant didn't know where the plan originated, but did know that in this instance a committee from the Bourbon County Farm Bureau, with the Farm Advisor at its head, came to the Fort Scott Chamber of Commerce with an outline of the plan.

It was pointed out that the county was much in need of more purebred dairy stock, that many farmers were not financially able to make the initial investment to secure the highest class of stock, that many who secure a few cows could not afford to keep a first quality bull just for a few cows, and that a stock company could be organized to purchase and own cows to be distributed among the farmers in such a way that the offspring could be made both to furnish foundation stock for the farmers and ultimately pay off all obligations. The plan looked so good to these hard-headed business men that they took hold hold of it with a will, and in co-operation with the Farm Bureau worked out the details.

A stock company was organized with a capital stock of $100,000. Each farmer desiring the use of company cows was required to take stock in the company to the value of $100 for each cow he received, and, of course, shares in the dividends the same as any other stockholder. About half of the stock was disposed of to farmers, the other half going to city men wise enough to see the advantages of the plan.

All the livestock bought by the company remains the property of the company, but it is distributed among farmer members who are willing to meet the rules laid down for its care. The farmer who takes the cows receives all the milk and one-half the value of the calves. The bull calves are to be sold before they are a year old and the money divided. The females are to be kept for five years, at the end of which time they are to be sold, the money to be divided between the farmers and the company, and the company dissolved.

The Company at Work.

The plan perfected and the capital in hand, the company has begun to function. One hundred head of registered cows have already been distributed to twenty farmers, and another hundred head are to be bought, or perhaps have been bought by this time. The cows were purchased in the mid-west, range in age from two to five years, and cost on an average about $400 each. They were selected by a committee composed of two dairymen, the Farm Adviser and one banker. The informant assured me that the dairymen and Farm Adviser were good judges of dairy cows, and that the banker also knows several things about them. He went along, however, to watch the financial end. On arrival the cows were divided into three groups. The best twenty in one group, the poorest twenty in another, and the rest in a third group. They were distributed by lot, the numbers being so arranged that each dairyman drew one from the first and second groups, and the balance from the third. Everybody thus got a square deal.

Several proven bulls of high quality, and all backed by good yearly records, have been bought for use on these cows. They are all to be in charge of a caretaker employed by the company. He has been supplied with a motor truck especially fitted for the purpose, and when a dairyman member desires to breed a cow the chosen sire is loaded into his "Pullman" and transported to the ranch. By this plan the sires receive the best of care, and the dairyman is relieved of all responsibility.

Another fine feature is the employment by the company of a skilled veterinarian to care for the health of the stock. He makes the rounds regularly and is subject to call in emergencies. I gathered that this doctor's main job will be what all doctors' jobs should be—to keep the stock in a healthy condition; and we will all agree that it is a fine stunt. Many a fine but small herd does not get the veterinary attention it should have, because the small breeder hesitates to incur the expense involved in an individual call from a veterinarian, often miles from the seat of trouble. Frequently he hesitates so long that the doctor can do little or nothing when he does arrive.

One Big Advantage.

This Kansas plan is a godsend to the small dairyman. I have wondered at times if the small dairyman with very limited capital were not doomed; if we were not drifting toward a centralization of dairy ownership by large aggregations of capital and dairy labor by virtual serfs. The academic dictum of the hour is that dairy profit must be sought in better cows and better feeding. And it is true. "Breed, Feed, Weed" is a slogan we must heed. But tell me how the small dairyman, whose every dollar is invested and whose check at the end of the month never more than meets his running expenses if it does that, is going to get a start in high priced breeding stock, maintaining a higher priced bull to increase that stock, buy high priced food essentials to develop the stock, and at the same time go right on meeting the regular monthly farm and household bills. We have heard men with the academic point of view say "let such a man drop out. If a man hasn't gumption enough to have made a better start than that, he cannot expect to succeed and he must not charge his inefficiency against society." Well, what would happen if all the small dairymen of this state, who own mediocre cows and who now simply cannot make the investment involved in a purebred foundation herd,—what would happen if they were to take the academic gent's advice and drop out? In the first place we would have an acute famine in dairy products. In the second place we would have an inrush of large aggregations of capital that would hasten, and fasten on our dairy industry, ownership by the few and the loss of independence, to say the least, by the many. Which is best; which is American; which will best secure the present and insure the future of our rural life, a few immense dairy farms dotted over with huge barns and little "laborers' cottages," or large numbers of small dairy farms, each one the abode of an upstanding, independent farm owner with a real farm home? It oughtn't to take long for any red-blooded American to answer that question.

If we want the small dairyman to endure in numbers, one of the first things that should be done, and one of the most important things, is to make it financially possible for him to secure better stock and to secure it in a hurry. Shown the financial possibility of such a thing, the average dairyman of today will not need much coaxing. The educational campaign has about run its course along this line. The advantage of high producing stock has been preached and demonstrated until the message has gone home to most of us. The problem at this point at this time is not educational but financial What's needed in this crisis is not more preaching but some ready money.

Have They Hit It?

To my mind at least, those fellows back in Bourbon County, Kansas, have hit upon the solution of the problem. Most any dairyman could dispense with enough of his scrub or grade

Diamond G Ranch
REGISTERED HEREFORDS

Our herd now headed by **DON PERFECT 2D**, by the great breeding bull and International Grand Champion, **POINT COMFORT 14TH**—one of the best sires ever brought to the Coast.

SEE OUR SHOW HERD AT STATE FAIR

A CHOICE LOT OF SERVICEABLE BULLS FOR SALE

H. H. GABLE, . . . Proprietor

ESPARTO, CALIF.

RANCH 7 MILES NORTH OF ESPARTO

Rule's Anxiety 4th Herefords

Contains more Gudgell & Simpson bred cows than any other herd west of the Rocky Mountains. Head herd bulls,

DANDY MISCHIEF, by the mighty Beau Mischief

SUPERIOR DOMINO 6TH, by the $21,000 Superior Domino

ROEHAMPTON 34TH, grandson of Dandy Rex.

BEAU ROSEMONT, by Dictator Fairfax.

Show at Sacramento State Fair

STOCK FOR SALE

CHAS. RULE

DUNCAN'S MILLS. CALIFORNIA

Wm. Briggs & Son

Dixon, Calif.

We are laying the foundation for a high-class herd of

Registered Herefords

Only Strictly First-Class Matrons mated to Bulls of Best Breeding and Type

See Our Show Herd at the State Fair and Live Stock Show.

WE ALSO BREED REGISTERED RAMBOUILLETS

cows to take say $500 stock in a company organized in his own county, and could put on five purebreds and care for them, provided he got all the milk and half the increase, together with the service of the best possible sires. Especially could he do this, and it seems to me, would do it, knowing that the company had no other purpose than to put the dairymen in possession of the best pure-bred herds and then retire, leaving the field to the dairymen themselves. And it does seem as though most any chamber of commerce would see the far-reaching possibilities of such a plan and give it enthusiastic support.

It Would Give Needed "Pep."

The morale in our dairy industry is none too good, in fact it is pretty badly off. Go into the dairy barns from one end of this state to the other, where actual dairymen are doing the actual work; reveal the sincerity of your purpose and let the dairymen pour out their hearts to you. If you don't come away depressed, you are an incurable, not to say unreasonable optimist. Dairymen in wholesale lots are discouraged and pessimistic. Awhile ago I stood in a corral containing many thousand dollars' worth of choice, purebred stock into which had gone years of hard work and earnest thought and, yes, loving care.

[Does not this seem a rather narrow-minded proposition after all? Why not put it on the broad basis of an association devoted to the introduction and distribution of all the breeds of registered livestock, especially all breeds of beef and dairy cattle? Horses also should be handled, making the raising of the very best of draft animals possible. If we are going to interest semi-public institutions like chambers of commerce and banks, we must do so from an unprejudiced standpoint.—Livestock Ed.]

Classified Advertisements.

Rate, 3½c per word. Cash must accompany all orders.

COUNTRY LANDS.

FOR SALE—10 acres—10-year-old orchard, 4 in apricots, 10 in almonds and balance in summer fallow. Three-fourths mile from highway on the Turlock Main Canal. For particulars, inquire, G. W. Bowles, Hickman, Cal.

LAKEVIEW CITRUS FARM
10 Acres, $2200; Easy Terms
Dandy little farm, pleasantly located only 200 yards lake; fine fishing, boating, bathing; fruited 80 orange and grapefruit trees, remainder land high state cultivation big crops; ideal for poultry; good 5-room house, barn, large new poultry houses; owner has big farm, offers this beautiful little place low; $22, easy terms. Details this and another with 13 acres oranges, grapefruit, page 52, Strout's Catalog Orange Groves and Other Semi-tropical Farms. Copy free. STROUT FARM AGENCY, 503FA, Wright-Callender Bldg., Los Angeles, Calif.

FOR SALE—116 acres on Cow Creek, 102 inches gravity water for irrigation; 90 acres under cultivation, 35 acres in alfalfa, some fruit trees; 2 acres in full-bearing olive trees. 7-room farm house, large dairy barn, electric lighted. Situated 11 miles from Redding, 1½ miles from store and postoffice; near school. $2500 down, balance on easy terms. Address owner, E. C. Waters, Olinda, Shasta county, Cal.

FOR SALE—40 acres improved, on paved highway; family orchard; 9 first-class cows and dairy supplies. 20 tons alfalfa hay. Land adapted all kinds of fruit, with 10,000 growing Thompson seedless grapevines for next year's planting 1½ miles from Livingston, Merced Co. No agents. Address J. G. Bronk, Livingston, Cal.

A HOME RANCH—192 acres, Eldorado Co. Cattle, hogs, goats or sheep, or fruit (outside range). School on ranch on county road. Store and Postoffice. Will consider small orange or other fruit in exchange. No stock to buy. Tools go with ranch. About 8 acres in apples, wood and water. Particulars. C. Russell, Fair Play, Cal.

FOR SALE—5 acres almonds, full bearing, with crop. Water right in Clark Colony Water Company and Greenfield Water Company fully paid up. Price $3,000 if sold at once. Address, F. J. Greer, Owner, Greenfield, Calif.

FOR SALE—14 4-5 acres irrigated farm with farm implements, team, heifer, 300 chickens and hay. Jacob Wilbois, Route A, Oakdale, Cal.

FOR SALE OR TRADE—55 acres with water for cows or sheep. G. H. Johnson, Bishop, Cal.

MISCELLANEOUS.

WANTED—Farmer agents for high-grade, well-known tractor in territories where there are no dealers. A chance to get a high grade tractor at a dealer's price and make profitable income from sales to your neighbors. Territory is limited, so write at once. Box 345, Stockton, Cal.

CORN HARVESTER — One-man, one-horse, one-row, self-gathering. Equal to a corn binder. Sold direct to farmers for twenty-three years. Oly $28, with fodder binder. Free catalog showing pictures of harvester. Process Corn Harvester Co., Salina, Kan.

REMANUFACTURED PIPE
All sizes standard pipe and wrought iron screw casing. All kinds of fittings. Guaranteed good as new. Write for prices. Weissbaum Pipe Works, 160 Eleventh street, San Francisco.

30 H.P. SAMSON TRACTOR, Model X. Practically new. H. G. Stevenson, Jr., Winters, Cal.

WANTED TO RENT—My lease expired, experienced Japanese orchardist with agricultural college training seeks new bearing orchard or vineyard. Will consider partnership. Best of references. Box X, Pacific Rural Press.

WANTED—Carload of wheat straw, and also carload of mixed grain—wheat, milo mire, Egyptian corn, white, etc. Must be reasonable in price. Write all particulars to Hohn & Smaus, Los Gatos, Cal.

RELIABLE CABBAGE SEEDS—I grow them. You want them. Let's get together. Write for special offer on what you need. Isaac F. Tillinghast, 32 Podel St., Santa Rosa, Calif.

FOR SALE—One 20 horsepower International gas engine with friction clutch pulley and 50-foot 10-inch belt. Just overhauled, in excellent condition. Box 367, Visalia, Calif.

PUMPKIN SEED — Mixed pumpkin seed. Good germination, 25c per lb. Aurora Seed Mill, Stockton.

WANTED—Position as manager of large ranch. Experienced in fruit, vineyards, sheep, grain and general farming. Lawrence Haven, 52 North Morrison Ave., San Jose, Cal.

ALL SIZES OF PIPE and screw casing, both new and second-hand, dipped and undipped. Guaranteed. Prices right. Shecter Pipe Works, 304 Howard St., San Francisco.

WANTED — Salesman capable of earning $250 to $350 a month selling groceries wholesale to farmers (Commission). Read "Ed's Job Wins," page 266.

FOR SALE—3000 apple boxes, 3000 orange boxes. Have been used once. In good condition. Farmers' Sales Agency, 901 35th Ave., Oakland, Cal.

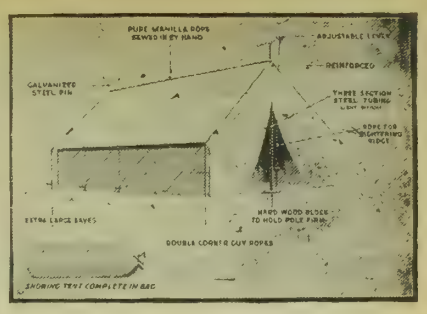
CROLEY'S BALANCED HOG FEED—The cheapest feed to fatten hogs. Write Geo. H. Croley, Townsend St., San Francisco, Calif.

FOR SALE — Mariout Barley Seed—clean and good quality, weighing over 100 lbs. per sack. J. D. Rowe & Sons, Davis.

FOR SALE—3 John Deere Corn Binders, with truck attachment and one Husker and Shredder. Webber Bros., Byron.

FOR SALE—Good stock saddle and bridle. Twelve dollars. F. Adams, 4725 17th St., San Francisco, Cal.

SHEEPMEN—I will pasture and care for your rams. A. Esparcia, Felix, Calif.



WENZEL POLELESS TENT

For Sale By

W. DAVIS & SONS

SADDLERY and HARNESS DEALERS

333 Market Street, San Francisco
427 J Street, Sacramento

Note the small package when folded and packed.

ARMY QUALITY

7 x 7, White	$24.00
7 x 7, Khaki	26.00
7 x 9, White	28.50
7 x 9, Khaki	31.50
8 x 10, White	34.50

Call at our Sacramento store and inspect it when visiting the State Fair

Veramont Herefords

Raised under semi-range conditions.

SENIOR HERD BULL

Patrician 5th, 472135,

a worthy grandson of Paragon 12th and Lord Erling, and a wonderful breeder.

JUNIOR HERD BULL

Don Woodford 4th, 694187

Grandson of Woodford and Lord Erling

Some splendid Herd Bull prospects

See Show Herd at State Fair

H. M. BARNGROVER, Proprietor

SANTA CLARA, CALIFORNIA

Herefords

LEADING HERD OF THE STATE.

My stock is the result of nearly 40 years of careful breeding and selection. Have for sale a carload of registered bulls and a carload of heifers—1917 calves, grandsons and granddaughters of Beau Donald 31, No. 109885, and Mr. Perfection, No. 215575.

They will go quickly. Write or call at once.

Wm. Bemmerly, Woodland, Calif.

NEVADA HEREFORD RANCH

A tuberculosis free herd.

Sells at Sacramento, November 5

50 lots of grand young Herefords, 30 two-year-old bred heifers, 10 cows, most of them with calves at foot and rebred, 5 open heifers and 5 bulls.

As this will be our first individual offering at auction, we are endeavoring to make a good, sound sale and to present a quality of cattle that will establish our future business.

Featuring our HARRIS STANDARD 2ND HEIFERS, bred to our $10,000 BEAU BLANCHARD 76TH

STUDY THIS PEDIGREE OF HARRIS STANDARD 2ND (525030)

- STANDARD 325950
  - Bonnie Brae 8th 239653
    - Publican 189221
    - Dulcinea 12th 194322
  - Tulip 233037
    - Excel 111229
    - Lady Wilson's Incomparable 130145
- DISTURBER LASSIE 4TH 349146
  - Disturber 139989
    - Beau Donald 3rd 86140
    - Columbia 76779
  - Pretty Lassie 160150
    - Prince Lad 108911
    - Pretty Face 2nd 41063

NOTE HIS ANCESTRY—He has every right to be a good one. Sired by Standard, who stood second at the International Livestock Show at Chicago, 1913, he by Bonnie Brae 8th, Sr. Champ. at International, 1908. Dam—Disturber's Lassie 4th by Disturber, second dam by Prime Lad, and one of the best producers of the Great Disturber family. Being dam of the $35,000.00 Repeater's Model, and is still producing high quality calves in the Col. Taylor herd of Kentucky. We value him very highly as a good, consistent sire. Our entire show herd of the last two years were sired by him and in the "Get of Sire" class he has been undefeated. He is a big rugged fellow, showing excellent Hereford character, with extra heavy bone, and is absolutely one of the easiest keepers we have ever owned or seen.

We have used him too heavily to make a great show record, but the one time he was shown as junior yearling, 1914, he made a most creditable showing. He won 3rd, Iowa State Fair, 2nd at Nebraska State Fair, 2nd at South Dakota State Fair, 2nd at Inter-State Fair, Sioux City, Iowa, and 4th at Missouri State Fair.. There was no show at Kansas City or Chicago that year.

A few of those Harris Standard 2nd heifers bred to Beau Blanchard 76th would make a valuable addition to your herd or will start you in the Hereford business right.

Write for particulars about our sale cattle and cattle we are offering here at the ranch. See Beau Blanchard 76th and our show herd at The State Fair, Sacramento, September 4th to 12th.

Pacific Coast Hereford Breeders' Sale, Nov. 4th
H. M. Barngrover's Sale, Nov. 6th, at Sacramento

John H. Cazier & Sons Co., Wells, Nevada

OTIS CORDELL, Herdsman

WINSOR RANCH DUROCS

HERD HEADED BY

WINSOR'S GIANT ORION

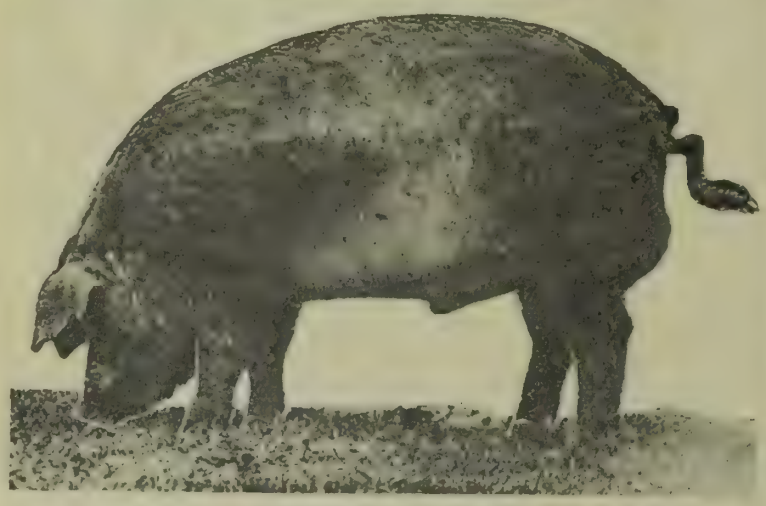
The Largest Duroc on the Coast
The Largest O. C. K. Boar in the World
A Proven Sire of Big-Type Hogs

WINSOR RANCH, Bonita, Calif.
San Diego County

MORRIS C. ALLEN, Mgr. CARL WOOSLEY, Hog Dept.

MEET US AT THE FAIRS

DUROC-JERSEYS



JUMBO SENSATION, NO 331907
THE NEW TYPE BOAR
High arch back, straight, stretchy, smooth sides; the kind that makes the bacon.
Come and see our herd of topnotch breeding.
PRICES RIGHT
TU-TOCK-A-NU-LA RANCH, R. E. Whitley, Mrs. R. E. Whitley, Owners
Ventura Boulevard, at Hazeltine Ave., VAN NUYS, CALIF

CALIFORNIA ORION KING

CALIFORNIA ORION KING
His sire by Orion Cherry King
His dam by Joe Orion 2nd.

Inquiries invited.

Is siring pigs that are not only of correct type but are proving

ECONOMICAL FEEDERS

MY SOWS are selected for quality and prolificacy.

They must be good mothers.

Young stock grown along lines that will make for their future usefulness.

Visitors welcome.

HARVEY M. BERGLUND, - - - Dixon, Calif.

BEEF CATTLE EXHIBITORS AT THE STATE FAIR.

(Continued from page 287.)

Thos. Dibblee Estate of Santa Barbara will show 11 head of Shorthorns, all of their own raising. Their exhibit will be an excellent one. Ernest Reynolds, the herdsman, has them coming along nicely.

W. M. Carruthers of Live Oak has 8 head entered. It is safe bet they are good ones, as he knows and will show none other.

A new exhibitor in the Hereford ring will be the firm of Wm. Briggs & Son of Dixon, with 6 head entered. They also have a carload of registered Herefords coming, selected from the best herds of Colorado and Wyoming, from which some choice ones may have been entered.

Polled Herefords will be shown from the Diablo Stock Farm at Danville, owned by G. W. Emmons. Eleven head have been entered. These are Herefords, carrying the same blood lines as the horned strains but minus the horns.

Chas. L. Weaver, who breeds Milking Shorthorns at Tulare, will enter an aged bull, junior bull calf, aged cow, 2-year-old heifer and senior heifer calf.

THE SHEEP SHOW AT THE STATE FAIR.

Bullard Bros., the well-known Rambouillet sheep breeders of Woodland, will make their usual extensive exhibit. Walter Priddy has kept the show flock in good condition in spite of the recent torrid weather.

Competition in the Romney classes will be limited to entries by U. C. Tribble of Newville with 6 entries and Spencer Ranch Company with 8 entries.

Shropshires will be shown by two well-known firms. Thos. B. Bishop Co. of San Ramon have a flock of 18 entered. This firm has bred an excellent type of the black-faced beauties for years and will have a well fitted and fed bunch to show.

Butte City Ranch have entered 15 and competition ought to be keen, as this firm have both bred and brought out some fine ones lately.

The most popular mutton breed of sheep next to the Shropshire is another black-faced breed, the Hampshire. There is competition here, also, as two breeders have entries.

Twelve head of Hampshires are listed for show by the Calla Grove Farm owned by J. Levy & Son at Manteca.

C. Harold Hopkins of Woodland have been accumulating a flock of Hampshires of the very best type. They have 7 head entered.

The Italian Vineyard Company have entered 4 head of Cotswolds, and are the only exhibitors of this old and popular long-wool breed.

In the range sheep, medium wool classes, Ellenwood & Ramsay of Red Bluff and G. K. Swingle of Davis have entries of 12 and 6 head respectively.

G. U. Merritt & Son of Woodland show both Merino Type and Rambouillets with 15 and 7 respectively in the two classes.

ROCSTEIN DUROCS

Headed by

LORD'S ORION CHERRY KING

1st prize Senior yearling at the State Fair.

See his pigs at the State Fair this year. They are out of Orion Cherry King and Pathfinder sows.

The kind YOU want to breed.

WM. WAY and SON

MODESTO, CALIF.

Greenwood Durocs

BIG-TYPE—HIGHEST QUALITY—POPULAR BREEDING

JOHNSON'S DEFENDER JR., our noted show boar, has proven himself one of the leading sires of the West, siring very smooth pigs with great stretch. His get are appreciated by the breeders, and sold high in public sales last winter.

WESTERN PATHFINDER, brother of the world's champion sow and the world's champion herd, is breeding the real Pathfinder type.

These boars are being mated to sows of the first quality and best breeding.

Stock of all ages for sale—moderate prices—satisfaction guaranteed. Our Durocs are the kind that produce pork most economically. Whether you want to increase the profits from a pork-producing herd or want breeding stock of highest quality, we can supply your wants.

GREENWOOD FARM

WITHEROW AND STAFFORD, Props.

Live Oak, R. F. D. 1, Sutter Co., Cal.

BOYANNA FARM BIG-TYPE DUROCS

CALIFORNIA PATHFINDER, grandson of Pathfinder, herd sire. Sows strong in the blood of Johnson's Defender and Grand Model. Young boars and females, all ages, for sale at attractive prices.

BOYD HARROLD, DIXON, CALIF.

SELECT FALL and YEARLING BRED GILTS

In service to ORION'S KING GANO, the boar with a coast-wide reputation, and ROYAL I AM, one of the very best grandsons of GREAT WONDER I AM. The kind that feed right, grow fast and show best. Satisfaction sure.

GRAHAM & HENSHAW Lancaster,
(Successors to Donald H. Graham.) California

HAVE YOU SEEN

THE DUROC PROSPECT?

HERD SIRE
CHOICE WONDER III { Grand Lady 72nd { Great Wonder / Grand Lady 20th
Grand Yady 72nd { Grand Model / Rose

Write for yours from the most select herd in California.
Littermate (gilt) topped Ed Kern's Last Sale at $5600

V. F. DOLCINI, JUNE ACRES STOCK FARM, DAVIS, CALIF.

WINE AT THE STATE FAIR.

Witherow and Stanford proprietors Greenwood Farm and breeders of uroc Jersey hogs will show only ring pigs. Their herd sire John-n's Defender Jr. will not be shown is year. He was considered a rong candidate for championship onors by good judges until they de-ded not to show him.

J. Boyd Harrold of Dixon, Duroc reeder and owner of Boyanna Farm ill not show this year. From Gold-n Blossom, whose dam is Cherry lossom, one of the great sows of the reed, he has some very fine gilts by alifornia Orion King. These he is ating to a grandson of Pathfinder.

The Berkshire contingent from the astanchury Ranch at La Habra ill consist of 5 head. This herd is eadily coming to the front under the ficient supervision of E. N. Whit-more. The Sires in services are oyal Longfellow 5th, Kintrye Laird nd Baron Premier 157th.

The Fortuna Herd of Poland Chinas wned by Hugh C. Shinn of Tulare ill be represented by The Californian e boar that is owned jointly by r. Shinn and A. J. Elliott, 3 aged ws, 4 gilts under 1 year that will exhibited in the get-of-sire and roduce-of-dam classes, and 4 boar gs under 6 months sired by The Pil-. Some of this stock will be in the cCarty-Shinn-Elliott sale of Septem-er 27th.

Viola L. Renwick owner of the ex-ellent herd of Poland Chinas headed y the celebrated boar El Profito rand champion at the Los Angeles ivestock Show last year, will have 7 head in the ring competing for onors.

Thirty Poland Chinas from the ell known herd of N. K. Horan at ockeford will compete in all classes xcept the market hog division. Big one Bob, Major Hadley Wonder and olden State King are the boars in ervice.

P. E. Mitchell the Poland China reeder of Atwater, writes that he ill show four in the Senior Pig class. e also says that the first litter sired y his "Buster Leu" arrived on the 1th inst., is composed of 9 "Sure nough Big Types" and every one a andy.

The Western Laboratories of Stock-on will not exhibit in all classes this ear.

Duroc Jersey pig classes will be ell filled. E. G. Stone of Modesto ill have two in the Senior Pig Class. e expected to show some sows but ecided to wait until next year.

W. T. Hollingshead and Son of rland breed excellent Duroc-Jerseys nd will show 11 head. They will how a Senior yearling boar, junior earling boar, junior boar and sow igs. They will also have two Fut-rity entries of Junior pigs sired by ensation Wonder 1st grand cham-ion at Sacramento in 1919.

The old and favorably know firm n the Poland China business Geo. V. eckman and Sons of Lodi will show 2 head filling nearly all classes. heir new herd sire Cultivator is by iberty Bond the celebrated boar in he L. H. Glover herd in Missouri. Do ot forget to see this exhibit.

Coming up from the south is the $15,000 Duroc-Jersey boar at the ead of the Tu-Tock-A-Nu-La herd t Van Nuys. They will also show a unior yearling boar, junior boar pig, unior yearling sow, senior sow pig, unior sow pigs, a herd, get of sire nd futurity. This is one of the new erds that has recently acquired considerable publicity by the pur-hase of Jumbo Sensation for the long price mentioned above.

W. A. Young of Lodi has sold a arge part of his noted Poland China erd to Riverina Farm at Modesto, but will have a few good ones at the State Fair.

A line bred Big Bob Poland China sow by Evergreen Model with her lit-ter will be shown by J. F. Lehman of Lodi. He will also have his usual quota of his own breeding in the open nd futurity classes.

Poland China breeders from Lodi usually are in the spotlight a good

Sierra Vista Ranch Durocs

OUR HERD IS HEADED BY "KING ORION JR.,"
whose winnings in 1919 included:
1ST IN AGED CLASS NEBRASKA STATE FAIR
2ND AT NATIONAL SWINE SHOW
GRAND CHAMPION AT PACIFIC INTERNATIONAL
STOCK SHOW, SAN FRANCISCO

What other boar on the Pacific Coast can show such a record? If you are keeping hogs for the pleasure of their company, the "King's" record will mean nothing to you, but if you are in it for profit it will mean a great deal.

GILTS AND SOWS BRED TO KING ORION JR. FOR SALE.

PRICES ARE REASONABLE

PETER B. KYNE
O. H. CASH,

SIERRA VISTA RANCH
Perris, Calif.

JOHN TENNANT,
Herdsman

Pino Vista Durocs

BRED GILTS
AND WEANLINGS
Either Sex
From
Grand Champion Stock

H. C. BAUM, Placerville

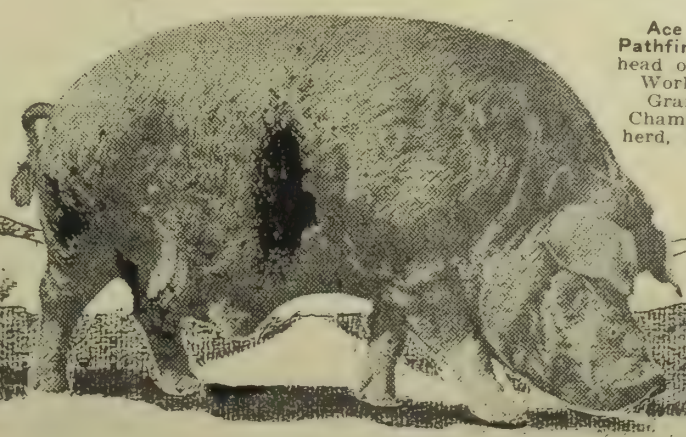
DIAMOND BAR RANCH

The Gateway to Better Durocs

See the representative individuals of all the world's leading families, including the Pathfinders, Sensations and Orion Cherry Kings, in our show herd at the coming State Fair.

An Orion Cherry King senior yearling.

A junior yearling by Great Orion Sensation.



Ace of Pathfinders, head of the World's Grand Champion herd, 1919.

DIAMOND BAR RANCH

F. E. Lewis, Owner and Manager R. K. Walker, Hog Department
SPADRA Los Angeles County California

THE COMET

BASSETT'S BIG TYPE

POLAND CHINAS

As large as the largest and as good as they grow. If you want **REAL** Big Types, come to the Bassett Herd.

Our herd represents such blood lines as The Rainbow, The Clansman, Imperator, Lukens, Big Bob, Giant Buster, Evolution, Gerstdale Jones, Big Timm, Buster's Defender, Fairacres Joe, Long Chief, Model Fellow, and the 1204-lb. Big Sensation.

We have some very choice fall gilts, which we offer for sale, bred for fall litters, to such boars as The Comet by Kings Timm; California Sensation by Big Sensation; Highland Bob by Highlander, a son of The Clansman; Model Giant by Model Fellow; and Imp by Imperator.

Our Herds Will Be Shown at the Fairs This Fall

Visitors are always welcome at the farm.

BASSETT BROS. *Hanford, Calif.*

McCarty-Shinn-Elliott

Sale of

Big-Type POLAND-CHINAS

50 Head Bred Sows, Gilts and Boars

The greatest offering ever made on the Pacific Coast. Every animal an attraction as to breeding and individuality sired by **The Pilot, The Californian, Hercules, Kansas King, King Jones Over** and others.

Sows bred to **The Westerner, The Californian, The Argonaut, Hercules Junior,** and **Orange Giant.**

See them at the State Fair and Tulare Livestock Show

Sale at Tulare, Monday, September 27th

For catalogues write H. C. SHINN, Tulare

GEO. W. BELL, Tulare——Auctioneers——FRED GATEWOOD, Fresno

deal of the time when their favorites are being judged at the State Fair.

Anchorage Farm at Orland where Berkshires of national reputation are found will have a large exhibit at the State Fair. Natomas Baron Duke will head the contingent from this noted farm and something unique is promised in their display.

Grapewild Farms of Escalon will have their usual quota of Berkshires which always have to be reckoned with when the ribbons are awarded. A. B. Humphrey and his manager, Charles Maurer have built up a herd of swine that have at least a national reputation. Twenty-nine head have been entered.

J. Francis O'Connor of Santa Rosa with a contingent of Berkshires from Castleview Ranch will be on hand for his share of the ribbons if he don't wear himself and his hogs out making a success of the Sonoma County Fair. This is the herd made famous by "Achiever the Boar" or the herd that made "Achiever the Boar" famous.

J. E. Thorp of Lockeford will show some exceptionally good pigs in the Duroc futurity classes, a senior boar and sow pig and two aged sows. Jim generally has some that are either at the top or so close that it takes more than an expert to tell the difference.

A-1 Ranch owned by J. P. Walker of Visalia will have 5 Durocs in line. John has some that are mighty good and liable to attract the attention of the judge.

Elmer Lamb has 2 good Durocs left and entered. Mr. Lamb has won before and liable to do so again.

Winsor Ranch of Bonita, San Diego county breeders of Durocs have 17 head in competition. Last year the herd was brought by boat from San Diego to San Francisco on account of the railroad strike.

Falfadale Farm at Perris will show 14 Durocs. This is the herd of which Bert Wilkinson is manager and he knows good hogs.

Poland Chinas entered by A. D. McCarty of Riverina Farms, Modesto Big Type. Some that are entered will be in the McCarty-Shinn-Elliott sale of Sept. 27th.

J. E. Glusing of Winton has 7 Poland Chinas entered most of them in the senior pig and futurity classes.

Berkshires will miss the Italian Vineyard Company's contingent if they do not exhibit. They have 26 head entered and every one a good one liable to be in the money somewhere. Their ranch is at Guasti.

E. E. Fulton, who bought the Billiken herd of Chester Whites, will have 19 head on exhibition. He is the largest exhibitor of Chesters. Two other exhibitors H. H. Huffman and E. N. Johnson will show 4 each. A better breed than their lack of numbers would indicate.

Tamworths, the English bacon hog supreme, have jumped in numbers from nothing last year to 40 head entered by Dr. J. J. Summerfield of Santa Rosa with 11 head and Pleasant Hill Farm having 29 head. We know nothing about the merits of the animals entered by the latter farm but if they are better than those of Dr. Summerfield the exhibit will be a crackerjack. Pleasant Hill Farm is also the only exhibitor of Yorkshires.

Jack Borge of Dos Palos breeds good Durocs and he will have 10 of his best on exhibition this year.

Jay H. Cook of Chico, will have 4 Poland Chinas in the show ring.

Diamond Bar Ranch of Spadra where they have 1100 Durocs now and expect to have 5000 when the plant is in full operation will show 16 head this year.

Charles Gatewood of Fresno who has shown the grand champion Poland China boar two years in succession has 4 head entered this year.

Superior California Farm Lands Company of Willows is the largest exhibitor of Berkshires this year with 35 head on the list.

Marshall and Son of Sebastopol show Poland Chinas from a Berkshire locality. They made a fine showing last year and enter 13 this.

H. M. Berglund of Dixon who number 40 large and small, all of the

Lakeside Stock Farm

We have a fine lot of spring pigs sired by this boar coming on in great shape.

Will show some of his get, including 2 futurity litters, at State Fair.

LAKESIDE DEFENDER 647556

FOR SALE — Choice young pigs, both sexes, by Lakeside Defender. Some outstanding past yearling gilts by Matchless Big Bob.

GEO. V. BECKMAN & SONS

LODI. CALIFORNIA

STRICTLY BIG-TYPE POLAND-CHINAS

THE ONLY KIND I BREED.

Boars and Gilts with high, strong backs. with lots of stretch. with plenty of bone. that are right on their feet. with plenty of quality.

Sired by GOLDEN STATE KING. Sired by BIG-BONE BOB.

Do not miss seeing them at the State Fair before placing your order.

Inquiries solicited. Inspection invited.

J. F. LEHMAN, Lodi, Cal.

MEET ME AT THE FAIR

And See

Golden State King

Major Hadley Wonder

Big Bone Bob

AND SOME OF THEIR GET.

If you want big ones that will breed big ones, do not fail to see these. They will surely please you.

N. K. HORAN

LOCKEFORD, CALIFORNIA

breeds Durocs and likes to show them will be at the State Fair with a strong lot. Among other classes he has entered a junior yearling boar, junior yearling sow and junior litter in the futurity.

Fresno Poland China breeders are represented among others by A. Buckland and Son who will have 12 head in competition. They were among the early advocates of the Big Type.

W. M. Way and Son of Modesto, are showing 13 Durocs this year. They are consistent breeders and will show some excellent stuff.

DeForest and Horr from Susanville Lassen County, are bringing 10 head of Poland Chinas from over the mountains. They made the first exhibit of hogs from Lassen County at the State Fair last year.

Orland through R. J. Gates will be finely represented in the Poland China show. He has 11 head entered.

Dixon and Dixon of Hughson will show Duroc Jerseys.

A. J. Elliott of Tulare has 16 head of Poland Chinas entered. Mr. Elliott owns a half interest in The Californian the boar brought out from the east by Hugh C. Shinn. Some of the hogs entered by Mr. Elliott will be in the sale of Sept. 27th at Tulare.

Another herd of Duroc Jerseys coming up to the State Fair is that of D. O. Brant at Owenmouth. He has 16 entered.

Six Poland Chinas from the Thos. Caesar and Son herd at Reedley will be in competition.

Bassett Bros. of Hanford are among the largest exhibitors of Poland Chinas. They are entering 40 head in the breeding classes and as a demonstration of the worth of their hogs have entered 77 head or two carlots in the fat class.

Kern County Union High School have entered Kern County Pilot. He is a son of The Pilot.

W. L. Haag and Son of Poland China breeders of Hanford are in line with 12 head. They have good ones that both show and grow. The profitable kind.

Fred D. Rose has a Poland China boar that will make 'em all sit up and take notice it is said. Mr. Ross has 9 entered.

In the fat classes Napa State Hospital has a carlot, A. B. Humphrey 6, Superior Calif. Land Co., 1 and Bassett Bros. 77 head.

BERKSHIRE PROMOTION SALE A SUCCESS.

The sale at La Habra on Saturday, the 14th inst., was received too late for publication last week. In these times when farmers are slow about investing money in more hogs this sale was a success. Judicious publicity brought about these results. The Inglewood Union High School bought the top sow, Rival's Matchless Lady 6th, for $500. She was consigned by the Italian Vineyard Company of Guasti. Princess May 12th consigned by J. G. Throckmorton of Sebastopol went to the Italian Vineyard Company for $320. John Donaldson of Perris, consigned Royal Matchless Lady, which was bought by D. J. Bastanchury for $260. This sow was junior champion of the National Swine Show in 1919. The average of the sale was $140, many going to the farmers in the locality, which was very satisfactory as this was the object of the sale.

RANGE RULES MAY NEED CHANGING.

Should cattle in the forest ranges be salted on top of a mountain or down near water? T. H. Carlon, who runs 400 head in the Stanislaus National Forest in Mariposa county, maintains that the place to salt cattle is somewhere near water; yet most cattle in the national forests are compelled by the rules to be salted on top, so they will travel some in search of water. Mr. Carlon, who has spent a lifetime handling cattle, says the extra travel works off an unnecessary amount of flesh that should be saved.

Another rule that seems to need fixing is the one which fixes the number of cattle to be grazed on certain ranges, usually figuring here on about 20 acres per head, and does not vary that number from season to season, according to rainfall and snowfall, which vary the amount of feed.

There are several sections of government land in the Tehachapi which, according to an old cattleman of that country, are monopolized by bluff by the Tejon and Kern Land Co. cattle, supposedly at a nominal rental if any at all. When other cattlemen inquire regarding range, they are told that there is none left. Perhaps there ought to be a rule providing that all comers might have a chance once a year to get that range on equal terms.

Wm. V. Mong of Whittier, a breeder of Duroc-Jersey swine, sends in a printed form which he has to send to prospective customers. This blank, properly filled out, carries the personal guaranty of Mr. Mong, the individual measurements and characteristics, farrowing date with other information, including tabulated pedigree to three generations—a very convincing document that should bring results.

LENDORRIS RANCH

BIG TYPE

Poland-Chinas

HERD BOARS

Lendorris Liberty Bond 355097
and
Lendorris Liberator 387255

Sows of exceptional breeding and individuality.

Look for us at the State Fair

W. L. HAAG & SON, Hanford

Buy Him

—AT—

THE STATE FAIR

Son of Grand Champion sow at 1919 State Fair and sired by the Junior Champion, 1916.

Also 6 pigs, 2 boars and 4 sows by

YOUNG TIM JONES

YOUNG & CLARK

LODI, CALIF.

SALE OF

Poland Chinas

October 27th

ARENAL RANCH

Lankershim, California

Some very fine specimens, the get of BIG BONE LAD—produce of sows from the show herd of H. I. Marsh. Also some El Profito and Bell's Hanford Boy March pigs.

E. AVERY NEWTON, Owner

1026 Marsh-Strong Bldg., Los Angeles, Calif.

ANCHORAGE FARM

Berkshires

at The State Fair

HERD HEADED BY THE 1919 GRAND CHAMPION

NATOMAS BARON DUKE

We invite our old customers and new friends who are interested in Berkshires or are looking for hogs that are noted for being prolific breeders, good mothers, excellent feeders, producing the largest percentage of marketable meat on the block to look us up at the State Fair. We will surely appreciate the privilege of making your acquaintance and showing you our Berkshires.

Anchorage Farm, Orland, Cal.

GUASTI BERKSHIRES

WINONA LEADER CHAMPION, 271471
CHOICE GOODS 10th, 259713
CHAMPION'S TYPE 2nd, 281859
CHAMPION MASTERPIECE 8th, 259060

Italian Vineyard Company

ALEX M. WILSON, Supt. Guasti, Calif.

—THE—

Jack London Ranch

BEEF SHORTHORNS
DUROC- JERSEY HOGS
SHIRE HORSES and JERSEY CATTLE
SPLENDID YOUNG STOCK FOR SALE

ELIZA SHEPARD, Manager

GLEN ELLEN, Sonoma County, California

BREED HEREFORDS

If you want to Abolish that Mortgage

It's the high-grade stock that brings big profits —common cattle cannot produce profits under present feed conditions.

The pedigree of each member of the Imperial Hereford Herd is unassailable.

SEE US AT THE STATE FAIR

The Imperial Hereford Herd

JAS. PRICE, Herdsman, Chualar, Monterey Co.

ROMIE C. JACKS, Prop. 614 Hobart Bldg., S. F.

The first son of SIR PIETERTJE ORMSBY MERCEDES ever offered at public sale in the West, will go to the highest bidder at

ALLANA FARM, DIXON, CALIF. THURSDAY, SEPTEMBER 23, 1920

To adjust an existing partnership between J. P. and W. W. Phillips, the entire high-class herd of registered Holsteins, excepting only one heifer and a few calves, will be sold at public auction on the above date.

Sir Pietertje Korndyke Ormsby

the sire referred to above heads the herd and will be sold. He is not only sired by Sir Pietertje Ormsby Mercedes, but is out of a good record daughter of Sir Korndyke Hengerveld De Kol, second dam a half-sister to Pietertje Maid Ormsby. He is 4 years old, a good individual, with about as good a hide as you ever put your hand on. Here is an opportunity to head your herd with a son of the famous "Sir Piet."

THE FEMALES

will afford a wide selection, mostly of Ormsby breeding, and in addition to the cows and heifers there is an especially attractive lot of young things. Among them are

A 26-POUND COW, with a good yearly record, and bred to Sir Pietertje Korndyke Ormsby.

A DAUGHTER OF THE ABOVE COW by a full brother to Pietertje Maid Ormsby.

A 20-POUND 4-YEAR-OLD, with a good yearly record and heavy with calf to Sir Pietertje Korndyke Ormsby.

A BEAUTIFUL 21-POUND 3-YEAR-OLD that has 470 lbs. butter from 12,724.7 lbs. milk to her credit in 197 days. Bred to Sir Pietertje Korndyke Ormsby.

A DAUGHTER OF COLANTHA SIR PONTIAC AAGGIE, out of a 26-lb. daughter of a 28-lb. cow.

SEVERAL DAUGHTERS OF SIR PIETERTJE KORNDYKE ORMSBY, out of well-bred dams.

REMEMBER THAT THERE ARE A NUMBER OF YEARLY RECORD COWS AND HEIFERS in the offering, besides others now on yearly test, and daughters of yearly record dams.

A CHOICE LOT OF YOUNG BULLS

There are some excellent young bulls in the sale, including a show son of Sir Pietertje Korndyke Ormsby, out of a 26-lb. daughter of a 28-lb. cow, as well as others of rich breeding.

40 REGISTERED COWS, HEIFERS, AND BULLS IN THE SALE

Every animal positively guaranteed to be a breeder; every animal over six months old tuberculin tested and sold subject to retest by the buyer.

Catalog free on request.

MANAGEMENT

CALIFORNIA BREEDERS' SALES AND PEDIGREE CO.

C. L. HUGHES, Sales Manager, SACRAMENTO, CALIF.

Auctioneer, COL. BEN A. RHOADES, Los Angeles

THE MARKET REPORTS

Compiled from Independent Sources.

SAN FRANCISCO

San Francisco, August 25, 1920.

WHEAT.

Buyers think prices asked too high and that no real good wheat is being offered. Receipts for the past week have been too light for for even a small jobbing trade. The market remains quiet.

Wheat ..... $3.50@3.65

OATS.

There is no market for oats, buyers are waiting for lower prices.

Red Feed, ctl. .....$3.85@3.15

BARLEY.

There has been no movement of barley on the local market, little call board business, no spot trading, and scarcely any demand.

Feed Barley .....$2.40@2.45

CORN.

Recent off-grade importations from Mexico and other places have been taken up. While there is a demand for cracked corn, no price drop has taken place because of the imports. Indications are that the market will pick up soon.

Egyptian, white .....Nominal
do, brown ..... $3.40@3.75
California .....$3.80@3.85

FEEDSTUFFS.

The dull market for feedstuffs continues. There is plenty of stubble in the fields for use now. Rolled barley and rolled oats have taken a tumble in price owing to the poor demand.

Rolled Barley .....$51.00@52.00
Rolled Oats .....$60.00@61.00
Alfalfa roducts ..... $45.00@52.00
Cracked Corn .....$80.00@81.00

HAY.

A record low shipment of hay to San Francisco was made during the past week, when only 1670 tons were received. This is less than half of the previous week's receipts which were 3,621 tons. The dearth of shipments was due to city dealers' cancellations. Such action was taken because of the glutted market here and the almost total absence of demand. Alfalfa arrivals were light and export business extremely dull. Indications point to increased dullness in the export line during the coming week. If there are light receipts during the next few days the market is expected to strengthen.

Old Hay .....Nominal
Wheat Hay, new .....$26.00@28.00
Tame Oat Hay, new .....$23.00@25.00
Barley Hay, new .....$17.00@20.00
Alfalfa, new .....Nominal
do, 2nd cutting .....$21.00@25.00
Stock Hay .....Nominal
Barley Straw, bale ..... Nominal

FRESH FRUITS.

(Wholesale prices paid by commission houses.)

Receipts of apples have been fair, but hardly equal to the demand. The apple market is getting better every day. Other deciduous fruit receipts have been light, the fruits moving well. No price changes have been made. With a weak market, berries are not moving well in the face of strong competition by other fruit. During the past week, there was no packing or loading of cantaloupes in Turlock, owing to the rains. Prices jumped when the demand continued in the face of light receipts.

Apples, Gravenstein, fancy $2.35
do, choice $1.75
do, Alexanders $1.75
do, Red Astrakhan .....Nominal
Plums .....$1.25@2.00
Apricots, lb. .....5@7c
do, box .....$1.25@1.50
Peaches, 4 baskets $1.25
Pears .....$2.00@4.00
Figs, box, 1 layer .....$1.00@1.25
Strawberries, 6 12-oz. boxes .....75@90c
do, 6 8-oz. boxes, drawer .....50@65c
Blackberries, drawer, 12-oz. drawers 30@40c
Raspberries, drawer .....75c@1.00
do, 8-oz. boxes .....40@50c
Cantaloupes, Standard .....$1.00@1.25
do, Ponies .....75@1.00
do, Flats .....50@60c
Watermelon, lb. .....1@1¼c

DRIED FRUITS.

There is little demand for raisins with only a few sales of seedless raisins reported. Otherwise the market is extremely quiet with no change in quotations.

Apricots—Following prices have been established as the opening price of the California Prune and Apricot Association, Inc., for the 1920 crop of dried apricots. Prices to be paid to the growers.

Extra fancy Moorpark, lb. 33c
Fancy Moorpark, lb. 30c

Growers Quality.

Growers' quality—Fancy, lb. 26½c
do, lb. 24½c
do, Choice lb..... 22½c
do, Slabs, lb.....20c
do, Standards, lb. 18c

Raisins—The following prices have been established as the opening prices of the California Associated Raisin Company for the 1920 crop of raisins.

Muscat, Sun Maid, seeded, pkg. 36-16s.. 21c
do, Fancy..... 36-16s 21c; 48-12s 16¼c
Bulk, seeded, Baker's Sun Maid, 25-lb. bx. 20c
do, Fancy Sun Maid, 25-lb. boxes 20½c
Loose, 1-crown, recleaned, lb.....20c
do, 4-crown, recleaned, lb. 24c
Layers, 3-crown, flat pack, 5-lb. box..$1.30
do, 3-crown, flat pack, 5-lb. box..$1.30
Clusters, 4-crown, flat pack, 20-lb. box $4.70
do, 4-crown, flat pack, 5-lb. box..$1.40
Sun Maid, 100-lb. boxes $21.00
Thompson Seedless, Sun Maid, recleaned, lb. 20½c
do, Sun Maid, bakers, lb.....21½c
Sultanas, Sun Maid, recleaned, lb.....20¼c
do, Sweat-box, layers, lb. 19c

..Figs—Following prices have been established as the opening prices for the 1920 crop of dried figs.

White Adriatic, 12-10 oz. $1.25; fancy, $1.30
do, 12-8 oz. .....$2.00; fancy, $2.05
do, 50-6 oz. .....$3.10; fancy, $3.20
do, 70-4 oz. .....$3.30; fancy, $3.40
Adriatic, bulk, Standard, 50-lb. boxes, lb. 9c
do, bulk, fancy, 50-lb. boxes, lb. 13c
Black Mission, Standard, 50-lb. boxes, lb. 7c
do, Fancy, 50-lb. boxes, lb. 12c

Prices f. o. b. Fresno.

Peaches.—Following prices have been established as the opening prices of the California Peach Growers for the crop of dried peaches.

Yellows, Standard, lb. 15½c
do, Fancy, lb. 17½c
do, Extra fancy, lb. 18½c
do, Slabs, lb. 15¼c
Muirs, Standard, lb. 15¾c
do, Fancy, lb. 18¼c
do, Extra fancy, lb. 19½c

The above prices are bulk basis.

Shipment: September, October, November. Seller's option. The above prices are guaranteed against Association decline until January 1, 1921.

Prunes—Following prices have been established as the opening prices of the California Prune and Apricot Growers, Inc., for the 1920 crop of Prunes.

Sunsweet Brand, 20-30s, flat, lb. 25c
do, 30-40s, bulk, lb. 17c
do, 40-50s, bulk, lb. 15½c
do, 50-60s, bulk, lb. 13c
do, 60-70s, bulk, lb. 11½c
do, 70-80s, bulk, lb. 10½c
do, 80-90s, bulk, lb. 9½c
do, 90-100s, bulk, lb. 9½c

First half September shipment, ½c premium; last half September shipment, ¼c premium. The above prices apply only to contracts already issued.

POTATOES, ONIONS, ETC.

(Wholesale prices quoted by commission houses.)

With heavy shipments still being received, the market has become quiet with some very slight increases in price. Shipments East from here are progressing fairly well. Onions are being cleaned up. Especially light receipts of all vegetables during the week has

Special Livestock Market Report

San Francisco, August 25, 1920.

BEEF—The local beef cattle market is very dull, largely due to the poor quality of the offerings. The supply of beef cattle is limited and not many are going into the feed lots. Values should rule high along in midwinter.

Steers, No. 1, 1000-1200 lbs.	9½	@10c
do, 1200-1400	9	@ 9½c
do, 2nd quality	7	@ 8c
do, thin	6	@ 7c
Cows and Heifers, No. 1	8	@ 8½c
do, 2nd quality	6	@ 7c
do, thin	2	@ 4c
Bulls and Stags, good	4	@ 5c
do fair	3	@ 3½c
Calves, lightweight	10	@10½c
do, medium	8	@ 9c
do, heavy	7	@ 8c

SHEEP—Prices of mutton sheep appear to be at a low ebb. Ewes are in heaviest supply. Wethers are slow.

Lambs, milk	9½	@10c
do, yearling	7½	@ 8c
Sheep, wethers	7	@ 7½c
do, ewes	5½	@ 6c

HOGS—There has been heavy receipts of hogs during the past week, consequently the market has eased off somewhat. Packers are taking the arrivals freely at the following quotations:

Hard, fat, grain-fed, 100-150 lbs..... 15c
do, 150-225 lbs. 16½c
do, 225-300 lbs. 16c
do, 300-400 lbs. 15c

Los Angeles, August 24, 1920.

CATTLE—The past week was rather quiet in this market. Lots of steers are being offered and killers were disposed to do more or less picking around, and the market was not only dull and weak for steers, but in some instances a little lower. Good cows rather scarce, in very good demand and brought full quotations.

er cwt. f. o. b. Los Angeles:

Beef steers, 1000@1100 lbs. ..$8.50@10.00
Prime cows and heifers .....$8.00@ 8.50
Good cows and heifers .....$7.00@ 7.50
Canners .....$4.50@ 5.00

HOGS—Receipts the past week only moderate and under the moderate supply the market held steady and a very good demand was had for all coming in. The supply, however, was only about equal to the demand for the fresh meat trade, and it was this that kept prices up, as packers are not caring to buy for curing at present prices.

Per cwt. f. o. b. Los Angeles.

Heavy, averag'g 275@350 lbs. $12.00@12.50
do, 225@275 lbs .....$14.00@14.50
Light .....$15.50@16.50

Rough docked 20 lbs. piggy sows 40 lbs. and stags, 40 per cent.

SHEEP—Market rather quiet as a whole. Wethers and ewes very dull. Lambs continue in very good demand, but everything is lower in sympathy with the markets East.

Prime wethers .....$6.00@ 7.00
Yearlings .....$6.00@ 7.00
Prime ewes .....$5.00@ 6.00
Lambs .....$8.00@10.00

Portland, Ore., August 23, 1920.

CATTLE—Receipts, 3,756; steady. Choice cows and heifers, $7.25@7.60; other grades unchanged.

HOGS—Receipts, 497; steady, unchanged.

SHEEP—Receipts, 789; steady, unchanged.

held the market steady in the face of a light demand, which will probably increase. An urgent demand for cucumbers, green beans and peas sent prices of these products soaring. Bay peas are finished; Half Moon peas are quoted at high prices.

Peas, Halfmoon	10@11c
Beans, wax, lb.	5@6c
do, green, lb.	4@5c
Carrots, per sack	$1.50@1.75
Green Corn, each	$1.50@2.50
Lettuce, local, dozen	25c@50c
Cucumbers, Alameda, lug box	$1.00
Tomato, River, large box	50@75c
Rhubarb, Strawberry, box 40 lbs.	$1.50
Summer Squash, box, 35-40 lbs.	50@75c
Egg Plant, box	50@75c
Potatoes, New River, cwt.	$2.50@2.75
Onions, Yellow, sack	$2.00@2.25
do, Red	75c@85c
Green Onions, box, 25 lbs.	$1.25@1.50

BEANS.

The market is slightly weaker, otherwise unchanged. Recent showers won't affect the general crop, which will be below normal unless the rains continue.

Bayos	$12.50@14.00
Blackeyes	$ 7.50@ 8.00
Cranberry	$ 6.75@ 7.00
Pinks	$ 6.25@ 6.40
Red Mexican	$7.50@7.75
Large Whites	$ 5.90@ 6.10
Small Whites	$ 5.90@ 6.10
Limas, Ass'n prices, South	$11.42
do, Baby, Ass'n prices, South	$11.42
Limas, S. F. prices	$10.75@10.90
do, Baby, S. F. prices	$10.50@10.75

POULTRY.

With a brisk demand and heavy receipts of all classes of poultry, the market is moving fast. Receipts were especially heavy at the close of the week.

Broilers	40@42c
Hens, mixed color	38@40c
do, Leghorns	25@30c
Roosters, young	42@45c
do, old	17@20c
Friers	40@42c
Squabs	55@60c
Geese	22@26c
Ducks	22@25c
do, old	18c
Belgian Hare, live	18@20c
do, dressed	22@25c
Jack Rabbits	Nominal

BUTTER.

Butter firmed at the opening of the week, after a drop in the market. An extraordinary demand from Southern California cleaned up the receipts and caused heavy withdrawals from storage later. Prices steadily advanced to a point three cents higher than at the week's opening, due to increasing urgent demands.

	Thu.	Fri.	Sat.	Mon.	Tu.	Wed.
Extra	57½	58	..	60	61½	61½
Prime firsts	56	56	..	56	56	56

EGGS.

After a phenomenal price advance the market closed top heavy with a drop expected. The market is too high to make eastern shipments possible. Other markets are much lower. Heavy bidding by buyers brought on the high prices. Fresh egg receipts are beginning to fall off, due to hens moulting.

	Thu.	Fri.	Sat.	Mon.	Tu.	Wed.
Extra	52½	52½	..	54½	60½	60½
Ex. Pullets	47	47	..	48½	53½	53½
Dirties	48	47½	..	48	48½	48½
Undersized	33	32½	..	33	33½	33½

CHEESE.

With a limited number of small and inconsequential sales, the market has been very quiet. There are practically no changes in cheese prices.

California Flats, fancy	28½c
do, Firsts	24c
Y. A., Fancy	33c
Oregon Triplets	27c
do, Y. A.	33c

SAN FRANCISCO HIDE MARKET.

Hides—No. 1 heavy, 55 lbs. up, 14c per lb.; medium, 45 to 55 lbs., 15c; light, 30 to 45 lbs., 15c.

No. 1 Wet Salt Kip, 15 to 30 lbs., 16c; No. 2, do, 15 to 30 lbs., 14c; No. 1 wet salt calf, trimmed, 24c; do, untrimmed, 19c; No. 2 calf, 2c lb. less.

No. 1 dry, 16 lbs. and up, 25c; kip, 7 to 15 lbs. 26c; calf, under 7 lbs., 28c; dry stags and bulls, one-third less than dry hides.

Horse hides.—No. 1 wet salted, large, skinned to hoof, $4@6; medium, $2@3; small, $1@$2.50.

Dry No 1, large, skinned to hoof, $2@3; medium, $1@1.50.

Pelts.—Long wool, 9 to 12 months, $1.50 up; medium, 6 to 9, 75c to $1.25; short, 3 to 6, 40 to 70c; shearings, good, 1 to 3, 10@15c.

SPECIAL CITRUS REPORT.

Los Angeles, August 25, 1920.

New York, August 24.—The citrus market shows a decided improvement in both oranges and lemons. Valencias sold at $5.35@$9.75. Majority of sales ranged from $6.50@7.75. Two cars sold as low as $3.50@4.00, due to quality and condition. Lemon market strong under conditions, such as heavy supply of both domestic and foreign stock. Sold for $3.50@4.00. One car sold as low as $1.05, and one car of rotten fruit sold at 50 cents per box.

Boston, Pittsburg, Cleveland, Baltimore, and St. Louis markets in splendid condition, on good stock, both of oranges and lemons.

Shipments of oranges to date 27,426 cars; same date last year, 30,775. Lemons, 7179 cars; same date last year, 8,755.

LIVESTOCK JUDGING PROGRAM AT STATE FAIR.

Monday. Holstein, Shorthorns and Jersey cattle; Poland China and Berkshire swine; Hampshire sheep. Night horse show.

Tuesday. Hereford, Ayrshire and Guernsey cattle; Duroc-Jersey swine and sheep other than Hampshires. Night horse show.

Wednesday. Judging Draft Horses. Opening of Bench Show.

LOS ANGELES

BUTTER.

Los Angeles, August 24, 1920.

There was quite a falling off in the receipts the past week, the arrivals being only 296,900 pounds against 483,600 pounds the week before. This falling off in the supply and an advancing market in San Francisco with a continued good demand for all extra creamery caused a firmer feeling, and Friday extras were advanced 1c, and Monday, under the influence of a good demand and higher markets north and east, there was a further advance of 1c and the market closed firm.

California extra creamery	61c
do, prime first	59c.
do, first	58c

EGGS.

A firm market and good demand was had the past week for all arrivals. The receipts by rail for the week were only 471 cases against 933 cases the week before. This falling off in the supply caused a firm market throughout the week up to Monday, when on 'change there was a scramble for eggs and extras were advanced 2½c, case count 4c, and pullets 2c for the week, and the market closed firm at this advance. We quote—:

Fresh ranch, extras	58½c
do, case count	55c
do, pullets	49c

POULTRY.

There was a quiet tone to this market the past week. Receipts were better and demand not so good. Broilers came in more freely and were slow sale. Friers that were dull the week before moved a little better and brought quotations. Hens were in only moderate demand. More coming in and buyers were slower to take hold. Prices, however, were generally steady. Turkeys continue scarce. What few coming in selling very well. Ducks still dull, but unchanged. Geese not wanted. We quote from growers:

Broilers, 1 to 1¼ lbs.	31c
do, 1½ to 1¾ lbs.	34c
Friers, 2 to 3 lbs.	32c
Hens	25@32c
Roosters (soft bone), 3 lbs. and up	38c
Ducks	17@20c
Turkeys	40@44c
Geese	25c

VEGETABLES.

Market well supplied the past week, but as the demand held up for all choice fresh stuff prices were generally held steady. String beans are higher again. Not many peas coming in. Potatoes coming in less freely and market high and demand fair. The same may be said of onions. Tomatoes coming quite freely and demand good for No. 1. Lettuce steady and demand fair. Corn steady and selling fairly. Summer squash higher and selling well. A good many cucumbers coming in but selling fairly at quotations. Green peppers doing a little better.

Potatoes, local, cwt.	$2.75@3.00
do, Northern, cwt.	$3.00@3.25
Onions, Stockton, white, cwt.	$2.50@2.75
do, local crate	60@75c
Lettuce, crate	$1.25@1.50
Rhubarb, per 30-lb. box	50c@$1.00
Peas, lb.	10@13c
Carrots, doz. bunches	30@35c
Summer Squash, local, lug	50@60c
String beans, green, lb.	7@9c
do, wax, lb.	7@8c
do, Kentucky, lb.	9@10c
Cucumbers, lug	40@50c
Tomatoes, home-grown, No. 1, lug	50@60c
do, No. 2	25@35c
Bell peppers, lb.	3@4c
do, Chile, lb.	5@6c

FRUITS.

Market holds up well. But few price changes. All choice fresh in very good demand. Market very well supplied. Figs are lower under increased offerings, but demand very good. Pears also shows a slight decline, but in good demand at quotations. Apples steady and selling very well. More coming in.

Plums, Santa Rosa, lb.	8@ 9c
do, Satsuma	7@10c
do, Black Dimond, lb.	8@10c
do, Burbank, lb.	5@ 6c
Nectarines, lb.	7@ 8c
Peaches, Freestones, lb.	5@ 6c
do, Clings, lb.	5@ 7c
Figs, lb.	7@12c
Crabapples, lb.	4@ 5c
Grapes, Malaga, lb.	8@ 9c
do, Muscat, lb.	8@ 9c
do, Thompson Seedless, lb.	5@ 6c
do, Black Hamburg, lb.	8@ 9c
Apples, Red & Wh. Astrakhan, bx	$2.25@2.50
do, Skinner's Seedlings, packed box	$2.00@2.50
do, Gravensteins, packed box	$2.00@2.50
do, Bellfleurs, 4 tier	$2.00@2.25
Pears, Northern, lb.	4@9c

BERRIES.

Market higher for strawberries and what few coming in meeting with a very good demand. Blackberries lower but selling fairly. Receipts light. We quote from growers:

Blackberries, 30-basket crate	$3.75@4.00
Strawberries, 30-basket crate	$5.75@6.00
do, poor to choice, crate	$5.00@5.25

MELONS.

Cantaloupes continue dull. A good many coming in. Prices, however, remain much the same as a week ago. Honey Dew melons slow sale and lower in sympathy with cantaloupes. Casabas also slow sale but unchanged. Watermelons in good demand and market steady.

We quote from the grower:

Home-grown, Tip-top, standard	$1.00@1.25
do, Rocky Ford, standard	$1.15@1.25
do, Pineapple, standard	75c@1.00
do, Paul Rose, standard	$1.15@1.25
Honey Dew Melons, standard	$1.25@1.50
Casabas, lb.	½@1c
Watermelons, lb.	¾@1c

BEANS.

There is nothing new to note in this market from a week ago. There is still nothing doing in dry beans. Prices, however, are quoted nominally steady, and the feeling is that the new season will open with a fair movement. We quote from growers:

Limas, per cwt	$10.00
Large white, per cwt	$5.25@5.50
Small white, per cwt	$5.25@5.50
Blackeyes, per cwt.	$6.50@7.00
Tepary, per cwt.	$3.00@3.25
Pink, cwt.	$6.75

HAY.

There was a little more doing in this market the past week. Lighter receipts and more willingness on the part of buyers to take hold, put a little more life into the trade. Alfalfa was in fair demand and there was something doing in grain hay. We quote f. o. b. Los Angeles:

Barley hay, ton	$23.00@25.00
Oat hay, ton	$25.00@28.00
Alfalfa, Northern, ton	$30.00@32.00
do, local, per ton	$28.00@33.00
Straw	$14.00@16.00

SPECIAL DECIDUOUS REPORT.

Sacramento, August 25, 1920.

During the past week the deciduous market has greatly improved. Bartlett pears and peaches are now in a class with plums. Reports down to the last minute from Eastern auction markets are: Bartlett pears, $3.60 to $6.00. This wide range was due to overripe condition. The majority of sales were around $5.00. Shipment of plums is fast falling off—12 to 20 cars daily, most of which are going from the foot-hill section. All varieties, however, are selling at prices that justify the shipment of all stock that will stand up under the long haul: Grand Duke, $2.10@$2.50; Giant, $1.65@2.10; Kelsey, $2.20@2.90; Gros, $1.80@2.20; Hungarian, $1.75@2.30. Wide range in prices are due to quality and condition of fruit on arrival.

The grape market is holding up well under the load of heavy shipments, which amount to 150 to 175 cars daily: Malagas, $2.65@4.00; Thompson Seedless, $1.65@2.85. Quality and pack causes the wide range in prices.

Peaches: Elbertas, $1.10@1.35; Clings, $1.95@3.55 per box of 21 pounds gross.

CALIFORNIA FARM BUREAU MARKETING ASSN.

REPORT OF SALES.

Le Grand August 18, 1920.

No. Hogs	Av. Wt.	Dock	Price	Buyer
51	146		$14.75	Lewis & McDermitt
19	227	125	13.00	"
31	128		13.75	"
	420	270	10.00	"

One car shipped to San Francisco and sold there.

Two cars, twenty-one consignors.

Madera, August 19, 1920.

87	200		16.10	Joe D. Biddle
12	168		14.50	J. E. Buckholz
27	290	290	14.50	"
22	190		14.50	"
29	133		14.00	"

Two cars, twenty consignors.

Fresno, August 20, 1920.

79	220		16.10	J. D. Biddle
79	196		16.95	Wilson & Co.
6	205		15.10	E. B. Miller
43	140		14.60	"
12	125		10.25	"
4	305		14.60	"
11	274		13.10	"
9	179		9.00	"

Three cars, fifteen consignors.

Bakersfield, August 21, 1920.

66	188		15.75	Joe D. Biddle
94	197		15.70	E. B. Miller
14	208		15.55	Wilson & Co.
76	170		15.55	"
82	202		15.50	Joe D. Biddle
12	259	110	14.75	"
9	147		12.00	E. B. Miller
23	140		11.00	"
16	292	220	11.00	"
1	470		10.75	Joe D. Biddle
8	56		4.00	J. E. Robert

Five cars, seventeen consignors.

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Diablo Orion Model
Defender Colonel 70th
Prize of Tulare Belle
Pathfinder's Queen
Great Wonder I Am Gano
Lucy Orion's Mayflower
Twin Oaks Attraction
Lady Defendress 70th
and 50 others.

WEANLINGS—$15.00 EACH AT RANCH — A large number always on hand to choose from. Crates $2.50 each, refunded when returned prepaid in good condition.

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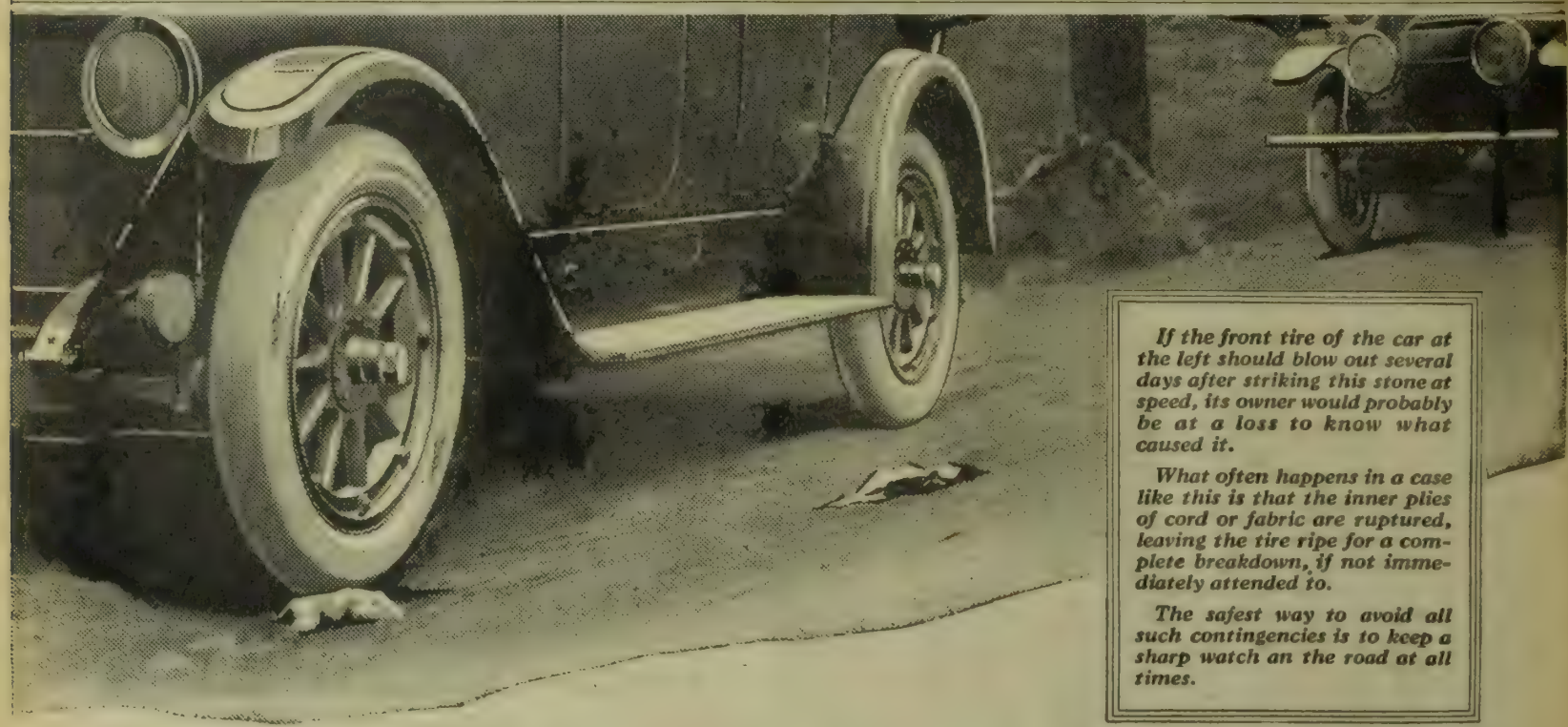
STOCK RANCH WITH FARM LAND

FOR RENT: Splendid opportunity for cattle or sheep—3800 acres rolling range—480 acres good grain land nearly level. Deep well at headquarters, 180 gals. per minute. Water being provided at central point. Good road five miles to railway station and three-fourths mile to State Highway, located between Dunnigan, Yolo Co., and Rumsey; twenty minutes from Arbuckle. Owners wish to lease till May 15th.

Wire or write for particulars.

685 S. BERENDO ST., LOS ANGELES, CALIF.

Are Car Owners too Easily Satisfied with their Tires



If the front tire of the car at the left should blow out several days after striking this stone at speed, its owner would probably be at a loss to know what caused it.

What often happens in a case like this is that the inner plies of cord or fabric are ruptured, leaving the tire ripe for a complete breakdown, if not immediately attended to.

The safest way to avoid all such contingencies is to keep a sharp watch on the road at all times.

IN every community of any size there are two types of tire dealers—one who encourages his customers in their search for the best and one who tries to persuade them to be satisfied with what they have.

The first man is selling a service; the second, tires.

* * *

There are still too many motorists who meekly accept the blame for a tire that has worn out before its time.

They will listen while the dealer tells them of all the varying conditions that a tire has to undergo.

They will agree when he pictures them as lucky that they got what they did out of a tire.

Not one motorist in five has yet found out what a tire is really capable of—how much he really has a right to expect from his tires.

* * *

The great mass of motorists in this country are just beginning to wake up to the fact that you can't encourage waste and have economy at the same time.

They are beginning to find out for themselves what makes for economy in tires.

And they are going to the dealer who not only sells good tires to the man who insists upon them, but who *refuses to have anything but good tires* in his store.

* * *

From the beginning the whole weight of the United States Rubber Company—the largest rubber manufacturing concern in the world—has been thrown on the side of the *good* dealer.

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And looking forward with confidence to the time when motorists *everywhere* will insist upon a higher standard of tire service.

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VOL. C—No. 10 Fiftieth Year

THE PACIFIC RURAL PRESS

SAN FRANCISCO SEPTEMBER 4, 1920 LOS ANGELES

California State Lib 7-1-2

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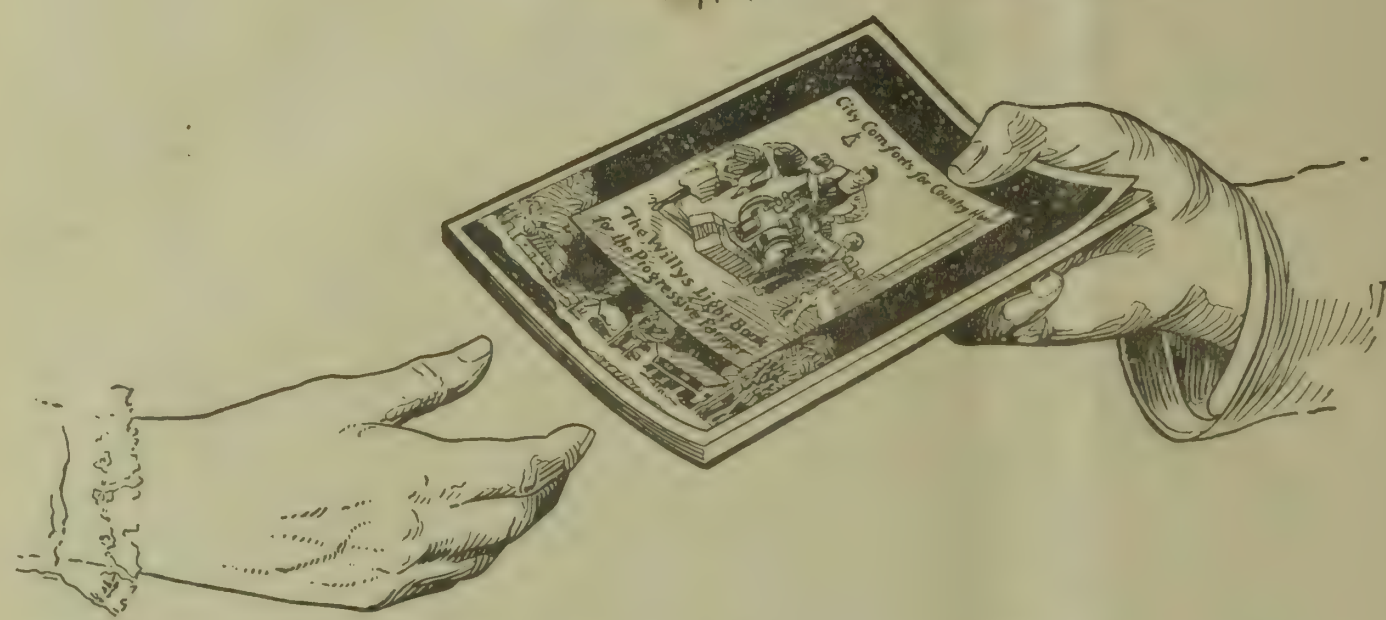

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General Agricultural and Horticultural Review

AGRICUTURAL NOTES.

Sugar beets in the Chino district are being harvested and shipped to the American Beet Sugar Company plant at Oxnard, the Chino factory being closed.

Rice growers of the Chico district are worrying more over the serious power shortage than they are over the possibility of early rain. This power shortage is greatly delaying pumping operations.

During the visit of the American Farm Bureau Federation Committee at the University experimental farm at Kearney Park, Fresno County, some members of the committee saw cotton growing for the first time.

Last year a certain dealer bought alfalfa seed from a farmer having 28 acres of common alfalfa and 28 acres of Hairy Peruvian. The farmer delivered 30 sacks of the former and 90 of the latter. Where is the nigger?

The Board of Directors of the Southern Rice Growers' Association, composed of farmers of Texas, Louisiana and Arkansas, have fixed the selling price of rice at $8 per bag for number 1 and 2. Last year the price was $10, but advanced to $12

Threshing in the Pleasanton section has ended with the year's crop exceeding the estimates made and with all grain farmers reporting good yields. Few sales have been recorded so far. All the local warehouses are filled with the year's crop of both hay and grain.

Hop picking on the ranch of M. B. Walker of Chico is now under full operation. The price for picking this season, is $1.25 per hundred pounds, an advance of 25 cents over the opening price of last season. The Butte County Hop Company is also working full time.

Anticipated yield of rice in California, as estimated by the Bureau of Markets, will be 3,500,000 bags, the same as that of 1919. A few contracts for future delivery are being made at between 7 and 8 cents per pound, practically the same as the price a year ago.

H. O. Jacobson, an extensive rice operator on the Parrott grant near Chico, predicts an increase of approximately one-half million sacks over last season's production in the Sacramento valley. This increase is due to an increased acreage. Harvesting will begin about September 25.

The Alameda County Farm Bureau has appointed a committee to confer with committees from other counties on the question of making disposition of the sugar beet crop for this year. The plan is to pool their interests in disposing of their crop. Heretofore the matter of marketing has caused the farmers much worry.

The Philippine residents of the province of Manila have made a protest to Governor Harrison on the sale of Philippine lands to Japanese for the purpose of rice growing. The result of the protest has been that the Japs have surrendered 5,000 acres of rice lands near Manila, amounting to $400,000.

Michigan bean growers now feel grieved because Armour and other packers were compelled to divorce their wholesale canned fruit, grocery, and other departments. Buyers of these concerns who used to take the crops are not now in evidence and the growers hold the sack. Peculiar how we don't want what we did want when we get it!

William Gould, horticultural commissioner of Yolo County, appeared before the State Highway Commission last week and suggested that they should finance the removing of thistles and weeds from the State highways, the work to be done under the direction of the horticultural commissioners of the respective counties. Gould has been advised that the commission favors his recommendation and will act accordingly.

J. H. Stephens, president of the Pacific Rice Growers' Association, has issued a circular letter to the growers advising against entering into future contracts at the present time. He states that growers making contracts now take a chance of being forced to sell the 1920 crop at rates from one-half to three-quarters of a cent below the prospective market price.

Ninety sacks of barley mysteriously took flight from the field of Peter Oxsen of Santa Rita, Santa Barbara County, a few nights ago. The first light-fingered act of the season. The individual who manipulated the "get away" was rather bold in his work, as he drove a truck into the grain-field within a few rods of the residence, loaded up and departed unmolested.

Bureau of Crop Estimates place the combined cotton crop of both Imperial Valley and Arizona at 187,000 bales as compared with 176,000 bales in 1919. A few buyers are offering 34 to 38 cents per pound for short staple, and 60 to 75 cents per pound for long staple cotton, but growers are refusing to sell at less than 40 cents for short staple and $1.00 for long staple. The growers claim that prices offered do not cover cost of production.

The minimum wage law of California had the effect of multiplying the cost of sorting shelled almonds five times and has absolutely killed the shelled almond industry of America. The Cal. Almond Growers' Exchange spent $30,000 or $40,000 on experiments and equipment to develop this industry and had a plant built at Sacramento when the goose that laid the golden egg was killed. All shelled almonds used in America now are shelled by cheap foreign labor and imported.

A race against time in the matter of biscuit production was conducted by Harry Huff of Chapman, Kansas, a few days ago. The "log" of this lightning change records the exact time it took from sheaf to biscuit. Fifty-five minutes after wheat left the thresher it had been made into biscuits. Mr. Huff was threshing on his farm and rushed the wheat to town and then back to his house where his wife made biscuits for dinner. Thirty-two minutes were consumed on the road to town and back.

The Cal. Bean Growers' Ass'n expects soon to offer a five-year contract to go into effect on next season's crop, since their present contract closes with the 1920 crop. Advertising advantages, the hope of affiliating with other State organizations into a national federation, and the saving that could be effected by the growers owning their own warehouses and bean cleaners will be leading points in favor of continuing the organization. It is doubtful also whether an adequate bean tariff can be secured if the California organization should not be continued. The association can sell at a price 5 cents below dealers' prices and still pay growers more than dealers can pay, according to Manager B. E. Jessee.

Early Baart wheat shattered far less than other varieties, as observed by C. H. Malmsbury of the Malmsbury & Shreve ranch in Tehama County. That ranch grew 600 acres of Baart this season. There was a perfect stand; but only where there was enough moisture did it stool enough to make a full crop. In the lighter yielding areas it did not whip out any; but in the creek bottom, where it yielded ten to twelve sacks per acre, the heavy heads were whipped together in a fierce wind which Mr. Malmsbury says, would have threshed out half the grain of other varieties. In this heavy Baart the excessive wind pounded out only about a sack per acre, though it was ready to harvest.

HORTICULTURAL JOTTINGS.

Watsonville Newtown Pippin apples are holding up at $2.00 per box.

The Viticultural Service will be represented by R. L. Nougaret and will comprise exhibits of grape by-products, including grape syrup, raisins and grape oil.

A. J. Sturtevant, Jr., sales manager for the California Peach Growers, Inc., estimates the crop at about 75 per cent of last year's crop. Hot weather has caused this unexpected shortage.

The Southern Pacific Company has informed the Oregon Public Service Commission that it will voluntarily make effective August 31 a reduced distance freight rate on dried fruit shipments in Oregon.

The Fruit Standardization Service will be in charge of F. W. Read, at the State Fair, at which time the proper method of packing apples and pears will be shown, as well as the grades of standard fruit.

California shipped 4,147 cars of apples in 1919, and of that number 539 went to New York City, or about 76 per cent of the California apples unloaded at the ten principal market centers of the United States.

The State of Washington, the most important boxed apple State in the Union, shipped 19,760 carloads of apples in 1919, and of this number 2,257 cars were taken by New York City and 1366 cars by Chicago.

A. F. Johns, a prominent fruit grower of Placer County, was recently caught in the fruit standardization "drag net" and fined $25 in the Justice Court for attempting to ship mouldy plums to the Eastern markets.

A. J. Sturtevant states that the California Peach Growers began shipping seven days earlier than last year. Cool weather in the peach-drying districts is aiding the growers by giving them additional time in handling their crop.

According to Fred Mason, the manager for a fruit shipping concern, Butte County's 1920 orange crop will compare favorably with that of 1919. He states that growers who have fertilized will be greatly repaid with a large crop.

The Fowler, Fresno County, labor camp has opened for the accommodation of the grape pickers and packers in that locality. The workers and their families are housed in semi-frame tents, while the eating-house is used by all.

Instead of making raisins of their Thompson Seedless grapes, as has heretofore been customary, the Sutter County growers intend shipping them green. Should this be done it is estimated that it will require 400 cars to transport the crop.

Dr. P. A. Boncquet, Tulare county, plant pathologist, states that 2,000 acres of citrus land in that county will be treated with sulphuric acid next year. Dr. Boncquet states that soil so treated will not need further fertilization for five years.

What's the matter with Clovis, a prosperous fruit growing and shipping district several miles northeast of Fresno? During the season thus far an average of 30 carloads of fruit have been shipped daily by freight, while five to six cars have gone out by express.

Figures compiled by the California Development Board show that there were 690,835 nonbearing apple trees in San Bernardino County alone in 1919, which is more than the total number of bearing and nonbearing trees in Santa Cruz County for the same year.

Expert prune pickers are making as high as $14 to $16 per day picking prunes. The State Free Employment Bureau states that there is a shortage of help, but if present weather conditions continue for a couple of weeks a large portion of the prune crop will be harvested.

The Yuba City Cannery has been on the job every minute during the peach packing season. It is stated that within the last month more than 100,000 cases of peaches have been packed. It is expected that more than 200,000 cases will be packed before the season ends.

Leave it to Sutter County to show the peach producing sections of the State how to head in. The latest the trouble arises from either an excess or deficiency of moisture. The disease has shown up in but few places this season, and an investigation has strengthened the findings of Profesor Nelson.

Walnut prospects around El Monte and Puente point to an 80% crop with number one nuts predominating. More growers are practicing correct irrigation this year and the results are shown in the better condition of the trees and in the quality of the nuts. Last year the nut crop in this section was valued at $3,000,000.

On account of an error in the weight of lug boxes, the growers in the Gridley district will receive a refund from the Libby, McNeil and Libby Cannery about $3,000. This is due to the tare of each lug box being taken at one-half pound more than authorized by the Weights and Measures Commission, 7½ pounds being the correct allowance.

There is complaint among the apple growers of Pajaro valley that the Bellfleur apple crop is not coming up to expectations. Before the fruit matured it was thought the crop would run 30 per cent larger than last year, but as picking advances it becomes evident that the crop will hardly reach last year's tonnage. Price has held up well for Bellfleurs, averaging around $1.50 per box.

Manager Carlyle Thorpe of the California Walnut Growers' Association is of the opinion that the invasion of Eastern markets by European walnut growers the California walnut industry "may be irreparably damaged" unless a satisfactory tariff is placed upon walnut importations. Fifty million pounds of European walnuts have been laid down in Eastern markets in the last nine months.

Recently an appropriate name has been bestowed upon many of the large trees in the mountains of Placer County, near Westville, by an expedition sent out for that purpose. The largest tree was christened "Teddy Roosevelt." It is a fallen sentinel of centuries' growth, measuring sixteen feet in diameter and more than 200 feet in length. It was not a fruit tree, but the fruit of Placer County's wonderful soil.

"It's an ill wind," etc. George Maddock, General Manager of the Sutter Basin Land Company, makes the statement that owing to the increased freight rate, the margin of profit on cantaloupes grown on their property had been wiped out and as a natural consequence shipments have ceased. Through the generosity of the company, according to Mr. Maddock, they will give away to the public about 50 carloads of melons that had been intended for Eastern shipment.

Professor J. M. Nelson, soil expert for the University of California, has made a test of the Turlock soil to ascertain the causes for the mysterious disease that appeared in the cantaloupe fields last year, when 50 per cent of the cantaloupes were destroyed. Professor Nelson states that story on peach production and sales is that told of John Hale, who sold his cling peach crop to the Western Canning Company at $110 per ton. Mr. Hale has 80 acres planted to cling peaches, that will produce more than 1,000 tons of peaches. Now, how much will Mr. Hale receive for his entire crop?

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EDITORIAL

A SLAM WHICH IS A SHOVE.

To the Editor: A while ago a man wrote you: "Your editorials are too comprehensive." You answered his five words with several columns. Several people told you that they do not like your policy, but of no avail. Your editorials become worse; almost unbearable. You say: "Certainly, we are always ready to reconsider our positions." Certainly you never are. I have read your paper five years, and feel that your editorials should be a "hit" with any Wall-street paper. They may please some of the large landholders and some of your advertisers; but surely not a small farmer. I cannot stand it much longer, and in time I shall be obliged to discontinue my subscription, despite the excellent conduct of the agricultural section of the paper, and feel that other people will do likewise.—Small Rancher and a Union Man., San Francisco.

Your letter has great value and encouragement for us. If we had anything to do with the business intersts of this journal we should arrange for some sort of endowment for you which would insure us such a letter once in awhile because of its testimony: first, that our editorials are read; second, and higher, that they are read by those who do not like them. Probably the general reader does not know how precarious a hold the editorial writer has on his job. The prevailing opinion among publishers is that "nobody reads that stuff," and perhaps the chief reason the publisher puts up money for it is the fear that his patrons would think him stingy if he sent the editorial writer's chair to the junk-room. So, you see, such a letter as yours insures our pay-envelope for another month, even on the evidence of reading the editorials, and perhaps for a quarter, or even longer, on the evidence that they grip you, even though you do not like them. Therefore, your condemnation is particularly valuable to us—and very timely too, because we have not received our August check from Wall street—probably because some political campaign manager has overdrawn the propaganda fund to promote un-American policies. If that is true, we beseech you to think up some new words of condemnation, so that we can convince the publisher that the editorials are being read—because the worse the things you can say about them the longer they will come in the same old style.

THE EDITORIAL FUNCTION.

Of course we must admit that you are very old-fashioned in your estimation of the editorial function; because there was a time, long ago, when editorial writers were looked upon as moulders of public opinion; though now they are considered merely as decorative artists. But you are not hopelessly old-fashioned, because your letter is at an enmity with itself; that is, you write one way and act another. You write as though you consider editorials worth paying for; you act otherwise, because you pay for the paper in spite of the editorials. You are more up to date in your action than in your writing, and more reasonable also, because if one finds in his paper what helps him in his work, or in his recreations, or in his proper desire to be well-informed in lines which interest him, why need he worry about what the editorial writer thinks or says? His work is decorative. Possibly it may create what the art critics call "atmosphere"; but it requires a pretty keen aesthetic sense either to approve or condemn that. The ordinary man is not sickened of a juicy steak because the coloring of the restaurant walls is outre, nor does he bolt from a good play because there is a bum fiddler in the orchestra. We read the papers which we buy for our home because of what we like in them, and we confess that we do not read the editorials at all. We know how they are made, and we get tired of all of them, except those we make ourselves. We enjoy the editorials in the papers we pay for just as we enjoy catfishes—for what we find on the back, and not on the front of them. If it were not for the high price of paper, which would make it an unthinkable waste, we would advise the publisher to print the editorial page on one side only, so it could be neatly removed on receipt without loss of any really valuable contents of the paper. So you see, you are much more generous in your thought of editorial writing than we are. You read the stuff; you read it, although you do not like it; you condemn it as vicious, and yet you cannot get away from it.

REASONABLE OBJECTION.

There is, however, one ground on which you have reasonable basis for action. If the editorials are really so bad that they grip you in a way you cannot evade; if the thirst for reading them constitutes with you an obsession so that you lose your peace of mind until the sight of the page appeases it, then it seems that you have good ground for proceedings against the publisher of this journal. But we must remind you of the testimony of writers in all languages in favor of what has been called "selective reading," which establishes the wisdom of Disraeli's claim that "there is an art of reading, as well as an art of thinking, and an art of writing," and thus return the responsibility for your distress upon yourself. For Bailey writes in his "Festus"—

All rests with those who read. A work or thought
Is what each makes it to himself, and may
Be full of great, dark meanings, like the sea,
With shoals of life rushing.

What you condemn in our editorial writing may be really their chief value, on the authority of Longfellow that "many readers judge of the power of a book by the shock it gives their feelings." Do you desire to read only what you, in your envelopment of "organized labor," believe or desire to believe; or do you, in your other capacity of proprietary farmer desire to know what most other farm owners, both small and large, must believe, if independent and self-supporting farming is to continue in the world? Of course, if your chief income comes from unionism, and farming is your pastime, it may be defensible for you to try to suppress views which are essential to those who operate farms for a livelihood, and who are paying the price of unionism, not only in their expenditure for labor, but in all that they buy to enable them to continue production, and to continue to live. But even then the shock of views contrary to your own may not do you any harm. If you are as stubborn as you say we are, it cannot hurt you. If you fear the writing may shake your views, don't read it. You are getting more than the worth of your money in the departments of the paper which you consider excellent, and as you get to be more of a farmer you may care less for the abuses of unionism which we have to condemn.

MONEY FOR FARMING.

There is a mint of money going into farming these days. Some of it happens to come from accumulations of those whom the war has prospered and to whom farming appears to be so profitable that they are paying unheard-of prices for land which will put them in the game. There is also a flood of money going into farm mortgages—largely we presume to those who are buying more land than they can pay for, which would naturally come in the course of the plunging which high prices of some products has induced. There seem to be two things the real old "dirt farmer" can now do to advantage: he can sell out, and get the high interest which is now running; or he can clear his land of all obligations, stop paying interest, and stay in. Both things are safe and reasonable. We do not need to say what we think of paying high prices for land and high interest on unpaid balances, and the relation of those things to subsequent profitability of farming entered by that gilded gateway. We can say, however, that it is our conviction that farming can never pay ten per cent on boom value of land by ordinary production such as will have to be relied upon in the normal times which will be soon returning. Seven years ago, when the Federal Farm Loan Act was passed by congress it was the general conviction that five or six per cent on production-capacity valuation was all that farming could stand, and that will be the case again when the war flurry is over. The question now is, "Shall all that was gained by the farm loan act be lost, and farm mortgage business go back to the go-betweens who doled out the money of the insurance treasuries to farming in the old way and at the old rates for interest and "expenses"? It looks very much as though that would be the way of it, unless the farmers get busy p. d. q. The farm loan act is in the supreme court and guaranteed to stay there until after election, so that any trouble with it may not hurt anybody politically, and what will happen after election seems to largely depend upon whether the farming interest, which was beginning to get money as cheaply as commercial interests were getting it, is ready to maintain its rights in that line when things do happen. This is the question which is taking the lead at the conference of the National Board of Farm Organizations, which is being held this week in Columbus, Ohio. The Board has undertaken to muster a force in favor of the fair financing of farmers by organizing a National Union of Farm Loan Associations, and it is announced that on August 21st Farm Loan Associations in twenty states had entered the movement. There are four thousand Farm Loan Associations, and by acting together under the leadership of W. W. Flanagan, who was until August 7th the secretary of the Farm Loan Board in Washington, the executive body which the law itself created to administer its provisions, it seems possible to strongly organize at once, and to act as conditions may make necessary. The members of these four thousand Farm Loan Associations are the borrowers who have taken advantage of the provisions of the law and are best qualified to act in its defense and preservation against those who desire to cut farm loans loose to float back to the breakers where the old beachcombers of finance had their life-saving stations set up. Our readers who are members of the Farm Loan Associations have no doubt been specifically advised of the movements. It seems very desirable that they should get busy.

PERSONAL CREDIT TO FARMERS.

The foregoing relates to the mortgage credit which congress arranged for as intimated. The other great question in farm finance is making available money for short-term loans to carry on farm operations without land mortgages, but to turn into collateral the personal business reputation of the borrower, and to arrange that such evidence as exists of that at home shall be certified to the distant source of ample capital which is desirous of dispensing liquid credit which will consist of loans on such terms as farmers need for producing operations. Such a source of capital desiring short-term employment are the great insurance companies which have heretofore been dispensing such loans to commercial, transportation and other big business enterprises. A bill has been introduced in congress organizing a rural credit society through which the great accumulations of money by the insurance companies can be made directly available to finance farm production. These companies desire such an avenue of use for their money, and there seems to be plenty of it. R. C. Milliken, a financial expert at Washington, has been giving much attention to this matter, and maintains that the life insurance

companies should carry at least $2,000,000,000 of liquid assets, and that the proposed rural credit paper will constitute the class of paper they should carry. It is necessary to demonstrate that the paper to be created by the proposed rural credit society is sound and meets the banking requirements of the life insurance companies. It is necessary to publicly establish these facts, and for that purpose congress is asked to hold a judicial inquiry at which all interested may be heard. This request is being urged by many prominent eastern farming associations, and should certainly be granted. If a safe way can be provided by which farmers can secure short-term credit directly from the great reservoirs of available capital it will be a great advantage in all places where local capital is insufficient or held at too high a rate. One of the most direct routes to restoration of affairs to normal condition in this country will be found in supplying farmers with all the money they can use to advantage, at reasonable rates.

QUERIES AND REPLIES

By the Editor.

Inquirers Must Give Full Name and Address
Answered Questions also on other pages.

What After Nematodes?

To the Editor: Is it possible to grow the papaya mato plants are attacked by nematodes; the roots are knotted and rotted. If one splits the stem open, the rot is away up in the plant, and I notice a swiftly moving, little white insect. What should I do with that ground? What can I grow on it? Would it attack melilotus as a cover crop for this winter? Would alfalfa be all right? I understand that corn and the different grains are unaffected by the pesky insect, but would rhubarb be attacked? Or onions, or garlic? I was intending to plant walnut trees next spring. Would that be advisable?—H. A., Puente.

You are all right about the nematodes taking the tomatoes, but you are wrong about the insect which you see being a nematode. It is some other little insect, possibly an acarus, feeding on the ruin which the nematodes have caused. Nematodes do not scoot around; they are minute worms, hardly to be seen without magnification, and they pass about all their time encysted in the knots. As nematodes are known to infest over four hundred different plants, it is hard to get around them. Of the plants you mention, wheat, barley and rye are least apt to be injured, and alfalfa does not usually suffer much. We would not risk walnut trees for a year or more. You can break up now loosely; let the soil dry and bake as much as possible, until time to put in barley, and go at a loose summer fallow again after the barley is off. After that the land ought to be clean enough for the walnuts.

D'Anjou Going to Grit.

To the Editor: I have Beurre d'Anjou pear trees on quince roots, seven years old, that have never had a touch of blight, although some Bartletts right beside are affected more or less every season. The Anjous bear heavy crops every season—good-sized and well-colored fruit, but the pears are more or less filled with woody knots, and therefore not very popular for canning; in fact, customers that buy once do not ask for them a second time. The flavor is excellent. Can this defect be overcome? Irrigation does not seem to have any effect. Any other kind of pear raised under the same conditions is normal. We intend to work them over to Bartletts. When would be the best time?

D'Anjou is, on the whole, a good pear—with limitations. It has, however, a way of getting gritty sometimes, and perhaps behaves better at elevations than in the valleys, and often sells well. We do not know why it gets gritty, except that seems natural to some pears—some being much worse than others. For canning, however, the commercial canners do not care for anything but the Bartlett and home canners do not get far away from the same position. The way to work over the trees is by ordinary top-grafting toward the end of the dormant season—putting in the scions as low down as convenient in the branches above the forkings from the main stem.

Irrigation and Alkali

To the Editor: I have apricots planted last spring which have had a little water with a bucket twice. I have prune trees three years old which have a little fruit. The soil has some alkali, but they have made a very prolific growth, and have a nice thrifty appearance. The soil always seems moist to the surface. It does not get any subirrigation or irrigation of any kind. I have been told that it will be necessary to irrigate to get a crop of fruit, and have also been advised to the contrary. I would appreciate your opinion in this very much.—C. R. P., Laton.

An opinion is not worth much. The trees will have to tell you the facts. Of course, moisture enough to grow young trees is not enough to grow good crops of fruit, but how do we know that the soil does not carry enough to do both things? That is one fact that the trees will have to tell you. As for the alkali, the chances are that it will be more apparent in fact and in effect if you irrigate. If you can keep it down and distribute as it apparently now is, it may not be too much for the trees, and dry-farming is your best play to do that. You have two horns to your dilemma: if you seize one the other may get you in the neck—and yet they say, "Any fool can be a farmer."

Alfalfa on Creek Bottom.

To the Editor: I wish to plant creek bottom land to alfalfa; no irrigation. When would be the better time to plant, spring or fall? How many pounds of seed to the acre, and what variety? What is best to plant with the alfalfa?—A. B., San Francisco.

If the land is frosty and likely to be winter-flooded, it is better to sow in the spring—as early as it is safe and the land can be got into good condition. In most places, however, it is better to start the plants as soon in the fall as the rains wet down deeply. This gives the plants time to grow several inches before frost and then they go through it all right usually. Sow 20 to 25 lbs. per acre of the common variety unless you can find local demonstration that one of the newer kinds is better in the district where you are planting. Sow nothing with the alfalfa; that is the best way in most places.

Tree Planting on Alkali.

To the Editor: In planting almond trees in soils which show alkali in spots, what methods, if any, are recommended for overcoming these conditions as regards planting and growing? I have both white and black alkali in small quantities and intend to plant the trees in large holes filled with good dirt. Will gypsum applied after the tree is started keep the surrounding alkali from killing the tree?—H. J. H., Delano.

If you eagerly desire fruit trees on that land, plant them in the way you describe. The trees will tell you more about it than we can. Whether they go up or down depends upon how much alkali there is at first or comes afterward by the water route, to the particular place where the tree stands. The office of the gypsum is to turn black alkali into white and the white does not hit a tree as hard as the black—unless there is a whale of a lot of it, and then it does not matter what color it is.

Bordeaux Paste Helps Re-barking.

To the Editor: Some time ago I noted an article in the Press about barked citrus trees and how to induce them to cover. At Lemon Cove I had a cultivator who was somewhat careless about trees. One day I was out on a still hunt for gum and had a jar of Bordeaux paste with me. Coming to a young tree that had just been badly barked I painted it with the Bordeaux and wrapped it. About three weeks later I examined it and found the wound completely covered with a thin layer of bark. I caught it when it had just been barked and the sap was still oozing. I think the bark growth was greatly stimulated by the Bordeaux.—W. S. S., Walnut Creek.

We do not know about the stimulation, but weak copper solution does some strange things to vegetative processes, and your view is possible. The protective action of the Bordeaux seems clearer and with that nature probably found it easier to do the rest. Your treatment, promptly applied, is very reasonable.

Lice on Strawberries.

To the Editor: Please tell me the cause of lice on my strawberry plants. Can you tell me what to do for them? If they need to be sprayed, what kind and when is the best time to do it?—J. L. H., Elk.

The cause is the fact that they arrived in some way. They are not generated by local conditions; they are invaders. The spray to use is 1 pound of nicotine sulphate (40 per cent) to 200 gallons of water, and it has to be applied as soon as you see the first of them by watching the under sides of the leaves early in the season—using a rod and nozzle so as to shoot upward under the leaves. It is too late to spray now, unless you have still green growth. To have as few lice as possible next spring, cut off the leaves when they get brown this fall, rake up and burn all such rubbish upon which the eggs may have been laid.

Two Kinds of Red Spider?

To the Editor: Are there two kinds of red spider, one requiring a dormant spray and the other spring strength?—E. G., Morganhill.

There are several kinds of mites affecting fruit trees, of which the so called "red spider" is one. They have some difference in their times of working, and so the character of the spray is changed, but the change is rather more for the sake of the tree than for the sake of the mite. Winter strength of lime-sulphur will kill the eggs of mites and the dormant tree will stand it. A weaker lime-sulphur will kill the spiders after they are hatched out and that can be used without injury to the foliage; or they can be killed also by vaporization of dry sulphur and that does not hurt the leaves. That is the chief reason why the winter and summer warfares on the mites use different materials.

Gumming Nectarines.

To the Editor: I have a few trees of nectarines, my favorites. Althought only 5 years old, they are bearing very large and most delicious fruit. But to my regret I notice that they are also developing gum or pitch on the fruit. What is the cause, and can you suggest a remedy.—G. A. B., Terra Bella.

There is sometimes gumming of nectarines, as of peaches, from insect invasion, and in that case the intruder must be caught and identified before treatment can be prescribed. In nearly all cases, however, the gumming of both fruits is due to some physiological trouble, of which the specific cause has not been discovered, though long and carefully sought, and no treatment can be prescribed. In the latter case there is a free effusion of gum and the pit of the fruit is usually split. Some varieties are more subject to this trouble and commercial planters reject them.

Too Much Pear Scab.

To the Editor: I have Bartlett pear trees, which I sprayed in spring with lime-sulphur, and after the blossoms fell I gave two sprayings with lead arsenate, and had a good crop, but nine-tenths of the pears were scabby? Please put me on the right track for next season.—F. E. K., Sebastopol.

Apparently you did not give them enough lime-sulphur to catch the spores of the scab fungus. To do this spray with lime-sulphur (one to twelve), just as the leaf clusters are opening, and spray again with the same, just as the first blossoms are opening. You can take another whack at the scab by adding eight pounds of lead arsenate to 200 gallons of the diluted lime-sulphur when the bloom petals are falling and thus hit at both the scab and the worms of the codlin moth.

Plums on Peaches.

To the Editor: I have five acres of young peaches set out last spring. Can I graft them to plums? I also have ten acres of six-year-old peaches. Would like to graft or bud them to Climax plums. Can I bud the peaches in September?—O. W. H., Exeter.

Grafting into the peach is not easy because of the shrinking habit of the bark. It can be done, however, by side-grafting without splitting the stock and good waxing. It is much easier to bud and September is all right if the growth is active and the bark slips well. If buds do not take, you can graft next winter—just as the sap is starting. All plums will not take on peach, but the Climax will do it.

CALIFORNIA WEATHER RECORD

The following rainfall and temperature record is furnished the Pacific Rural Press by the United States Department of Agriculture Weather Bureau at San Francisco for the week ending August 30, 1920:

Eureka	.56	.56	.20	68	54
Red Bluff	.31	.31	.01	96	72
Sacramento	.00	.00	.01	94	62
San Francisco	.00	.00	.01	78	58
San Jose	.00	.00	.04	92	58
Fresno	[illegible]	.14	.00	94	66
San Luis Obispo	.00	.00	.04	84	60
Los Angeles	.00	.00	.00	78	64
San Diego	.00	.00	.00	74	67
Winnemucca	.66	.66	.34	90	54
Reno	.44	.44	.38	82	54
Tonopah	.04	.94	.69	82	58

One Californian Grows 300 Sacks Spuds Per Acre

Written for Pacific Rural Press by R. E. Hodges.

Imagination could scarcely have compassed the change which has actually taken place in the district surrounding the town of Van Nuys and the whole San Fernando Valley in Los Angeles county since W. P. Whitsett surveyed the grain fields carpeting the valley in 1911. No community in the State is flourishing more on an equally sound basis than this one, as seen by the writer last July. A real home-land it is, where farms are large enough and fertile enough, well-enough watered and close enough together to enable the people to make a good living from the soil in the midst of the fullest community life. We were told on good authority that this community last year shipped out a million dollars' worth of poultry products, another million dollars' worth of dairy prducts, half a million dollars' worth of potatoes, besides hogs, sugar beets, fruits, and vegetables uncounted.

The man who did more than anyone else to develop this homeland, came here to win health. Splendidly he succeeded, and along with health, he has made great wealth. The development has, however, meant more to him than even health and wealth—it is continuing a delightful occupation worthy a big man's absorbing enthusiasm. Mr. Whitsett bought the present townsite and a great deal of the land around it, subdivided the property, and advertised it extensively for sale. He was largely responsible for bringing hither hundred of families in the midst of whom he proposes to spend his life.

Land Values Require Better Crops.

Their increasing prosperity is his delight; but it also brings him problems that keep him on the alert. When the great producing possibilities of the land had unfolded, and the delightful living conditions of climate, modern improvements, and community life were being realized, land prices went so high that ordinary crops would not pay interest on investment above living and producing expenses. The problem of making these small farms pay interest on their high valuations has for several years furnished Mr. Whitsett most of his daily recreation.

New Projects Established.

To convince the people of the local opportunity in poultry raising was the project of one year. Once established, it grew of its own momentum to the proportions mentioned above. He boosted potatoes one or two years in the early days of the settlement; and they failed him. Four years ago it was generally conceded that potatoes would not grow here. But Mr. Whitsett did not concede that supposition, and a million dollars' worth will be shipped from the 2,000 acres planted around Van Nuys in 1920. His own fields have this spring produced yields that many readers of this article will believe are fictitious. He took up dairying as an experiment to increase the dollar-production per acre; and you have read above that the surplus from this industry brought a million dollars to the district last year.

Wonderful Strawberries This Year.

This year the introduction is strawberries, and they seem as promising as potatoes have proved. No finer berries were ever enjoyed by the writer than some that were picked by Mr. Whitsett in July from vines planted last spring. Banners, Klondikes and Brandywines were planted on an acre of the home place in rows far enough apart to cultivate with mules and a riding cultivator.

"I want to make a white man's job of it," said Mr. Whitsett. "And always in introducing a new industry like this, I aim to get some specialist who has succeeded in that line to advise us until it is well established here. Our advisor for strawberries is M. L. Cadwalader of Texas, a personal friend, who is staking his reputation on fourteen acres of strawberries here this year." The vines would be easily mistaken at a short distance for potatoes, so thrifty are they and so big at the crown. When a considerable acreage shall be ripening fruit, it is planned to bring children by the bus load daily from Los Angeles, give them their dinner and all the strawberries they can eat, and thus solve the labor problem.

Enjoys Co-operative Farming.

Unique in this State is the co-operative farming plan carried out on about 225 acres here and 320 acres in Imperial Valley in family-sized tracts of five to eighty-five acres, depending on crops to be grown and equipment furnished by the family. Mr Whitsett picks out a promising family and joins them in leasing land from himself at a nominal rental. The family does all the work at going wages. Mr. Whitsett reserves the right to say what work shall be done and how. Then after expenses and wages have been deducted from the sale price of crops produced, the net profit is divided equally. The partner is sure of a job and ordinary wages. He is also morally sure of a good net profit, because no slack farming goes. In case the partner fails to do work as desired, Mr. Whitsett has reserved the right to employ someone else to do it without altering the terms of co-operation. The idea is to farm the land as he wants it farmed, and cultivate and fertilize as the average renter could not afford to do. Only proven crops, such as potatoes, beans, etc., are grown co-operatively.

Potatoes Thrive Where They Didn't Before.

When the recent potato development was started four years ago, the internationally known potato specialist, Eugene Grubb, and the potato "wizard" of Orange county, Andy Young, were called in for advice. Mr. Whitsett took a bunch of Van Nuys people to Mr. Young's ranch to generate some enthusiasm, and he had meetings in the home town addressed by both potato specialists. They were convinced that conditions at Van Nuys, including the cold nights, were well suited to potatoes, and so the renaissance gathered headway. Two crops a year are regularly grown on the same land now, rotating occasionally with beans, etc., and putting particular emphasis on fertilization, irrigation, cultivation, and seed selection.

Gets a Full Stand of Potatoes.

Pre-preparation of the land is carried by Mr. Whitsett on his own plantings to what appears to be an absurd extent—but the results indicate that the absurdity rests on those who practice less pre-preparation. This is specially necessary for the fall crop. It was being illustrated July 20 on a field of soft sandy loam, which had been irrigated and plowed deep with a tractor, "smooched" and cross-smooched with a harrow made of two 4x4's, one parallel behind the other, and both set with long teeth sloping backward. This implement worked over the field twice again, then a cultipacker firmed the seedbed and a tooth harrow hitched to the cultipacker loosened up a surface mulch. After another harrowing, this piece was ready for planting.

It costs a bit to put water on the land; so any waste due to poor preparation of the soil is poor economy. It is worse than that; for lack of a cool, moist seedbed is held responsible for most of the poor stands produced elsewhere. A field planted just before we called at the ranch, illustrates the extreme effort made to provide plenty of moisture for the midsummer planting. It had produced a crop in the spring. Ten tons of moderately strawy chicken-manure were disked in with the potato vines at a cost of $100 per acre. The field then was checked into ten-foot squares and flooded, running water through all checks from upper to lower until water stood six inches deep in each, thus soaking them all for several hours. Then the borders were disked down and the ground plower rather wet about ten inches deep. It was then harrowed, dragged with a leveler, and furrowed every thirty inches. Water ran through the furrows eight or ten hours. As soon as possible, the furrows were loosened with a cultivator, and a planter immediately put seed potatoes into the bottoms of the furrows. Then the wheel tracks were cultivated and the whole piece was smooched to level it off smooth. This is lots of work, but it prevents the rotting of seed, which frequently occurs when they are not planted deep or are covered with dry dirt or are not kept moist and cool until they come up. Where seed potatoes are planted shallow in midsummer and covered with a ridge of dirt, the ridge dries out and the seed dies out. Instead of a ridge, Mr. Whitsett has his seed in a groove.

Spring Crop 244 Sacks Per Acre.

A good-sized field, planted among walnut trees, was a solid mass of vines which had stood four feet tall when in bloom and were nearly up to a tall man's hips when digging commenced. Many of the stems were nearly an inch in diameter. They were Scottish Chief, Early Harvest King and Early White Rose. Some of the latter had been dug and had yielded over twelve tons per acre, with another crop to follow. The other varieties had as heavy a crop or even better. They had been planted in the spring about four inches below the level surface twelve to fifteen inches apart in rows thirty inches apart, using about eight large sacks of seed per acre.

Every week or ten days the field was harrowed and cross-harrowed to save moisture until the plants were two or three inches tall. Some potatoes always come up sooner than others on account of position of eyes on seed pieces, etc. The earliest sprouts were doubtless killed by the harrowing, and it looked as if the crop would be spoiled the last time over. But new sprouts came and they all came together, much more evenly than without the harrowing, which was considered a great benefit. Similar harrowing is being practiced on the summer-planted potatoes.

Early level cultivation was changed later in order to hill up the potatoes and protect the tubers from heat of the sun. They were irrigated four times during the growing season and cultivated each time except the last, in a way that left them ready for the next irrigation.

Heavy Fertilization Pays Big.

Fertilization plays a prominent part in economical production of potatoes, as proved here. The proximity of many poultry ranches simplifies the problem; and a great deal of commercial fertilizer is used; but Mr. Whitsett believes his cheapest fertilizer is in the form of rotation and winter cover crops. A crop of beans is followed by melilotus indica sown broadcast, double-harrowed, furrowed, and irrigated. This is three or four feet tall in February, when it is again irrigated and plowed under. The spring irrigation hastens decay, so potatoes can be planted ten days later. On the field which this summer yielded 2,440 pounds of White Rose per acre, five crops of beans and two of melilotus had been grown just previously, and 500 pounds per acre of a commercial potato fertilizer had been applied.

On the five-acre tract mentioned in our panel with this article, beans and melilotus had been grown in 1918; and 1,000 pounds of commercial fertilizer per acre had been applied with the seed potatoes through the planter in the spring of 1919. After that crop was off, six tons per acre of chicken manure were applied and a fall potato crop was produced. Last spring about 500 pounds of commercial fertilizer per acre was used, and after the spring crop was off $100 per acre was spent on chicken manure before planting the crop now growing on that piece. Strawy manure is preferred rather than the clear stuff, which is said to be too heating for summer use. As a matter of fact chicken manure should be applied only in the fall.

The combination of plenty of plant food and water tends to make potatoes grow overlarge. To prevent this they are planted closer together than would be desirable under less favorable conditions. Knobby potatoes are also avoided by continuous moisture and plant food. Knobs are due to arrested growth and new starts when irrigation is applied later.

Seed Selection Increases Yield.

"The average run of White Rose seed here won't make over two marketable potatoes per hill," says Mr. Whitsett, "and it persists that way. We have carefully selected our seed, and it makes a big difference in yield. At first we dug certain hills and saved the best. Now we only dig out the poor hills and not much of that. Much of the crop has been sold at a premium for seed. Much of it also has been sold at a premium for consumption, seven cents per pound at the ranch, having been the common price this summer.

There is no doubt in Mr. Whitsett's mind that if you want to make money with potatoes you must put money into them and give them what they want when they want it. Then, with selected seed, their response will be a joy to the producer.

SPRING POTATES NETTED OVER $900 PER ACRE.

If the potato crops you raise do not yield as much as the ones mentioned in this article, read how it is done and screw up your courage to try similar methods. A gross price of $4,442.25 for the potatoes interplanted in five acres of walnuts last spring is the achievement of Frank Ross Whitsett, a fourteen-year-old schoolboy of Van Nuys, Los Angeles county. Space left on each side of tree rows reduced the area to about four acres net. After paying expenss of raising the crop, except his own labor and rental for the land, Frank cleared $3,800, over $900 per acre. This area is now producing a fall crop. Last year it produced 200 sacks per acre in the spring crop and over 100 sacks per acre in the fall crop. This made $600 per acre net. A neighbor under similar natural conditions sold $1,500 gross from five acres of potatoes. The vast difference in net profits is solely due to the extra brains and money employed in raising the big crops.

WINDBREAKS BEING PROVIDED.

A stiff wind blows up the Salinas valley at certain seasons when fruit would be damaged by it. There seems only one remedy—windbreaks, such as are employed at Greenfield and in many Southern California districts. For this purpose, 200,000 eucalyptus seedlings were grown in a cold frame on the California Orchard Co. ranch, and have been transplanted into flats to continue growth through the summer in a lath house. Half of these are to be alternated six feet apart on the ranch in double rows four feet apart, these double rows to cross the orchard at intervals of 800 feet. The rest are to be available for outsiders.

Marketing California's Prune Crop--"Some Problem"

Written for Pacific Rural Press by W. S. Killingsworth.

The harvesting of California's 200,000,000 pound prune crop is now under full headway. The orchards are alive with men, women and children picking prunes up off of the ground, while around the processing plants and on the dry yards men may be found busily engaged dipping and spreading the fruit on trays where the drying process takes place. With this enormous tonnage soon in readiness to be distributed to the trade we were interested to learn to what extent this, the most important feature to the producer, had progressed. We knew of no better source from which to obtain this information than from the California Prune and Apricot Growers, Inc. While at San Jose, the writer called at the office of the association where he found a human bee-hive, where everybody was busy, but good natured. On entering Mr. Coykendall's office we felt at home in a moment. He told us of the plans that the association had and would continue to formulate in the handling of the large tonnage of prunes that would be in readiness in a very short while. In answer to our query as to the marketing of the coming crop he said, "The prospects are good. We expect to have a great many small prunes, but we have a scheme on foot by which we believe we have the problem solved. We intend to pit all of the small prunes and put them on the market as 'pitted prunes,' then teach the housewife the dream of the possibilities in the California prune. We are now putting them to the test to find that they make a most delicious prune bread—a bread second to none. We intend to teach the hotel-keeper, the dining-car chef and the baker what they can do with the pitted prune. We will feature all of these delicacies in our advertising in the leading women's publications in the United States and Canada. We will play them up strong in the jobbers' and bakers' journals, and further than this we will educate the bakers by sending out a baker to teach them the many and varied uses of pitted prunes. We also intend to issue a series of recipe packets for chefs and bakers, prepared by the highest class men in this profession in the country.

Prices to Move the Crop.

"The price on these pitted prunes is by far the most interesting part of the case. We will sell pitted prunes for immediate or delayed shipment, extended over a period of time to suit the buyer's requirements, at 10 cents per pound bulk basis, or 11½ cents per pound packed in 25-pound boxes, and 11¼ cents per pound in 50-pound boxes. With a price of this kind, backed by our advertising, specialty and educational work, the use of pitted prunes will go by leaps and bounds. We want it understood that we are not working for this year alone, but for the future as well. We intend to put 'Sunsweet Prunes' and their 'Sunsweet Family' of by-products into the homes of the nation. We propose to double the domestic consumption of prunes during this year and next. Such statement may seem a little out of reason, but we have that goal in view."

One may readily see from this statement that every effort will be made not to allow a pound of prunes to remain idle; there will be no hold-over even though indications are that there will be a large tonnage of small prunes. During the course of our conversation Mr. Coykendall said, "Here is a by-product we expect to place on the market that will unquestionably take; it is oil made from the apricot kernel, to be used for salad making, and we will go further than that by converting what is left, after the oil is extracted, into meal that will be used in making macaroons. Prior to the world war we sold our apricot pits for German exportation; they made these articles from the kernel and shipped them back to us. Now that we have learned how it is done, we will go into the manufacturing of these by-products ourselves." We left Mr. Coykendall with a feeling that he was extremely optimistic as to future results. He admitted that there were many pitfalls along the highway of an industry that is so fast becoming one of such magnitude, but he is alive to the situation and we expect to hear of splendid results accruing from the campaign he has mapped out.

The Bane of Holdover Stocks.

Knowing that there were other live wires and human dynamos connected with the institution, we went down the line to meet Mr. Dunlap, with whom we discussed prices that had been set by the association for the 1920 crop of prunes. We told him that we had heard the opinion expressed that the price on prunes was not in keeping with the price on raisins and dried peaches. He said: "The association is thoroughly aware of conditions. The prospective large tonnage of small prunes, the return of a large tonnage of California prunes from Europe, the lack of export demand and the deplorable condition of foreign exchange had a great deal to do with the setting of prices for the 1920 crop of prunes." Mr. Dunlap dwelt at length on these conditions, and in answer to our query as to future foreign demand he said: "It is not likely that we will have a foreign demand worth while for years to come; hence we must look to our own country to consume our prunes, and we must put our prices within reach of the consuming public." As to the reason why the better sizes are quoted at an improved price over the small sizes, he said: "The outstanding feature of this schedule we have issued is noted in comparison with the opening prices of the 1919 crop. In this it will be noted that the better sizes are quoted at improved prices, whereas small sizes are slightly reduced. Circumstances beyond the association's power to control or completely influence have so retarded the market on small sizes that the present season's opening, if maintained, will amount to the association's greatest accomplishment. Holdover stocks have in all previous seasons served to break markets and reduce prices by at least 50 per cent. This has seldom been justified, but is invariably a natural result in a speculative market. Such a condition has been averted in the association's maintenance of market, and our merchandizing of holdover has been appreciated, not only by growers, but by the trade, for great losses would have been sustained by a dumping of production on an unprepared market.

America on a "Purchasing Rampage."

The price we have issued is based on intelligent conclusions drawn from the lesson brought home to us in the past year's sales effort. The differential of one-half cent on Growers Brand and the lack of any quotation in this opening on the sizes smaller than 100 are further a reflection of this same situation. The present sale of sizes smaller than 100 have not justified an opening at this time. From a survey on deliveries as recorded in the association's books of past seasons, it is demonstrated that orchards producing principally Growers Brand and small sizes will profit even on the schedule we have set in excess of the average of orchards from which the larger sizes are secured. Consequently our opening is most reasonably fair to all. Generally speaking, the consumer of this country is on a purchasing 'rampage,' or spree, and will have nothing but the best, no matter what the price. This situation is reflected to manufacturers and producers in all lines, and our dried fruit products have not been found any particular exception to the rule.

"In announcing the opening price on prunes, the directors and management of the association consider the schedule as in the case of apricots so excellent as to require no elaborate comment, and certainly no apology, when we consider the positive lack of any market or offering on the part of independent packers. Summing up the situation I will say: "Last year's markets were built on an export expectation that has not materialized, and we have lost in this the bulk of our demand for small sizes. Last year's crop, exceeding by some fifty million pounds any previous season, naturally developed an excess quantity of small fruit, in which we still have on hand a material hold-over. Some two months back we were able to make sale of a portion of this, but such market was short-lived due to a heavy shipment of the past season's prunes returning from Europe, and selling in some instances in the East at prices ranging as low as an average of 8-cent basis, on both large and small sizes. Of course, such price does not establish a market as this hold-over of packed goods subjected to shipping and storage conditions is of rather a poor quality, in no wise up to the standard of our offerings.

"In our management we have determined that it would be foolhardy and ruinous to camouflage or fail in a recognition of the difficulties in marketing small fruit. As a consequence our opening prices on such grades for the present season have been named somewhat under last year. We are not attempting, however, to entirely meet the situation by the cutting of prices, and we are taking strenuous steps to improve and develop the condition. As you may already have learned we are aiming to develop the use of prune products in the manufacture of pastries, and we have every confidence in the future of such a movement; the opportunities are excellent at the present time and we shall not leave a stone unturned in the furthering of this movement. With the wonderful sales department of the association, assisted by more than 250 brokers all over the world, the best established and most capable brokers the association could find, we are going to win."

An Horticultural Paradise.

On leaving the office of the Prune and Apricot Association, we were more thoroughly imbued with the co-operative marketing spirit than ever before. When we stop for a moment to consider what the association has accomplished in the few years it has been in operation, it's hats off to the management, and with reverence do we bow to the growers who have stood so faithfully by the institution. Satisfied with our information as to the marketing of the coming crop of prunes, we took a swing around the circuit of the great Santa Clara valley, known from the Occident to the Orient and as far the other way for its production of prunes that have met all comers in every test they have been subjected to. As we wended our way along the burnished highways through the Evergreen district, the Alum Rock section and down the line past Edenvale to Morgan Hill, then back through the section leading to the little city nestled so comfortably in an amphitheatre of hills, better known as Los Gatos, and last but by no means least through the great cherry, apricot and prune sections of Santa Clara—through all of this vast territory, where millions of prune trees are laden with fruit to their utmost capacity, we did not falter in our opinion that the Prune and Apricot Association would be able to cope successfully with the situation, and that opinion was not weakened when we viewed the millions of trees not yet in bearing, for by the time their products are ready for market with the times.

Big Achievement in Prune Improvement

(Written for Pacific Rural Press.)

By invitation it was the writer's privilege as well as pleasure to attend what has come to be known as "Coates' Annual Checking Up," at the orchard of Leonard Coates, at Morgan Hill, Santa Clara County, where on last Friday some twenty-odd horticultural experts and members of the press inspected the 14-18 French prune propagated by Leonard Coates. Some twenty years ago H. H. Dingley, Santa Clara County orchardist, discovered in his orchard a prune of exceptional quality, and upon relating the circumstances to Mr. Coates he made an investigation to find a type of French prune superior to anything in the orchard. The tree had been neglected. As a matter of fact there had been but one limb that escaped with sufficient vitality to carry to maturity a small quantity of fruit. However, Mr. Coates was so impressed with the find that he selected some of the wood for grafting purposes, and for twenty years he has been patiently watching and caring for this prune, until now he states that the goal of his ambition has been reached.

The "14-18" Prune Selected.

In the propagation of this prune Mr. Coates did not herald it to the world that he had perfected the greatest prune of the age when his yearling grafts produced the first crop, and advertise the wood from this tree at fabulous prices per foot; but, on the other hand, he continued his experimental work by selecting buds from branches producing the best fruit, for size, color, texture, flavor, and performance during the drying process; and so on down through those twenty years did Mr. Coates make annual selections of buds until he was satisfied that he had a prune that would stand the test, in which there would be no "breeding back." During this time eighteen consecutive selections were made, and when the final judgment was passed, it fell to the 14-18 prune to be selected by Mr. Coates. Upon careful examination we found the trees to be strong growers and well proportioned. Unlike the French prune, the trees fruit more evenly. Compared with French trees in adjoining rows there was not the crop for quantity, but for quality and size it was superior, and as for tonnage there would be little difference, if any. The fruit ripens earlier than the French, and it also drops more easily.

After an examination of the trees carefully lunch was served at the beautiful home of Mr. Coates, after which there was a general discussion on the merits of this prune and it was the consensus of opinion that Mr. Coates, by his untiring efforts, had added to the horticultural family a product that would stand for all time as a monument to his perseverance and ability as a horticulturist. Dr. Coleman of the Prune and Apricot Growers, Inc., ventured the assertion that should the entire acreage of prunes in California be of the prune propagated by Mr. Coates it would increase the value of the annual crop at least $15,000,000.

So pronounced were all in their belief as to the great value and possibilities of this prune and their desire that it be given its proper place among the great horticultural benefactors of tree and vine, that a resolution was introduced and carried the purport of which was that a committee be named to select a name for this prune, and that the committee should report at the coming State Fruit Growers' Convention.

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The 1920 olive crop of Butte County promises to be one of the best for years in both quantity and quality.

Here and There in the Fruit Business

Rush in the Prune Orchards.

The recent atmospherical flurry caused a general rush in the prune orchards. The growers are still mindful of the great loss from rain damage in September, 1918. The recent hot spell has caused a heavy drop of prunes in all orchards, and especially so in those most affected by red spider. We noted, in a trip through the Santa Clara Valley, that in many of the orchards a large portion of the fruit was on the ground, and apparently there was sufficient help to handle the situation. However, should there come a heavy rain and the weather remain cloudy and damp for any length of time, many prunes will become badly damaged by souring, and as a result they are rendered practically worthless. So it stands every grower in hand to get busy. Sing Kee says "lain belly soon."

Turlock Cantaloupes Done.

The Turlock cantaloupe shipping season of 1920 is practically over. With more than 4,000 cars to the credit of this district, there were several hundred cars that remained unshipped. This sudden end of shipments was due to the premature marketing of Colorado cantaloupes, which of course, on account of being nearer to the base of consumption, heads off shipments from California. Owing to the excessive cost of placing a crate of cantaloupes on the Eastern markets, the Turlock growers are unable to compete with a nearby melon at a cheaper cost of general handling and freight rates. It is truly discouraging to learn that the cantaloupe growers are unable to boast of substantial results.

All Canneries Busy.

Every fruit cannery able to turn a wheel is now doing overtime, the work confined principally to peaches; however, there are some pears and the later varieties of plums still going to canneries. Canneries in some districts where irrigation is not practiced fell short of requirements, although such was under contract. The fruit failed to size up. In most cases, to prevent a shut-down, fruit was forwarded from other districts. The Suisun Cannery at Suisun, Solano County, met with such difficulties, fruit failing to size up to requirements.

Pears Practically Moved.

Pear shipments of all varieties have been reduced to a minimum. Placer, Nevada, El Dorado, Kern, Los Angeles and Santa Clara Counties yet have a few carloads of pears to go forward. Aside from Santa Clara County the pears going are Bartletts. Those from Santa Clara are entirely of the winter varieties, most of which will go into cold storage for winter and spring consumption. The Winter Nelis pears of Santa Clara County are showing up fine as to quality, size and quantity.

Grape Shipments Heavy.

As forecasted in the last issue of the Pacific Rural Press, grape shipments are climbing higher and higher, although daily shipments have not reached the 200 carload mark; highest up to present writing for one day's shipment has been 189 carloads, the majority of which were wine grapes. From the northern district of the State were shipped 48 cars, central district 125 cars, southern district 16 cars.

Peach Shipments Growing Light.

With the exception of the foothill districts the peach shipping season is done for the season of 1920. While it has not been a season of extreme heavy shipments, with the exception of one temporary slump prices have been satisfactory. All peach shippers look for this slump at some time during the season, and avoid it as best they can, but in the irregularity with which the Eastern peach shipments reach the markets it is simply a matter of guesswork. We have seen the "Leviathans" in the business miss their guess at times.

Plum Shipments Over.

Plum shipments are a thing of the past as far as the 1920 season is concerned. Though short in tonnage, the prices realized go far in making up that deficiency. One to five cars are leaving the State daily at present.

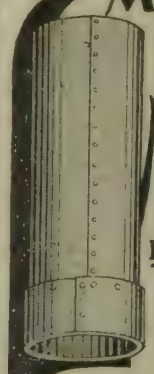
BRIDGE GRAFTING.

To the Editor: In 1915 I wrote you about some trees that had been almost destroyed by some party who was evidently afraid to cut them down entirely as that would be noticed at once. Instead he hacked them all around for a space of 6 to 10 inches above the ground and some of them he cut almost off. Of about 80 trees bridge-grafted not a single tree was lost. Some only had 4 scions inserted and although they will completely heal over in time, it's a poor-looking job. Others had eight scions inserted and bound tightly with cloth and are a perfect job. I have noticed a large number of prune trees as much as 8 inches through that have been entirely girdled by gophers. There is no reason why they cannot be saved by this method.—J. R., Sebastopol.

"OLD TUSCAN" SELECTED.

Millard Sharpe, horticultural expert of the Nurserymen's Bud Selection Association of California, and Horticultural Commissioner H. P. Stabler of Sutter County have made a careful study of the canning peach problem. They have sent peaches to the different canneries, and watched the process from tree to can, such as in the matter of picking, shipping, stoning, cutting and canning. This was done for the express purpose of determining which of the Tuscan cling peaches was the best of the Tuscan strains. After all investigations were over it was decided that the "Old Tuscan" was the best all-around Tuscan to grow.

MADEWELL WELL CASING



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For strong, smooth, perfect-fitting well casing, specify Madewell.

—Made from Hard Red or Galvanized sheet metal.

—Joints fit perfectly, because they're built to an exact standard.

—Made in all sizes, single or double.

Write for Catalogue A

It describes Madewell Well Casing and other Madewell Sheet Metal Products in detail.

MADEWELL PIPE AND CULVERT WORKS
Dept. 1.
E. 12th St. and 25th Ave. Oakland, Cal.

MADEWELL

Take A Vacation This Fall!

HERE are Thompson's ideas on farming.

"I've been watching my neighbors for many years. Some farmers 'dig in' the year around. They make money, but—

"Last fall when I got back from two weeks' shooting my neighbor, Hutchins, tried to get me riled because I'd been loafing.

"I didn't answer him. It wasn't any use, but I don't mind saying that Hutch is envious because we get more done and treat ourselves better than he does. We all get in a rut if we stick too close to our job. He never leaves the farm except to go to town.

"And you ought to to see the deer I brought back. I sent some venison over to Hutchins just for the fun of it."

Remington
for Shooting Right

Men like Mr. Thompson appreciate Remington High Power Autoloading and Slide Action Rifles. They have great respect for the unquestioned responsibility and experience behind all Remington products.

For more than 100 years it has been the practice of Remington to keep in advance in improvements and to keep faith with the sportsman and the dealer on the basis of actual performance behind all firearms and ammunition.

The first Remington was produced in the shop of a farmer-blacksmith in 1816. Not entirely on that account, but because of practical merit, Remington rifles have always held a strong position with folks on the farm.

Any one of the Remington dealers in your town will be glad to serve you. There are over 88,000 of them throughout the country.

Send for General Catalog

REMINGTON ARMS COMPANY, Inc.

Largest Manufacturers of Firearms and Ammunition in the World

Woolworth Building, New York City

Successor to The Remington Arms Union Metallic Cartridge Company, Inc.

Pear Trees

THERE'S MONEY IN PEARS IF YOU GET STARTED RIGHT.

Elmer Bros.' Trees are the best you can plant. Grown on virgin soil, and

BLIGHT RESISTANT

Pear have been grown in this valley for forty years, and blight has never made its appearance. That's why our Pear Trees are so much in demand.

Send for Copy of Our Latest Price List.

Elmer Bros. Nursery

"The Nursery That Helped to make Santa Clara Valley Famous."

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Citrus Orchard Foreman Wanted

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JAMES MILLS ORCHARD CORPORATION
Hamilton City, California

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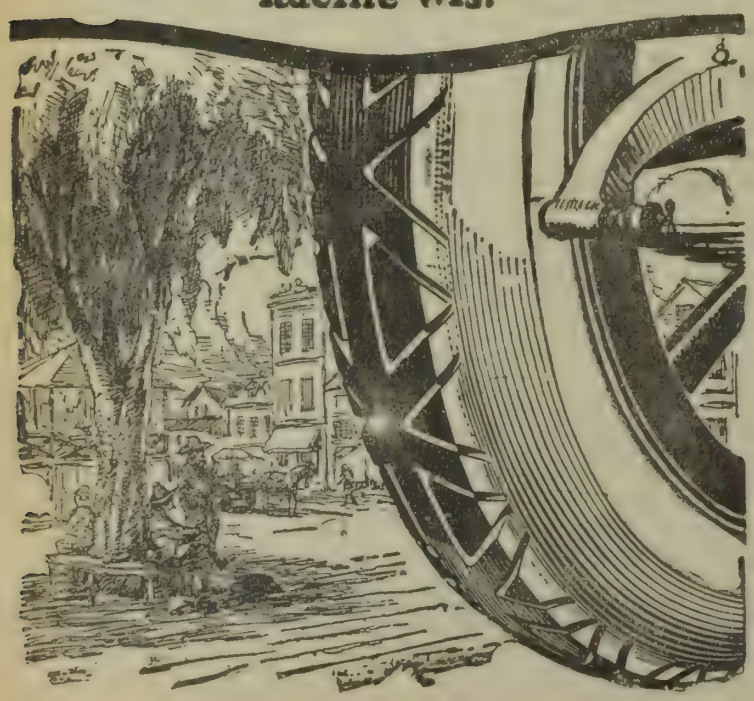
Extra Tested for Extra Miles

Buy tires you know are right. Racine Tires—Multi-Mile Cord and Country Road Fabric—are Extra Tested to yield Extra Miles. Racine Absorbing Shock Strip welds tread and carcass perfectly—the industry's greatest mile-making feature. Racine Tires are extra quality tires—that's why they are economy tires for car owners everywhere. Be sure every tire you buy bears the name Racine Rubber Company.

Racine Rubber Company
Racine Wis.



Markets Active on All Fruits.

(Written for Pacific Rural Press.)

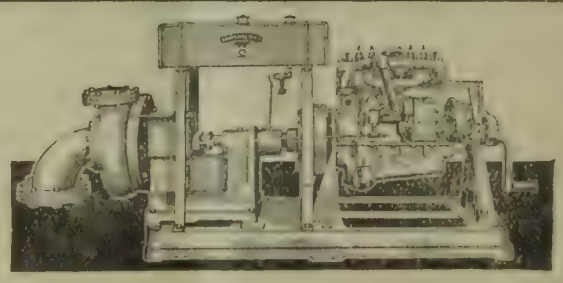
During heavy shipments resulting in a general depression of all markets on all varieties of fruits there is seldom a substantial "come back"; however, this season is an exception to that rule. There is not a fruit on the list, regardless of the depths to which it descended, but what has returned to a much higher level in price than demonstrated in many years, not within the memory of the writer at least. As evidence of this notable come back seven cars of Bartlett pears, shipped from Contra Costa County and sold at auction in the various Eastern cities by the Pioneer Fruit Co. during the past week, grossed $23,225 or an average of $6.28 per box of 48 pounds net. However, these prices are not confined to any one locality. Placer, El Dorado, Kern and Nevada Counties are receiving about the same encouraging returns. Peaches, the least expected to return to early season prices, are now giving the Bartlett pear a merry chase for first place. Peaches now being sold are foothill stock from Newcastle, Auburn, Placerville, Loomis and Penryn. Elbertas averaged $1.88; Lovells, $1.48; McDevitt Cling, $2.20; Orange Cling, $2.83; Philips Cling, $1.88; Albright Cling, $2.05; Salway, $1.90; Crawford, $1.97 in boxes 18 pounds net. Before next issue plum shipments will have ceased, but during the past week plums going principally from the foothill section averaged as follows: Grand Duke, $2.66; Kelsey, $2.25; Giant, $2.59; Gross, $2.76; Hungarian, $2.54; Victoria, $3.30; President, $2.60.- Grapes are now holding the center of the horticultural arena; in the matter of daily shipments and Eastern auction markets are holding up remarkably well under the burden of receipts. More than one hundred and fifty carloads of grapes are leaving the State daily, and the latest reports from the auction markets are as follows: Malagas averaged $2.90, selling as high as $3.65. Thompson Seedless, $2.00; Tokay, $4.50 per crate of 20 to 24 pounds net. While grape shipments have by no means reached the peak, with sufficient cars well iced, and climatic conditions reasonable the probabilities are that there will be a continuance of good prices for table grapes, as well as the remainder of tree fruits.

DEVICE FOR PICKING UP PRUNES

(Written for Pacific Rural Press.)

While in the San Jose district a few days ago the writer attended a demonstration in the art of picking up prunes with a mechanical device propelled by electricity. Several hundred fruit growers and those generally interested in anything that will lessen the cost of production and harvesting were in attendance to witness the feasibility of a mechanical apparatus that would supplant the human hand. While we are not prepared to say that the demonstration was a success, we believe that it will lead to further study in the matter of perfecting a machine that will eventually assist very materially in harvesting the great prune crop of California. The machine is the invention of C. M. Hurd, who unfortunately had been called away at the last moment; however, W. L. Cochran of the Delco-Light Company of San Francisco, acted as master of ceremonies, and gave the machine every opportunity to prove its practicability.

While the machine did pick up a few prunes, it showed its weakness in its delicate construction by being easily interrupted in the performance of its duty when not handled most carefully. That in itself would be an objectionable feature, as it would require experienced help to manipulate it, and such help, unless specially selected, is not often found among the class that is usually employed in the harvesting of prunes, as this is largely done by women and children. However, we still maintain that because this machine did not accomplish the work that several pickers could do by hand and knee action, it is no criterion that a power prune-picker will not in time to come accomplish this purpose.



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(Clip Out and Mail)

BEAN SPRAY PUMP CO.
111 W. Julian Street
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Distance to water below surface of ground_____
Possible distance to water when pumping_____
If water is to be raised above surface of ground, how high? (Length and size of pipe line)_____
Volume of water desired. Gals. per min._____
Inches_____
If you have pit, give width_____ length_____ depth_____
H.P. of motor or engine if you have that equipment_____
Give total depth of well_____
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Is well straight and true?_____
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You don't have to conserve on power if you own this Bean Direct-connected Engine and Pump. You can pump all day and all night if you want to.

Runs as smooth as an electric driven unit. The water pours from the discharge in a steady flood. Runs 10 hours on 6 or 7 gallons of fuel.

The outfit consists of a sturdy 4-cylinder engine direct-connected to a Bean Universal 4-inch Pump, the pump with the water-sealed stuffing box, automatic water balance, and other valuable features.

Send the coupon for Bean catalog of Horizontal, Vertical, and Deep-well Pumps, and Direct-connected outfits.

BEAN SPRAY PUMP CO.
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Centrifugal Pumps

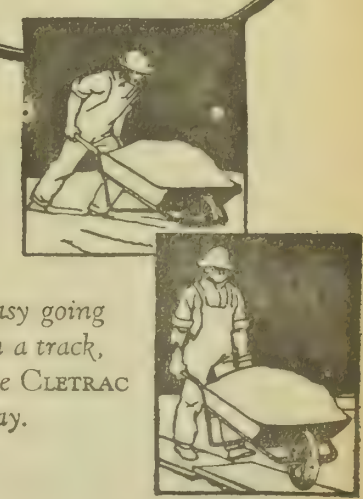
The Cletrac Never Tires-

The long grueling grind of open field plowing doesn't bother the Cletrac. This husky tank-type tractor never tires. Replaces four to eight horses—stands ready to work every minute, 24 hours a day, 7 days a week too, if necessary. Laying its own endless track, the Cletrac travels lightly over *any* soil, no matter how soft, without packing or miring. Plows deep and fast—lightens seed-bed work later on and helps produce bigger crops.

The Cletrac is economical too. Burns kerosene or distillate perfectly—and a boy can run it.

Let the Cletrac shoulder *your* plowing load. See the Cletrac dealer near you or write for a copy of the interesting booklet, "Selecting Your Tractor."

Cletrac
TANK-TYPE TRACTOR



Easy going on a track, the CLETRAC *way.*

Pacific Coast Sales Offices:
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The Cleveland Tractor Co.
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Largest producers of Tank Type Tractors in the world.

One of more than 1,200 CLETRAC *dealers with repair stocks is near you.*

MARIOUT BARLEY SEED
FOR SALE

This seed yielded twice as much as common barley on my ranch this year.

Have a few hundred sacks of good clean seed left. Order early.

Julius Trescony, - San Lucas.

Your Soil Needs Humus and Nitrogen Bacteria
Melilotus Indica Supplies Both

Now is the time to plant it. Buy only seed that has a quality test tag on every sack. It protects you against seed of low germination.
Buy from your local dealer or from

Aggeler & Musser Seed Co.

Look for the Tag LOS ANGELES, CAL.

Significant Agricultural Pointers

Riverside Sorghum Molasses.

Sorghum molasses are not generally available to consumers in California; but various communities in many parts of the State are providing themselves with this superior delicacy. D. W. Furrow of Riverside county grew 20 acres of sorghum cane last year and put in an inexpensive mill with which he made 5,000 gallons of molasses from his own cane and small patches grown by neighbors. This year he has distributed seed enough to make about 20,000 gallons. All of last year's first-grade molasses were sold early at $1.50 per gallon. An acre of cane made 200 to 300 gallons plus 1,000 to 2,000 pounds of seed and a heavy tonnage of pomace. The latter was sold at two cents per cubic foot for fertilizer and will be priced at three cents this year. We doubt its value at that price; but there is talk of its being worth more as a source of alcohol and vinegar. Seed is planted as late as June. Silver Tip is considered the best quality and the main variety, but Texas Seeded Ribbon cane is the heaviest yielder on good soil with a long growing season. Japanese Honey Drip is an early variety, which matures if planted as late as July. Crushing begins about September 1, the mill capacity being 200 to 300 gallons per day. Neighbors get their cane made up for one-third share. The molasses is put up in tin pails.

Cheap Seed Full of Weeds.

A seed company of Chicago about a year ago was offering two brands of clover seed to mid-western farmers. Wisconsin State Seed Inspector, A. L. Stone performed a simple problem in arithmetic, showing that "Economy" clover seed at $20.70 per bushel, or 34½ cents per pound cost 47 cents per pound for the clover seed in it. The same firm's "Pinnacle" seed also sold at 47 cents per pound. The difference in favor (?) of Economy seed was that the buyers got for the same amount of money an equal amount of clover seed plus 5,086 noxious weed seed per pound, 38,360 other weed seed per pound, 8.2 per cent of poor grade clover screenings, 3.8 per cent of inert matter, and 5.5 per cent of other crop seeds. Planting at the rate of 10 pounds per acre would deposit 50,860 noxious weed seeds per acre, the plants resulting from which would take years of labor to eradicate. California has no pure seed law—do you want one?

Dams for Sacramento Navigation.

How to permit maximum diversions from the Sacramento River for irrigation and still maintain its navigability is a problem that has engaged attention of U. S. Army Engineers this summer. Says Lieut.-Col. W. Kelly of San Francisco, "the only plan that will do this is one involving movable dams with locks." A tentative plan, subject to later revision, proposes four such dams, one to be located near Freeport, one near Collins Eddy, one near Kent, and one near Compton. Lieut. Kelly points out that Congress is not likely to pay the full cost of such a project, and unless those financially interested shall give financial help, diversions for irrigation may be cut short. The engineers are collecting information concerning all diversions and the possibility of benefiting pump diversions by a rise in water level due to the dams, and any probable effect on drainage along the river.

Auto License Money for Roads.

Somewhere around $5,000,000 have been taken in this year by the State Motor Vehicle Department in licenses. Ten per cent of this is allowed for maintenance of the Department. Forty-five per cent, or $2,225,000 are set aside by law for use of the State in maintaining and repairing improved highways. An equal amount is distributed to the counties proportional to the amount of license money received from them. This money also must be used for repair and maintenance of improved roads. The writer recently noticed that Los Angeles county apparently keeps its highways in better condition than many of the northern counties. This is explained by the fact that nearly one-third of the automobiles of the State are registered from that county, which is thus provided with well over half a million dollars a year to keep its own highways in good condition.

Mariout Barley Exported.

Shipments of Mariout barley for seed have recently been made from Yolo and Sacramento counties to Mexico, Australia, New Zealand, South Africa, South America, Arizona, Nevada, and Colorado, according to Prof. G. W. Hendry of University Farm. Arthur Green of the river district of Sacramento county, who shipped 20 sacks, averaging 123 pounds per sack, to Mexico, last winter planted Mariout and common barley side by side. The Mariout yielded 43.3 sacks per acre, while the other yielded 38 sacks per acre, but about two pounds lighter weight.

GRAIN VARIETIES FOR COAST.

Written for Pacific Rural Press by Prof. Geo. W. Hendry, University Farm, Davis.

In our opinion, oats would succeed better than either wheat or barley in the cooler, more humid southern portions of Napa county, and there is little to choose between the red and the black varieties, which are the only two obtainable upon the California market at the present time. The common Red (Texas Red) oat would probably succeed somewhat better as a grain crop on the drier lands, whereas, the Black oat (North Finnish Black) would yield somewhat heavier in the immediate vicinity of the bay. The Black oat is a somewhat heavier hay producer than the Red oat, but the quality of the hay is slightly coarser than that of the Red oat. The comparative feeding value, however, has been found to be practically identical in feeding experiments at the University Farm.

There is a third variety known as the Burt oat, California No. 1005, a gray-seeded variety, which we have found splendidly adapted to dry land conditions. We are just now increasing this for distribution at the University Farm, and shall have a considerable acreage of it this Fall. Unfortunately, there is no seed available for distribution at the present time.

We should not advise extensive plantings of wheat in the southern portions of Napa county, but are of the opinion that the variety Defiance would succeed better than any of the other wheats in such situations, because of its resistance to rust, mildew and other diseases prevalent in coast localities.

Probably the best barley variety for the cooler parts of your county would be Tennessee Winter, and we would recommend it especially on your heavier soil types. Mariout barley should not be grown in your cooler coast districts and should certainly not be grown on the heavy adobe soil.

For the more northern and warmer parts of the county, we would discourage the growing of oats for grain, but would recommend either the Red or Black variety of hay crops. We have also had considerable success in such localities with Chevalier barley as a hay crop. As a grain crop on the drier lands of northern Napa county, we would prefer Mariout barley on the lighter soils and Four Thousand barley for the medium soil types. When planting can be done prior to December 25 on such lands, especially on summer fallow, we would prefer Four Thousand barley. Mariout, however, would undoubtedly outyield Four Thousand when planted after that date in such situations, but, of course, to secure the best success with Mariout, it should be planted early in the Fall. We should caution farmers, however, against planting Mariout on heavy soils early in the Fall since it suffers from cold wet soil conditions more than other varieties; but on the other hand, it is better able to withstand dry soil conditions better than the other varieties. Mariout barley has succeeded very well sown on light well drained soils, but there is danger in sowing it too early on heavy soil types.

Bunyip wheat would be worthy of a trial in your county. This new variety recently introduced from Australia, has become popular in the San Joaquin Valley, and in parts of the Sacramento Valley. It is earlier than White Australian Bluestem or Club, and has been found to be a heavy producer in this part of the state.

"LOVE-APPLE" FLOUR.

If the experiment works the once-called love apple—tomato—and condemned as a promoter of a loathsome disease, will appear on the grocery list in the form of flour. This will be done by drying the tomato, and flour will be made of the residue. The experiment is now going on at the Brentwood Irrigated Farms, Contra Costa county, and will be watched with much concern.

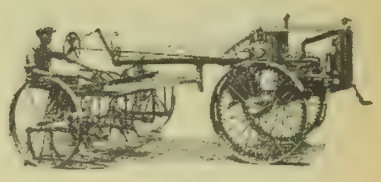
Farm Machinery for your every need

ALLIS-CHALMERS 18-30

A four plow tractor especially suited to California conditions.

THE success of the farmer—like the success of every business man—depends upon his buying the right tools, the right materials, etc. for his own work.

We consider it a part of our service to go into the markets of the world and to secure the very best equipment available for the modern farmer working under California conditions.



ALLIS-CHALMERS 6-12

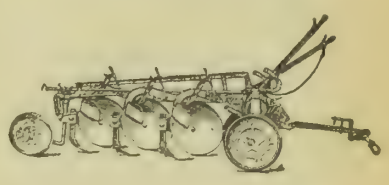
A one man tractor which will accomplish the work of 3 men and 3 teams.

Tractors

In the two models of ALLIS-CHALMERS TRACTORS—the 6-12 and the 18-30, and in the BEEMAN TRACTOR—you can buy just the tractor that will exactly fit the work to be done.

Plows

Not only do we handle the usual line of plows, cultivators, etc. but in addition carry such implements as the McKAY, combined power lift disc plow and sub-soiler, etc.



McKAY PLOW AND SUB-SOILER

An efficient power lift disc plow and sub-soiler making possible plowing and sub-soiling in one operation.

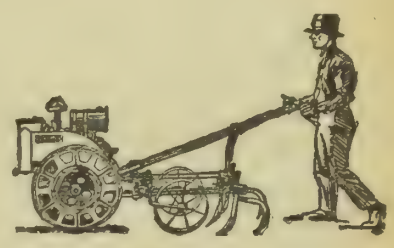
Sprayers

Spraying equipment is necessary to every orchardist. To supply you with the best available—we carry the HARDIE. Make known your requirements

Implements

No matter what your needs in farm implements and equipment—make them known to us and we'll take care of you. Our experts will gladly advise with you—and refer you to your local dealer handling these lines where possible.

You'll see us at the STATE FAIR—*but in the meantime write us about your requirements.*



THE BEEMAN TRACTOR

In plowing or cultivating, does the work of one horse.

H·V·CARTER MOTOR CO

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SAVE MONEY—BUY PIPE FROM US

Farmers, Miners, Builders—people in every kind of business are saving money buying used or renewed pipe from us. We sell every kind of pipe. Send in a list of your requirements today and get our prices. We have saved hundreds of people 33 1-3 to 50 per cent on their pipe bills. Here's a partial list of some of the miles of pipe we have in stock for immediate delivery.

8,000 ft.	6 in.	Riveted	16 gauge
700 ft.	8 in.	"	16 "
5,000 ft.	12 in.	"	12 "
1,000 ft.	18 in.	"	12 "
800 ft.	22 in.	"	14 "
300 ft.	24 in.	"	14 "
500 ft.	36 in.	"	12 "

10,000 feet light wrought iron 8-inch pipe with cast-iron collars.

All above pipe thoroughly overhauled and inspected and ready for immediate use.

We also have large quantity standard pipe and screw casing, pressure tested and guaranteed.

Don't delay—write for our prices on your pipe requirements today.

PACIFIC PIPE COMPANY

229 Howard Street, San Francisco, Cal.

SEED WHEATS AND BARLEYS

From Farmer to Farmer

BUNYIP, BAYAH, and DART IMPERIAL SEED WHEATS

Hard White Australians; California acclimated; best milling; higher price for products.

MARIOUT and BELDI SEED BARLEYS

Large yields; quick growth; early maturity; more drouth resistant than other varieties known to us.

There is in California a very limited quantity of choice wheat and barley seed of these varieties. All our seed grown on new soils, one irrigation only. All water from deep wells; no Bermuda, Johnson or Morning Glory. Orders booked as received, shipments following consecutively.

We also have limited quantities Early Baart, Sonora, Diener's Hybrid-Baart and Diener's Hybrid Sonora Seed Wheats. This is our first year with last two varieties and data not yet sufficient to permit our making definite conclusions or recommendations. Both tiller well, permitting light planting, and neither shatters so badly as Sonora.

In our judgment Bunyip, Bayah and Dart Imperial wheats and Mariout and Beldi barleys yield more or less soil moisture and shatter less in wind than any grains we have grown.

We are also now booking cotton seed orders for late fall and winter delivery. Pure strains, Durango and Mebane, grown by us in selected, hand-rogued fields. We do our own ginning, carefully avoiding seed mixing. We invite trial of our seeds for results with less moisture.

Write for prices, stating quantity desired.

BOSTON LAND COMPANY

Post-office, Telegraph, Express and Freight Address: WESTHAVEN, FRESNO COUNTY, CALIFORNIA.

ESSEX MOTORS JACKSON USA

See How Essex Proved Economy

A Nation-Wide Demonstration No Motorist Can Overlook

Connecticut—With 12 cars over Mohawk Trail and Hoosick Mountains and 12 over a coast route—many owner driven—216 miles average distance per car, 18.7 miles per gallon were shown. One car with 35,000 miles service averaged 21.2 miles per gallon.

Nebraska—A Hastings, Neb., woman drove her Essex from Lincoln to Hastings, 109 miles, averaged 21.2 miles per gallon.

California—Four women drove from Los Angeles to San Francisco and return averaging 22.3 miles per gallon. A San Francisco Essex made the round trip, 846 miles, in 33 hours with 23 miles per gallon. Hood and radiator sealed.

San Antonio, Tex.—In a 166 mile run to Austin and return, Essex averaged 25.5 miles per gallon. **Sacramento, Calif.**—Defeated 19 entries and took Tallac Cup for highest gasoline, oil and water mileage in Sacramento Dealers' reliability run.

Baltimore, Md.—Essex sedan, on original tires with 15,000 miles service, traveled 221 miles over Maryland hills, averaging 23 miles per gallon.

Florida—On a measured gallon an Essex covered 23 miles and without change or adjustment of any kind showed speed of 68 miles per hour.

49 Cars Average 18.9 Miles Per Gallon — Records cover every kind of test at a speed of from 5 to 72 miles per hour.

Los Angeles, Calif.—To San Francisco over 828 mile route of steep grades and frequently far from water supplies Essex which had previously gone 28,000 miles and under U. S. Marine observation made trip sealed in high gear with sealed hood and sealed radiator. Average 22.8 miles per gal. gasoline.

Also Broke World's Dirt Track Record--1261 Miles

Made at Dallas, Texas, by a Car That Had Already Gone 12,000 Miles

From the mere standpoint of gasoline mileage, Essex in its nation-wide tests showed a performance worthy of cars which possess that advantage as their principal quality.

Records were kept on 49 cars. They averaged 18.9 miles to the gallon.

But bear in mind this was not done by taking advantage of every device possible to increase gasoline mileage. Under conditions of that sort, Essex showed as high as 37 miles to te gallon. However, men don't drive that way. How obviously unfair it would be, therefore, to offer such carefully economized fuel milage tests as typical of all Essex cars.

In the Essex tests, conditions and performances adverse to gasoline economy obtained.

These cars were being driven at speeds from 5 to 72 milesp er hour. They were reeling off thousands of miles over all sorts of roads in inter-city runs that set new time marks. They were making new hill-climb, acceleration and endurance records.

Many were owner cars—owner driven. Women piloted some.

Some of the Essex cars used had already traveled upwards of 30,000 to 35,000 miles.

So you must not view Essex economy merely by its gasoline consumption. You must also consider its endurance and reliability.

If there were nothing more striking about the Essex than its gasoline mileage, it would be a worthy subject of our advertising. But important and impressive as that fact is, does not its other qualities take first rank in your consideration?

Essex Motors, Detroit, U. S. A.

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ESSEX MOTOR CARS — WATCH the ESSEX — ESSEX MOTOR CARS

Are You a Salesman? Write Parks Bros.

Mary's Man Wins

"A man rapped as I finished selling Mrs. Smith. Introducing him, she said: 'He is selling Parks Bros' Quality Groceries Wholesale to Farmers. Goods Guaranteed. 'Satisfaction or Money Back.'" And we save 20 per cent." He sold her a $54 bill in an hour. Much as I did in a day. I'm on the Parks job now. Mary says, "Billy, we're as happy as the year we got married. And we've many more comforts. And a better home. And all because you're a Parks Bros.' Salesman." We have a job for a man as good as Billy. Do you want it? Full time work only. Tell us your age, experience and what you earned for the years past.

P. R. H. HUNTTING, Care Parks Bros., Portland, Oregon

(Read "Lou's Best Girl," next issue.)

Big Money Boring Wells

One Man One Team

Have water on your own farm. In spare time make wells for your neighbors. It means $100 extra in ordinary years, double that in dry years. No risk—no experience needed.

Outfits for Getting Water Anywhere

Earth augers, rock drills and combined machines. Engine or horse power. *Write for easy terms and free catalog.*

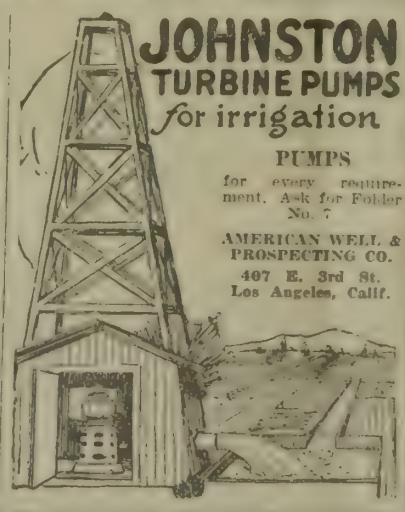
LIBERTY MFG. COMPANY
Box 712 Clarinda, Iowa

PLANT BERRIES

Produce big crops the first year. Small plants are high and sure to continue. Order your plants from us now for Fall and Spring delivery, because plants will be scarce later.

M. J. MONIZ, Berry Specialist
Sebastopol, California

The two-wheel 6-12 Allis-Chalmers tractor has been adapted to a six-foot Russell road grader.



The harvesting of approximately 4,000 acres of sugar beets is now under headway in the Pomona district and the loading and shipping points are scenes of busy operations.

AGRICULTURAL AND MECHANICAL SERVICE

Waterproofing Concrete Cistern.

I have a cistern which has been concreted, but it leaks slowly. The concrete work was done by an inexperienced man and has since been coated with a wash of cement and water. There are no cracks. I have been advised to use asphalt, but do not like to try this as I want to water horses from this source and fear the taste would prevent them from drinking.—C. V. W., Santa Clara county.

Probably your cement wash was too thin or has scaled off. An application or two of cement and water, mixed to cream-like consistency, is likely to hold the water. But it will not stick long if the old surface is dirty. Prepare the old surface by scrubbing with a stiff brush, scratch the walls liberally, and rinse with water to which one-fifth of its volume of hydrochloric acid has been added. Within half an hour, wash this off with clean water, brush the loosened particles off with a stiff brush, wet the surface again, and apply your creamy cement coat, leaving the surface rough. Keep the cistern closed and moist. As soon as the first creamy coat has set moderately hard, apply a second coat. Keep water away from the cement while it is soft, but keep the cistern closed; and about two days after the last coat is applied put several bucketfuls of water into the cistern gently, in order to keep the cement from drying out. This is rather elaborate procedure, but the poor concrete wall seems to make elaborate treatment necessary. Asphalt is frequently used in watering troughs and reservoirs, but is not recommended where the water is to be used by animals, though it does not make the water taste bad.

Pipes from Head Ditch to Furrows.

Running irrigation water from a head ditch into a number of furrows at once requires that all the furrows be on the same level or else some compensating device be provided. Otherwise one furrow gets much more water than another. Many irrigators in Southern California, of whom S. C. Oertley in Orange county is one, provide themselves with two-inch galvanized-iron pipes about 20 inches long to carry water at the proper level in proper quantity into each furrow. The head ditch bank is filled up over the pipes. The latter may be increased in number or changed in height to vary the quantity to pass into any furrow of varying soil or other conditions. There is also less trouble with washing-out of the head-ditch outlets.

Nitrate of Soda Price.

Where can I get nitrate of soda in ton lots and what is the price?—M. C., Yuba county.

We have referred the inquirer's name to a nitrate agency. The price is $87.50 per ton f. o. b. San Jose for immediate delivery. It may be slightly lower f. o. b. San Francisco in December and January, when additional cargoes are expected from Chile. Nitrate is handled in bags varying in weight from 190 to 205 pounds.

Late Green Feed in Dry Hills.

Late-planted white Egyptian corn, unirrigated, grew too rank on the adobe hills of San Benito county in the fall of 1918 to suit W. H. Best. It headed out but did not mature. It grew eight feet tall and stayed green all winter. Mr. Best had to use a grub hoe to get it out of the way of plows. For grain, it was not a success, but if planted early and fed fresh and crisp the plants should make admirable green feed after June, when pastures dry up.

Fast-Growing Clover.

What is the covercrop clover seed that grows in three months. I want a big tonnage to plow under in March. Farm Advisor Robt. W. Hodgson has been telling about it.—R. B. H., Los Angeles.

Mr. Hodgson says that the inquirer probably refers to the annual white sweet clover which has created a stir at the Iowa Experiment Station. Some of this plant was found in clover from seed produced in Alabama, where this variety is not uncommon. It has also been tried out in Oregon. It is reported able to make four or five feet of growth in three or four months, but has not been tried out in California and no seed is commercially available.

Avoiding Brown-Streaked Potatoes.

Fall crop potatoes in San Bernardino county used to get objectionable brown streaks inside; but that trouble has largely passed, according to E. D. Campbell. With more irrigation to cool the ground, closer planting to keep it shaded from the hot sun, and hill cultivation after potatoes begin to set in order to give greater protection from sun heat, the tubers develop normally.

Suckers Reduce Corn Crop.

Suckers sap Indian corn and still are valueless for cow feed, according to Will Moore, the man who introduced this crop into San Fernando Valley. Suckers make nubbins; while if they are removed, each stalk bears one to three good ears. But suckering is a back-breaking job. Even when knee-high, while the suckers may be jerked out easily by hand, an acre a day is a big job. Waiting too long makes the suckers much harder to pull loose. Labor has been so hard to get that the suckering was not completed last year on the Shattuck ranch, which Mr. Moore now superintends, but it would pay, and had always previously been done.

GRAIN CO-OPERATORS STUDY WESTERN ASSOCIATIONS.

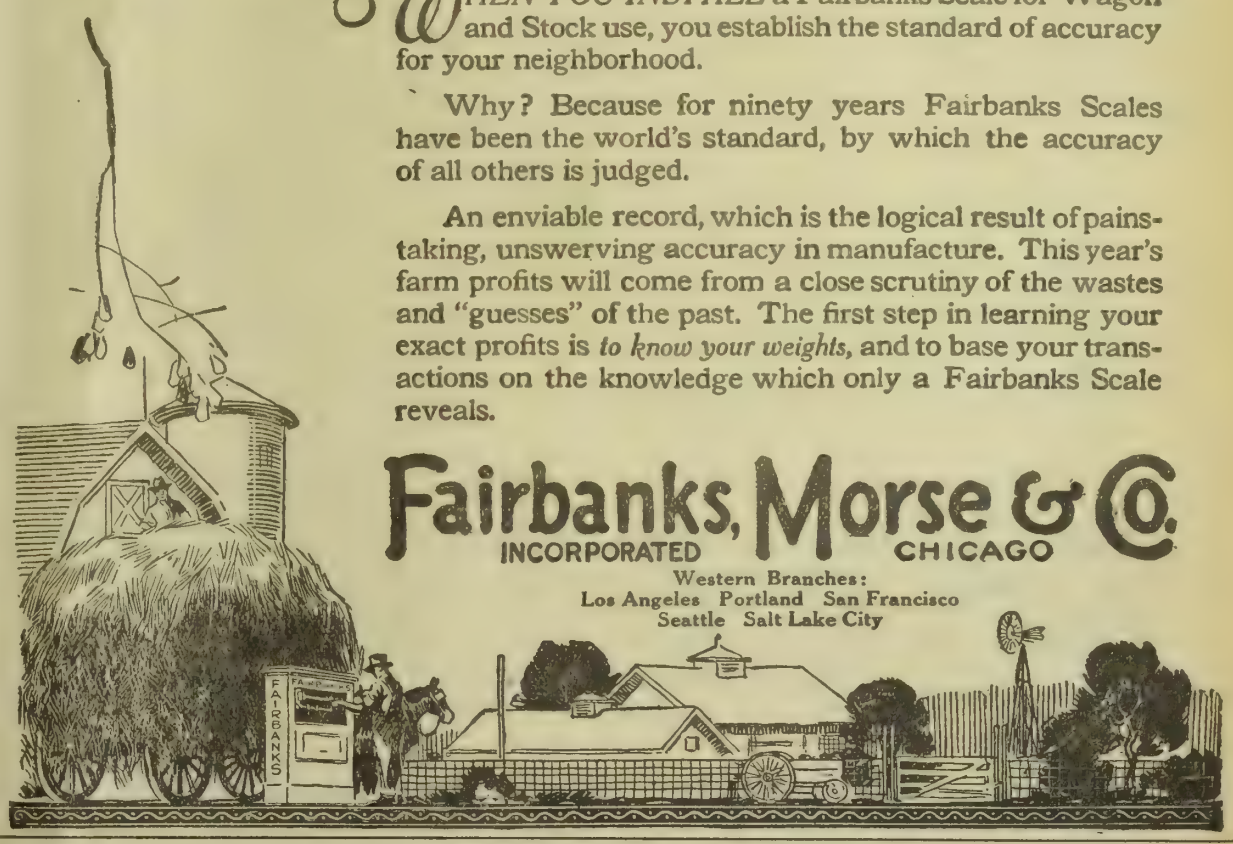
(Written for Pacific Rural Press.)

Representatives of midwestern farm bureaus, agricultural colleges, and farm papers have been investigating the question, as stated by one of them, why California co-operative organizations have made such outstanding success as compared with those in the Middle West. They were in San Francisco August 28 to 30, when they visited executive officers of the Poultry Producers of Central California, Inc., the California Almond Growers' Exchange, Cal. Bean Growers' Ass'n, and Cal. Pear Growers' Assn. On August 31 they went to San Jose to ask their questions regarding organization and management of the Cal. Prune and Apricot Growers, Inc. These men had already visited the co-operative associations in Los Angeles and Fresno. They and the grain farmers they represent are in the process of forming what may be the most colossal co-operative organization yet attempted—to market American grain without submitting to the great wastes due to speculation and inefficient distribution. They are earnestly studying every phase of the question in order to avoid any missteps in their own great project. Already many local and statewide grain organizations exist in the Middle West. A recent meeting of their representatives under auspices of the American Farm Bureau Federation in Chicago invited Aaron Sapiro, attorney for several of the Pacific Coast organizations, to outline a plan of organization for them. His suggestion was to form a nonprofit co-operative marketing association, with subsidiary co-operative capital stock associations to operate elevators and perhaps later to operate flour mills. It was favorably received and a committee of seventeen was appointed to work out details. Members of the investigating party included Wm. G. Eckhardt, Director of Grain Marketing, Illinois Agricultural Ass'n; Pres. J. G. Brown of the Indiana Federation of Farm Associations; H. G. Beale, Treasurer Ohio Farm Bureau Federation; Prof. E. G. Nourse of Iowa Agricultural College; P. R. Bausman, County Agent from Indiana; E. L. Rhoades of Kansas Agricultural College, and Herman Steen, Assistant Editor of the Prairie Farmer.

Short staple cotton picking will begin in Kern County about Sept. 15.

FAIRBANKS SCALES

The Standard of Weight in Your Neighborhood



WHEN YOU INSTALL a Fairbanks Scale for Wagon and Stock use, you establish the standard of accuracy for your neighborhood.

Why? Because for ninety years Fairbanks Scales have been the world's standard, by which the accuracy of all others is judged.

An enviable record, which is the logical result of painstaking, unswerving accuracy in manufacture. This year's farm profits will come from a close scrutiny of the wastes and "guesses" of the past. The first step in learning your exact profits is *to know your weights*, and to base your transactions on the knowledge which only a Fairbanks Scale reveals.

Fairbanks, Morse & Co.
INCORPORATED CHICAGO

Western Branches:
Los Angeles Portland San Francisco
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Holt Inspection

Standards accurate to within a hundred thousandth of an inch check all Holt gauges. Holt gauges, in turn, are a double check upon all material and parts that go into the making of the "Caterpillar" Tractor. One set of gauges is used by the workmen, another set by a corps of inspectors who check each process. By every possible means, Holt high quality is protected and maintained.

"Accuracy"—a most interesting booklet—will tell you all about it. If you are interested in "Caterpillar" Products, send for a copy.

The Holt Manufacturing Company
Stockton, Calif., Peoria, Ill., Los Angeles, Calif., Spokane, Wash., San Francisco, Calif.

CATERPILLAR
Reg. U.S. Pat. Off.

Red Crown gasoline has a continuous chain of boiling points. It is an all-refinery gasoline.

STANDARD OIL COMPANY
(California)

CRESOLITE
makes
STUMPS HUMP
Money back if it don't.
LOUIS BAHRS, Loomis, Cal.

BEES PAY

Bee-keepers can obtain from the Apiary Department of the Diamond Match Co. the finest quality of Bee-keeper's Supplies at fair prices.

The Apiary Department, which is in charge of experienced Bee-keepers, is one of the largest of its kind in the United States, and maintains a constant excellence of product and unsurpassed service.

Write for catalogue and if a beginner for Cottage Bee-Keeping, which will be promptly mailed free.

THE DIAMOND MATCH CO.
APIARY DEPARTMENT
CHICO, CALIFORNIA, U. S. A.

MOTOR TRUCKS JUSTIFY BREAKWATER.

Hope for a Government breakwater to make Monterey harbor commercially available for trans-oceanic vessels seems now to hinge entirely on the possibility of commercial motor trucking over Pacheco Pass! When the business men of Monterey petitioned the Government before the war for a breakwater, Government engineers pointed to the scant need for an ocean harbor to supply the needs of the Salinas Valley alone. They said that a direct railroad connection with the San Joaquin Valley would justify the expense of a breakwater. But the most direct route for such a railroad is the Pacheco Pass, which was long ago considered for the purpose and rejected. Hope became languid.

But last summer the Pacific Fleet rested in Monterey harbor. A little later California voted $40,000,000 for State highways, one of which was to cross Pacheco Pass. Then the first motor truck train made a thousand-mile trip down the coast to Los Angeles and back via the Valley route.

The Montereyans' hope flamed bright. They called in the Director of the Firestone Ship-by-Truck Bureau, and he made a thorough survey of the practicability of trucking freight in both directions across the Pass and estimated the tonnage. San Joaquin fruits, field crops and livestock products could easily be sent to seaboard by the direct Pass route and return loads of fish, lumber, and manufactured freight would make low transportation rates profitable. The tonnage would assure financial success to any reasonable number of motor truck transportation companies. Now the petition for a breakwater is believed to have much better chance at Washington.

MORE GASOLINE? FROM SAME CRUDE.

The semi-annual motor fuel test conducted by the U. S. Bureau of Mines proves that more of lower grade oil is being mixed with the gasoline of today than formerly. The average boiling point for the summer test made in July, 1920, is 277 degrees, as against 264 degrees last January. Normally, gasoline of lower boiling point is put out in winter, but the average difference between winter and summer boiling points is greater this summer than usual. Two samples showed evidence of adulteration with kerosene and several others showed careless refining. However, figures on production and consumption indicate the necessity of "cutting deeper into the crude" to increase the total volume of motor fuel oil even at sacrifice of its quality. The Bureau's figures on consumption for the first five months of 1920 were 1,418,534,063 barrels, an increase of 26 per cent over the same period in 1919.

PIT RIVER POWER PROJECT.

Approximately 35,000 barrels of oil per day will be saved by the harnessing of Pit and Fall rivers for electric power, as formally proposed by the Pacific Gas and Electric Company in its application August 20, 1920, to the Railroad Commission for permission to develop that source of power. The springs which supply these rivers have practically a constant flow the year around, averaging about 2,500 second feet at Peck's bridge. The available drop totals 2,000 feet. It makes possible the development of approximately 500,000 horsepower constant, which will enable the company to deliver to users in northern and central California about 7,000,000 kilowatt hours per day. Construction of plants and lines involves $125,000,000 expenditures on several plants, including about fifteen miles of tunnels.

OIL-TYPE AIR CLARIFIER PREFERRED.

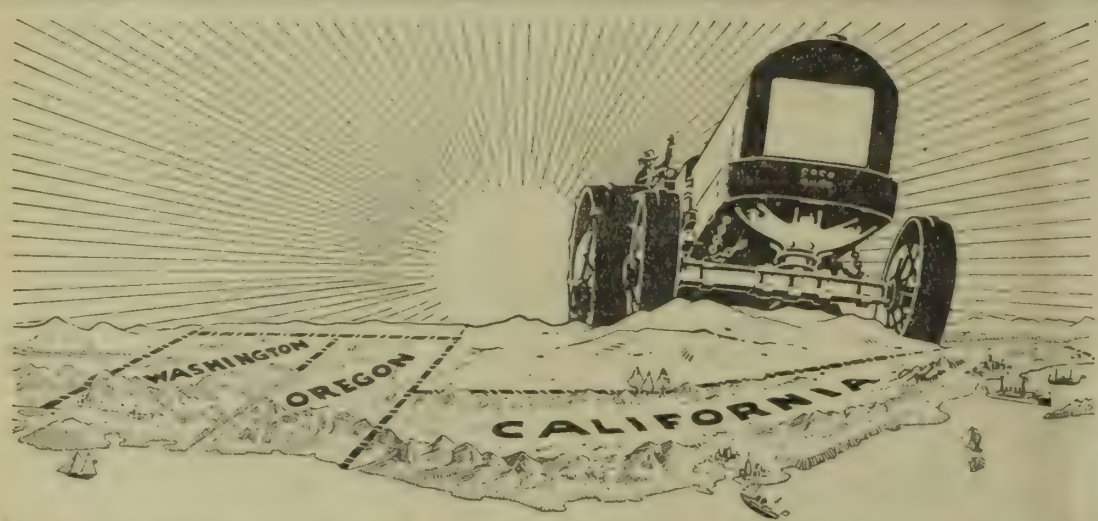
A water clarifier on the 8-16 tractor used in the Corona Lemon Company's orchard in Riverside county left so much dust in the air that mud had to be cleaned out of the carbureter about three times a week, according to J. H. Patten, who keeps the tractor in working order. A smaller clarifier was installed this summer and practically no dust passes it. This one is made of hair dipped in oil. The hair must be cleaned frequently with gas or distillate and dipped in oil ready to catch all the dust that would otherwise clog up the machine.

"PUNCTURE VINE" CAUSES TIRE TROUBLE.

Has your auto tire been punctured by spiny burs, which come from vines running along the ground? A survey recently completed by the California Department of Agriculture shows that the "puncture vine" is more or less widely distributed from Red Bluff to the Mexican borders in Imperial Valley. Its burs fall apart, always with one spine pointing upward, long and stiff enough to puncture almost any auto tire. The plant grows under arid desert conditions, but thrives better in cultivated areas in hot climates.

LUGS FOR WET ADOBE.

Lugs for tractors working wet adobe are useless if they are so close together that they fill up with the sticky stuff. The Bound Rancho in Butte county has four big wheel tractors, which work their adobe beautifully. The lugs are angle irons, four inches deep and about 3½ feet long, set far enough apart on the wheels so any adobe that sticks between them falls off during the revolution of the wheel.



NATIONAL TRACTOR & IMPLEMENT SHOW OF THE WEST

Verdugo Woodlands—Glendale—Los Angeles

September 20-26

The Great National Exhibition of Tractors, Trucks, Power Farming Machinery, and Accessories
The most complete exhibition of Modern Farming Equipment ever held in the West.

You cannot afford to miss this Big Business Show for Farmers

Your opportunity to compare standard equipment and make selections under ideal conditions. Tractors, Trucks, Trailers, Power and Horse-Drawn Cultivators, Threshers, Plows of best makes for all purposes, Road Building Equipment, Farm Lighting Equipment, Household Appliances, Lubricants, Carburetors, Electrical Accessories, Motors, Paints and Varnishes specially made for farm use. A wide variety of agricultural aids will make this show the greatest achievement of the sort ever recorded on the Pacific Slope.

Make Your Plans NOW to be There

Unequalled opportunity for recreation and entertainment in Southern California. Reasonable hotel rates at Los Angeles and Glendale. Free camping grounds for autoists near Verdugo Woodlands, Glendale. Inquiries gladly answered by the Secretary of the Association or the Management of the Show.

DIRECTION OF
Tractor & Implement Dealers Association of Southern California
GUY H. HALL, MANAGER.

TIMING GEARS PLACED WRONG.

A rancher of Santa Barbara county had trouble with his tractor and called a service man to fix it. For ten days afterward he tried to work it but the thing "wouldn't pull your hat off." It was sold to another man who brought it to L. M. Higgins' shop. The cam shaft which opened valves was timed with a thirty-tooth gear. This had been replaced by the service man just three teeth out of place and it opened valves at the wrong time. It was put back in the right relation to crankshaft and now pulls better than a new one. Service men are not paid enough to keep them interested in self improvement along service lines such as better knowledge of the machines and of methods to overcome difficulties. Many of them are of the class that are purely ignorant or careless, or both.

BETTER PROTECTION FOR OPEN SPINDLES.

Many tractor manufacturerers and operators attempt to protect their open-ended spindles and other exposed axle shafts by covering them with a sleeve or collar. Such a sleeve is admirably adaped to catch dirt so it rolls around exactly where it is supposed to be kept off. Far better to cut a tin can in two lengthwise and fasten the halfround section over the top of the spindle. This will shed what dirt drops onto it and will hold none of it as a full-round sleeve or collar would do.

FRESNO IRRIGATION DISTRICT AUTHORIZED.

Organization of the Fresno Irrigation District, comprising 246,000 acres of land, was authorized last week by a majority of nearly 8 to 1 in the election called for that purpose This will be the biggest unit of the Kings River Conservation District, which is now awaiting the Supreme Court decision before proceeding with the Pine Flat reservoir project.

MAKESHIFTS ARE EXPENSIVE

Lots of people buy any old wreck for a trailer; but if they could figure up the wear on truck or automobile and the extra gas required to pull such makeshifts, they would find themselves in the hole as compared with what they would be if they bought a good automatic steering trailer built for the purpose, says Perry V. Grout, who has charge of the motor truck and trailers hauling over 400,000 boxse of oranges per year from orchards to the Santiago Orange Growers' Association packing house in Orange County. Many makeshift trailers pull like a sled. The automatic steering is necessary for safety of the load, for safety of other machines on the road, and in some counties, such as Los Angeles, for freedom from motor-cop troubles. One swaying trailer had to be unloaded by the roadside not long ago, because the traffic-cop considered it dangerous to other travelers.

POWER NOTES.

A big tractor was bought secondhand last November. Within the following eight months eight different men had been employed to drive it. Now, if there is a big repair bill, should the tractor be blamed?

A big Schmeiser leveler and Oil-Pull tractor are both operated by one man, C. W. Patty, for C. W. Wood of Fresno county. He has fixed an air-compressor on the front of the engine in a way that makes a one-man outfit. He uses 12 to 15 gallons of stove oil 24 to 28 degrees gravity per nine hours. An equal amount of water goes into the firing chamber with the stove oil.

"THE ONLY 15-25 Tractor Capable of Pulling Three Plows on High Gear Around Here"

"I have just finished the threshing season pulling a 24" separator. I had plenty of reserve power at all times. In plowing the LAUSON seems to be the only 15-30 tractor capable of pulling three plows around here. Practically all the other machines use only two plows or plow on low gear. It is the best kerosene burner I know of, using the lowest grade kerosene which will hardly ignite with a match and burning it without smoke or odor whatever."

Hornick, Iowa.
Aug. 18, 1919

The John Lauson Mfg. Company.
New Holstein, Wisconsin.

Gentlemen,-

Have just finished the threshing season pulling a 24" Advance Rumley machine with only 15 minutes' stop for tractor, a broken fan belt and a clog in carburetor. Had plenty of reserve power at all times.

In plowing the Lauson seems to be the only 15-25 or 15-30 tractor capable of pulling three plows on high gear around here, practically all the other machines use only two plows or plow on low gear

It is also the best kerosene burner I know of, using the lowest grade kerosene that will hardly ignite with a match without any smoke or odor whatever.

Yours truly,

(Signed) F. B. Burns

This is a strong testimonial for F. B. Burns of Hornick, Iowa, to write. But it is the kind of service LAUSON Tractors are giving all over the country.

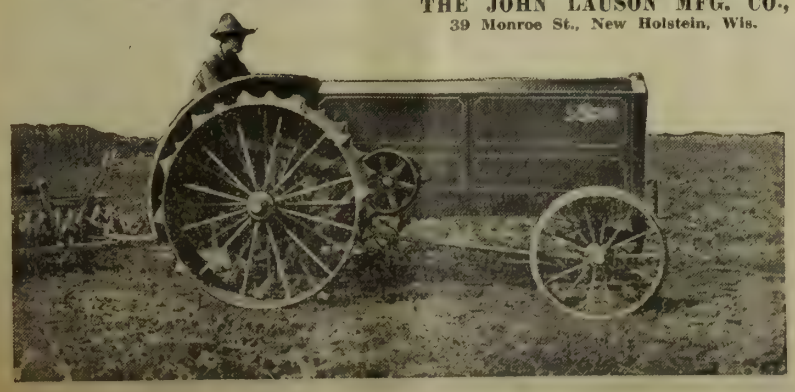
Year after year the LAUSON Tractor has gained favor with the better class of business farmers —men who consider service and satisfaction rather than price. You will usually find LAUSON owners the leading and most prosperous farmers in the locality.

Write for our new catalog which illustrates and describes the construction of the Lauson—the "Pattern" Tractor.

De Laval Dairy Supply Co.
59 Beale St. San Francisco, Cal.
Distributors for
Oregon, California, Arizona, and Nevada

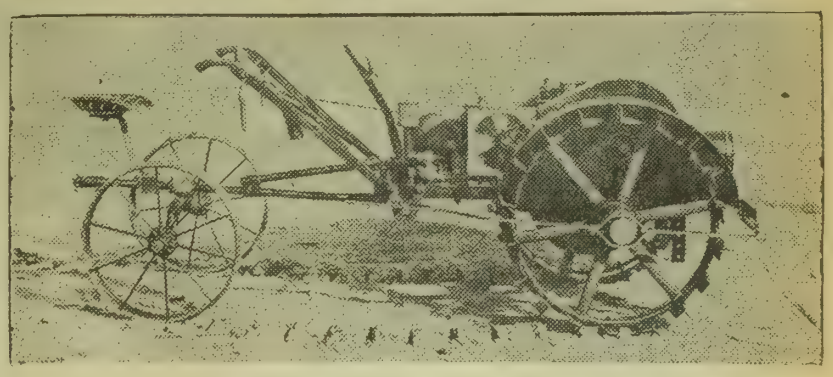
THE JOHN LAUSON MFG. CO.,
39 Monroe St., New Holstein, Wis.

The LAUSON 15-25
DUST PROOF-ALL GEARS ENCLOSED



Oldsmar Garden Tractors

(Designed by R. E. Olds, the World-Famous Designer.)
WILL EXHIBIT AT STATE FAIR



The Operator Does Not Walk

5x5½ MOTOR
15-inch Clearance
30-inch Tread

36 in. wide Over Lugs
32-in. Wheels.
Positive Clutch in Each Wheel

FRED A. BENNETT

PACIFIC COAST DISTRIBUTORS
223-25 North Los Angeles Street

OLDSMAR TRACTORS—COLLIER TRUCKS—ROGER TRAILERS

WILL EXHIBIT AT NATIONAL TACTOR SHOW, LOS ANGELES

The Easy-Pull Spreader

THE outstanding feature of the **International Manure Spreader,** among a number of exceptional features, is its light draft.

Equipped with roller bearings at seven points, it runs with almost the smoothness of a sewing machine.

Two rapidly revolving steel beaters tearing tough chunks of manure into bits; a heavy load carried on the main axle, to be moved steadily back to the beaters — these things ordinarily would tend to create heavy draft. But roller bearings in the new **International Spreader** smooth out the hard work and convert what otherwise would be "heavy draft" into a horse-saving, spreader-saving "Easy-Pull".

Your nearby International dealer will be glad to tell you more about this spreader.

INTERNATIONAL HARVESTER COMPANY
OF AMERICA
(INCORPORATED)

Billings, Mont. Cheyenne, Wyo. Denver, Colo. Helena, Mon.
Los Angeles, Cal. Portland, Ore. Salt Lake City, Utah
San Francisco, Cal. Spokane, Wash.

Dairy Substitute Arguments Reviewed

(Written for Pacific Rural Press by Ralph Newman.)

Two communications have recently come to the writer that he is unable to get out of his system without comment.

Our Friend Hebe.

The first is a bulky, beautifully printed and expensive lot of literature from our friend Hebe, who, as some may remember, was rather slightingly referred to in a Pacific Rural Press article some time ago.

Our friend disclaims any desire to influence editorial opinion, but is anxious to set us, as fair-minded dairymen, right about the dairyman Hebe, to the dairy interests. The argument is not only beautifully and extensively printed, but is clever—very clever—and very shallow and unsound.

Utilizing a Waste Product.

Just one real point is emphasized, and that is, Hebe is a friend of the dairy industry; becauses it utilizes "a waste or partially waste dairy product"—skim milk. Anything that turns a dairy waste to use and profit is a benefit to the dairy.

Well, let's see about that. Hebe, made of skim milk and cocoanut oil, for all the eloquent disclaimers, is a substitute for condensed milk. Hebe denies that it is a substitute. One choice bit in the communication says it is not a "substitute," but an "alternative," for certain uses. How pretty! The only difference between the two is in the dictionary—not in the milk tin. Furthermore, their own literature proves that it is regarded as a substitute. They righteously rebuke one of their dealers who has written a glowing testimonial about the fine effect of Hebe on his own baby. If Hebe hasn't yet educated its own dealers to the fact that it is merely an "alternative," it is a cinch that untold thousands of ordinary mortals if they know about it at all and it is cheaper than condensed milk, will buy it and use it in place of condensed milk, and will feed it to the babies, which will be a moral crime against the rising generation.

Is It An Ally?

Being a substitute for condensed milk, or at least a mongrel alternative, if its use should spread very far it would throw back butter-fat to break the market. Do you call that being an ally of the dairy industry? Hebe attempts to answer this with the assertion that if you condemn it on this account we must also condemn skim milk cheese, as this also uses the skim, but not the butter-fat—a fine example of the cleverness and shallowness of the whole argument. Skim-milk cheese is a legitimate dairy product. It goes for just what it is, without being bolstered up by any foreign substance. If a cheese maker should lug in a cocoanut to replace butter-fat, and should throw on the market a cheese made of skim milk and cocoanut oil as an alternative to full cream cheese and to compete with it, leaving the extracted butter-fat to create a surplus and break the market, he would be a fine friend to the dairy industry, wouldn't he? Hebe really may not know it, but that is just the kind of dairyman's friend it is.

Is Skim Milk a Waste Product Now?

Moreover there is now little force in the plea that Hebe utilizes a waste or partially waste product—skim milk.

The chances are good that Hebe was thought out when skim milk was a waste product. Let's give them the benefit of this surmise anyway. But skim milk is no longer a waste product to any large extent; and just as fast as the necessary equipment can be installed it is becoming a waste product to no extent at all. It is going into perfectly legitimate dairy products, knowing no alliance with the cocoanut trade, a cotton field or a reeking fat vat. And these products, frankly dairy products, and nothing else, are taking their legitimate place as an inexpensive complement to those higher priced and more valuable dairy products containing the vitamine-bearing fat for which there is no known substitute.

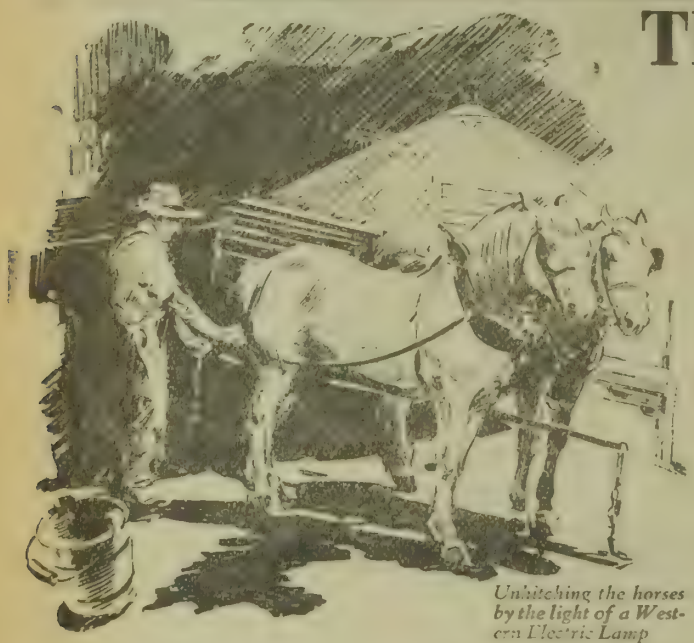
If the Hebe people are real dairymen with skim milk to dispose of, let them manufacture and put it on the market for what it is, and leave the cocoanuts for the cows who need them. Until they do this, no amount of clever argument is going to cause dairymen of intelligence and integrity to extend the right hand of fellowship.

Salve for the Students.

The other communication is a statement that a certain butter substitute is being used at the San Luis Obispo Polytechnic School and a request that as a dairyman I protest to the State Board of Control.

Now, it is hard to believe that it is being done. The writer was there a while ago and saw some fine Jerseys and fair Holsteins at the school, as well as the dairy equipment. And he remembers the enthusiasm with which the head of the department was preparing for a special course in dairy manufacture. It seems incredible that a State institution would make butter and throw it away, or on to the market to compete with farmers while feeding salve to its own family. Let's have more light before we condemn.

(Continued on page 319.)



Unhitching the horses by the light of a Western Electric Lamp

There was once a man called "farmhand"

"If farmhands grow much scarcer, we will soon forget what the word means. Help is certainly hard to get. But I have found help in another form—an electric power and light outfit. I want to tell you what these plants can do for you, and some of the things they can't do."

H. J. Bowman

Editor's Note: *Mr. Bowman's farm is located near Ames, Oklahoma.*

"NOT being able to get any steady help, I have been doing most of my work myself. It worried me to think that every hour I spent milking cows, turning a grindstone or chopping wood was just so much time taken away from necessary work in the fields.

"Last spring I became interested in the question of a farm plant. But I delayed buying one, because those I first saw were not much more than lighting plants. They didn't show up well in a power test for heavy work.

"Now my idea of a piece of farm machinery is that it must be useful first of all.

Carry the motor right to the job you want done

An outfit that does a man's work

"I kept on looking till I found the plant that came nearest to satisfying my need for power — A Western Electric Power and Light Outfit. I'm not saying that this outfit can mow the hay or do any plowing. But it certainly is doing some real, honest-to-goodness work for me, saving time and labor.

"In the first place the Western Electric Outfit has an engine that can operate pretty near all the machinery on the average farm. It runs my fanning-mill, feed-mixer and milking machine.

"Then with the generator and batteries in action—or the batteries alone—I let electricity milk the cows. The utility motor, which I can carry around and connect to any lamp socket, is mighty handy for such jobs as running the churn or the grindstone, or in fact, turning any machine I used to turn by hand.

"All this means time saved—and time is money when a man is in the middle of his planting or harvesting."

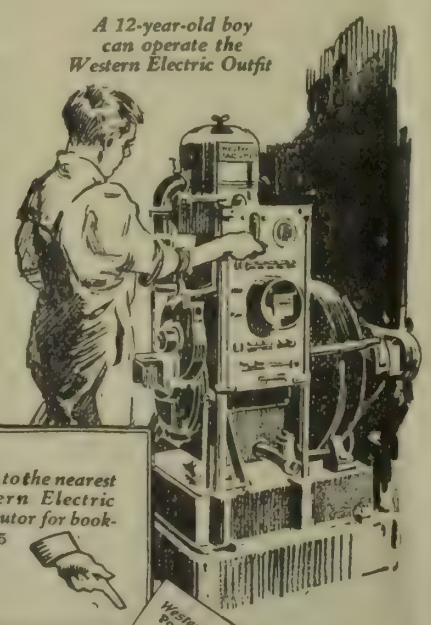
Long life to your battery

You may be interested to know that the engine to which Mr. Bowman refers is of the dependable valve-in-head, air-cooled type, burning gasoline or kerosene.

The battery lasts long because of the famous "tapering charge", a Western Electric feature. An automatic control very gradually decreases the rate of flow as the battery fills, till the current stops gently by itself. This takes all strain off the battery.

A postcard for booklet **PP5.** will bring you more facts about the powerful Western Electric Outfit. Write to the distributor nearest you.

A 12-year-old boy can operate the Western Electric Outfit



Write to the nearest Western Electric distributor for booklet PP5

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For territory still available write to Western Electric Co., Los Angeles

Western Electric Power & Light

Makes the battery last longer

For President
Warren G. Harding

For Vice-President
Calvin Coolidge

The Republican Party and the Farmer

To the Farmers of the Northwest:

Next November you will join with all other good citizens in choosing a president of the United States for the four years beginning March 4, 1921.

You must choose either Warren G. Harding, the Republican nominee, or Gov. Cox, the Democratic nominee. There is no third choice. One or the other of these two men will be elected. The affairs of the nation during the next four years will be directed either by a Republican or by a Democratic administration.

Which will best serve your interests, both as a citizen and as a farmer?

Let us look at it for a moment from the purely farm standpoint.

Your experience of the past seven years, and especially during the past three years, tells you what you may fairly expect from a Democratic administration.

Your industry, the greatest in the nation, was singled out as the target for a price fixing policy which has limited the prices of the things you had to sell while leaving you exposed to the exactions of profiteers in practically every other line of production, distribution and speculation.

You have been told what you could receive for your staple products, either directly or indirectly; you have been subjected to restraints as to shipping, and all sorts of exactions and annoyances.

But there has been no limit placed upon what others might charge you for the things you have had to buy.

The result of this unwise, unsympathetic policy, while discouraging and harmful to the farm producer, has not helped the consumer. On the contrary, it has made conditions worse for him, because it has tended to curtail production and at the same time has stimulated speculation and profiteering.

The Republican party is not a class or sectional party; its policies are intended to upbuild the entire nation. But it believes that it is essential to the welfare of all our people that the farmer, whose industry is the very foundation of our national prosperity, should have his fair share of the wealth which his labor and enterprise creates. It believes that if our agriculture is to be maintained the farmer must have an absolutely square deal.

The Republican party therefore, by its platform and by the utterances of its candidates, is pledged to a thoroughly sympathetic, practical, helpful attitude toward American agriculture. It promises a well-thought-out, constructive program, which will help make farming more profitable and therefore make our farms more productive.

In contrast with this helpful attitude of the Republicans the Democratic party offers no protection to the American farmer against the cheap farm products of foreign lands; on the contrary, it reaffirms its tariff-for-revenue-only policy which throws the American market wide open to the dairy products, grains and meats produced on the cheap land and by cheap labor of foreign countries. It promises no relief from the price-fixing and price drive policies which have cost the farmers hundreds of millions of dollars during the past two years and have helped no one but the speculator and the profiteer. Nor does it even recognize the existence of the violent fluctuations in the prices of farm products—more violent and unreasonable during the past three years than ever before in our history—which have caused you such heavy and unnecessary losses.

Pledges of the Republican Party

Here are the formal pledges of the Republican party as set forth in the agricultural plank of the national platform. Read them carefully, for they are of vital interest to you.

Practical and adequate farm representation in the appointment of governmental officials and commissions.

The right to form co-operative associations for marketing their products, and protection against discrimination.

The scientific study of agricultural prices and farm production costs at home and abroad, with a view to reducing the frequency of abnormal fluctuations, and the uncensored publication of such reports.

The authorization of associations for the extension of personal credit.

A national inquiry on the co-ordination of rail, water and motor transportation, with adequate facilities for receiving, handling and marketing food.

The encouragement of our export trade.

An end to unnecessary price fixing and ill-considered efforts arbitrarily to reduce prices of farm products, which invariably result to the disadvantage both of producer and consumer.

The encouragement of the production and importation of fertilizing material and for its extended use.

The extension of the federal farm loan act so as to help farmers to become farm owners and thus reduce the evils of farm tenantry, and also to furnish such longtime credit as farmers need to finance adequately their larger and long-time production operations.

Revision of the tariff as necessary for the preservation of a home market for American labor, agriculture and industries. (Note that the pledge to the farmer is just as specific as to labor and capital.)

Harding's Endorsement

Senator Warren G. Harding, the Republican nominee, in his speech of acceptance took advanced ground on behalf of agriculture. He said:

"I hold that farmers should not only be permitted but encouraged to join in co-operative associations to reap the just measure of reward merited by their arduous toil.

"Our platform is an earnest pledge of renewed concern for agriculture, and we pledge effective expression in law and practice. We will hail that co-operation which will make profitable and desirable the ownership and operation of small farms and which will facilitate the marketing of farm products without the lamentable waste which exists under present conditions.

"A Republican administration will be committed to a renewed regard for agriculture and seek the participation of farmers in curing the ills justly complained of and aim to place the American farm where it ought to be—highly ranked in American activities and fully sharing the highest good fortune of American life.

"Becoming associated with this subject are the policies of irrigation and reclamation so essential to agricultural expansion, and the continued development of the great and wonderful West."

Mr. Harding pledges federal co-operation with State governments in building and improving farms-to-market roads rather than national highways, to cheapen and facilitate the quick shipment of crops.

Republican National Committee.
Auditorium Hotel, Chicago, Ill.

Please send me, free and postpaid, copy of Senator Harding's Address on the present-day problems of the farmer.

Name .....

Send for a free copy of Senator Harding's address in which he discusses at length present-day problems of the farmer.

REPUBLICAN NATIONAL COMMITTEE, Auditorium Hotel, Chicago.

Early to Market—Full Weight

51 per cent of all hogs marketed in the United States in 1918 were Duroc-Jerseys.

Duroc-Jersey hogs have proved themselves in championship shows as well as on the market.

Duroc-Jersey hogs raise large families and put on weight quickly. They are hardy, easy feeding animals that mature at an early age, and are uniformly red in color.
Write for our Free booklet "*Duroc-Jersey Hogs Are Prolific and Profitable.*"

The National Duroc-Jersey Record Association. Dept. 120 Peoria, Ill.
The largest swine record association in the world—12,000 members

Llano Vista Ranch Grand Champion Hampshires

JUDITH—No. 126448
Sire: Calif. Lad, 45021. Dam: Mabel, 113078.

This pioneer herd has brought to light the winning blood lines in our big shows and is responsible for the growing interest in the breed. We have furnished foundation stock for many new herds throughout the State. Bred sows, service boars and pigs for sale.

F. A. LANGDON, Mgr.
Perris, Calif.

GUASTI BERKSHIRES
Weaned pigs, both sexes, from sows that farrow large litters and raise them. Priced reasonable — they are money-makers.
ITALIAN VINEYARD COMPANY
ALEX. M. WILSON, Supt. Guasti, Calif.

Keep your hogs free from lice

Keep their sleeping quarters, the feeding grounds, pure and healthful. Use the sprinkling can. Add four tablespoonfuls of Dr. Hess Dip and Disinfectant to each gallon of water. Sprinkle the animal body to kill the lice, the sleeping quarters and feeding grounds to destroy the disease germs. Or provide a wallow, to which add about one gallon D and D to every 70 gallons of water. Disinfect the barns, the poultry house.

Also use it about the home, in the sick room, sink and cesspools, to establish better health conditions.

DR. HESS & CLARK Ashland, Ohio

DR. HESS DIP and DISINFECTANT

Lambert's
HEALTH FOR CATTLE

Remedies for
COW CLEANING, BREEDING and ABORTION
Scouring Calves, Hog Cholera
An Insect Destroyer
A Poultry Food

LAMBERT STOCK REMEDIES COMPANY
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FACTORY: MODESTO, CAL.
Mail Orders Promptly Filled

ORMONDALE RANCH SHORTHORNS
REDWOOD CITY, CAL.
HERD SIRES
BOQUHAN GUINEA STAMP, the great imported young Broadhooks bull.
GOLDEN GOODS JR., sire of LITTLE SWEETHEART, Grand Champion International Show, Chicago, 1919.
Bulls and Heifers for sale.
Duroc-Jersey Hogs for sale.
JAMES McDONNELL, - Supt.

A Short Visit to a Master Breeder

Written for Pacific Rural Press by Thomas F. McConnell.

A newspaper man with herds or flocks of livestock of the purebred class as his Meccas, if we may so term them, sometimes has his time apportioned by need in a way that is not at all to his liking. About one year ago the writer paid his first visit to the Hampshire breeding establishment at Santa Barbara known as the Ortega Underhill Rancho. It is owned by Francis T. Underhill, one of the most, if not most, scientific breeders of livestock in the world today.

The first time there we had no conception of what was being done nor how. After going over the stock then Mr. Underhill kindly outlined his plans. So deep a proposition could not be more than outlined and it was hoped to study his plans and follow up his work in detail closely, but routine matters intervened with the result that in the year following our first visit but little attention was paid the work being done.

Our second visit, made about a month ago, renewed the resolution to get in closer touch with the work and the methods employed. The inspection of the young stock bred and grown on this ranch the past year is direct evidence of the accuracy of Mr. Underhill's ideas on scientific breeding. Uniformity of type with elimination of one or two faults that were in evidence are sure indications that the right course is being pursued.

Some of the so-called practical breeders of California have an idea that the methods of Mr. Underhill are those of an idealist, that he pays no attention to the individuality of the animals mated at all but breeds from pedigree entirely. This is without foundation in fact as the gentleman is too much a lover of animals and the best livestock to ever neglect the individual for a "mere scrap of paper." To show that pedigree and individuality may coincide with certainty we will repeat an occurrence here that has already been told. When the time arrived for selecting of gilts for mating, Mr. Underhill telephoned his manager, Mr. Dinsmore, to select gilts for future breeding. Mr. Underhill then chose 23 animals from their pedigrees that he thought ought to be the best if the previous matings had been correct. When Mr. Underhill went to the ranch to see what Mr. Dinsmore had selected he found the manager had chosen 24 head, and that the 23 gilts selected from their pedigrees were included in 24 picked for their superior individuality. This seems as though the master breeder's theories were bearing fruit from the very beginning.

We do not believe that Mr. Underhill claims to have discovered any new principles in the science of breeding, but he has studied out methods and found they correspond to those used by such early English breeders as Bakewell and Colling Bros., who produced such wonderful results in establishing breeds of sheep and cattle. He is sure that he is right. Results so far are very encouraging to say the least.

The usual breeding methods so lacking in results consist of the selection of animals of excellent conformation the characteristics of which are not backed by any extended blood lines—a result in fact of a conglomeration of blood lines that have accidentally concentrated and produced one good animal which in all probability will be scattered in nearly all future matings of this individual. Mr. Underhill aims to make these excellent characteristics dominant by backing them up or emphasizing them with blood lines extending back for generations and continuation of same in future. We hope to give our readers the results of Mr. Underhill's work from time to time. We certainly are in need of information by which matings of our farm animals will produce definite good results.

Swine--Three Kinds, and All Good.

(Written for Pacific Rural Press.)

Yes, it is easy to find three kinds or breeds of hogs on one ranch. Sometimes it looks as though there were more than that, and all mixed too, in one animal, with the undesirable points predominating. This is not the kind we have in mind just now, however. A mile west of the city of Lankershim Dr. E. Avery Newton, of Los Angeles, has established a swine ranch or hog farm, which he inaugurated three years ago by buying 50 acres of land for $250 an acre. He then proceeded to improve this land until he now has it well equipped with buildings, fences, water system and a fine acreage of alfalfa.

Along with the improvement a herd composed of three breeds of swine was assembled, including Duroc-Jerseys, Hampshires and Poland-Chinas. Usually one breed satisfies a fancier, but in this case perhaps the doctor thought that if one breed was good three ought to be better.

A Good One Added.

A rather recent addition to the Duroc contingent is the line-bred Sensation boar, Arenal Sensation, from the Graham & Henshaw herd at Lancaster. He is good size for his age and typical of the advanced type of the breed. His use will be a demonstration of constructive breeding. The other Duroc boar is Critic bred and is not quite as stretchy an individual.

The Hampshire boar is sired by Harvey's Choice at Fairbanks Ranch. He is of such type, quality and size as to convince the doubters of Hampshire worth of the error of their ways.

If standing on his tiptoes is a desirable point the Price's Longfellow boar at Arenal Ranch is qualified for blue ribbon honors. He is a good fellow otherwise and typically representative of the breed.

The sows as they lined up at the trough for their evening meal showed the characteristics of breed strongly and are excellent selections for constructive building up of the various breeds represented.

The general appearance of everything about the place was indicative of good care; in fact, the breeding stock was almost in "show shape." However, it is better to have them this way than to have them come squealing up to the feed trough every time anyone makes their appearance.

Records Kept.

The system of record-keeping is worthy of notice. Dr. Newton has his own method of ear-marking. Fred Calloway, the foreman, has a special form of day-book in which he records all transactions and happenings on the ranch, with especial attention to the breeding, birth, sale and death of any of the animals. Twice each week the bookkeeper from the doctor's office in Los Angeles comes out and transfers the data from this day-book to the card index system in town, where it is instantly available for reference and study.

The soil at Arenal Rancho seems to grow alfalfa to perfection. A five-acre field sowed in February will exceed the 25-ton estimate of the optimistic owner by a safe margin. Other things grow just as well, and as rapidly as possible the agricultural side is being developed.

Dr. Newton takes great personal interest in everything and spends Saturday and as much other time as possible at the ranch.

All boars' tusks should be removed before they become long enough to be dangerous weapons. All fair associations make a rule that this shall be done before boars will be allowed in the show-ring.

SIMPLEX SILOS ARE SCIENTIFICALLY CORRECT

PAPEC ENSILAGE CUTTER

PAPEC ENSILAGE CUTTER

Cow Lunches in Hotel Grill

While in San Francisco, Tilly Alcartra, the wonder cow, belonging to A. W. Morris & Sons Corporation, had luncheon at the Palace Hotel. At her home in Woodland, California, Tilly is fed upon ensilage, cut by a Papec Ensilage Cutter.

In order to properly feed their valuable stock, A. W. Morris & Sons required the highest quality of ensilage—cut exactly at the right time. They needed an ensilage cutter—one that was efficient, capable and dependable.

So they investigated, found out about ensilage cutters—compared one make with another—and finally selected a Papec.

The solid semi-steel frame of the Papec—the low up-keep—the minimum power upon which it operates—its cutting capacity, 3 to 10 tons per hour—the six fans on the cutting wheel which prevents clogging of the pipe—these were some of the reasons why A. W. Morris & Sons favored a Papec.

We do not, however, ask you to accept their judgment. Find out about the Papec. Compare it with other ensilage cutters. Really make this fair test, and decide for yourself.

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16 California St., San Francisco, Cal.

Please send me folder describing Simplex Silos, also information about Papec Ensilage Cutters.

Name .....

Address .....

Livestock and Dairy Notes

The Dairy.

Stanislaus Co. will be well represented at the National Dairy Show, as the Bridgford Holstein Company expects to have cattle in competition at this Mecca for dairy cattle.

During the last quarter 114 Ayrshire cows qualified for the Advanced Registry with an average yearly production of 10,731 pounds of milk, 429.92 pounds fat and test of 3.98 per cent.

Well posted men say that livestock in Fresno and Tulare Counties has dwindled until, for all of the short crop, there is more feed for the amount of stock than any time in the past three years.

Fred W. Hansen has handed in his resignation as manager of the San Joaquin Valley Milk Producers' Ass'n, to take effect as soon as his successor can be chosen. Mr. Hansen wishes to retire from the active management of the association, but will continue as president of the organization.

General Clay, the Milking Shorthorn bull, senior herd sire in the Glenside herd at Granville Center, Pa., has died after almost 14 years' service in this noted herd. He probably had more direct descendants noted for production than any other Shorthorn bull in America

Bridgford Holstein Co. of Patterson, Toyon Farm of Los Altos, E. D. Barry Jr. of Daggett, and Allana Farm at Dixon are Holstein breeders who will consign cattle to the sale to be held in connection with the National Dairy Show in Chicago. The cattle will go forward as one shipment.

Ciruela Walker, owned by H. E. Cornwell of Modesto, has completed her yearly test with 12,795 lbs. milk and 533.98 lbs. butter to her credit in 305 days. She won first in class at State Fair last year as a two-year-old. She freshened during the fair last year and is expected to repeat this year.

Several Holstein breeders of Tulare County are trading with Tulare dairymen "even up" a young purebred bull for the grade sire. Needless to say the grades taken in that way go to the butcher. The dairymen have taken hold so strongly there are no surplus young purebreds in that county at this writing.

Ice cream dealers in six different places in the San Joaquin Valley have been arrested and fined $10 each for not properly cleaning ice cream containers before returning them to the factory. Improper cleaning may result in ptomaine poisoning of the consumer.—Evidence gathered by inspectors in the State Dep't of Agriculture

The current number of the Ayrshire Quarterly, published by the Ayrshire Breeders' Ass'n of America, is just out and is certainly a very attractive publication. Filled from cover to cover with salient facts and news, beautiful cuts and interesting articles, it cannot but create a very favorable impression for the "bonnie Scotch coo."

The Merced County Cow Testing Association records show that the average yearly production per cow last year was 180 lbs. butterfat. These are mostly grades and scrubs. Now "listen here"! E. E. Greenough's pure-bred Jerseys, half of them first calf heifers, averaged a little over 400 lbs. and E. W. Doane's three pure-bred Jerseys averaged 478 lbs.

Jerseys are the leading breed of dairy cattle about Orland, Glenn County. Dr. Jno. S. Hay, Veterinary Inspector of the State Dep't of Agriculture, reports the herds of these economical butterfat producers absolutely free from tuberculosis in that region, not a single reactor having been found in a recent test. A record to be proud of, as it is not so many years ago when it was whispered about that Jerseys were more susceptible to the disease than other breeds, an idea which was proven to be without foundation by just such demonstrations as the above.

Field men are fashionable and the American Guernsey Cattle Club has just put their second one in service in the person of Prof. Karl B. Musser, recently with the Washington State College at Pullman.

In Washington, one 6-cow herd made a return of $188 for the month of May and another $199. Six of the latter herd produced but $11 in money for the month. Who wants to board 6 cows for a month at that price?

The law, with reference to recording branding irons, applies to brands used for the purpose of branding cattle, irrespective of the class or kind of cattle. Dairymen who use such a brand must record the same.—State Dept. of Agriculture.

Cows to the number of 1686 were on the testing list in Stanislaus County during the month of July. Of this number 96 "made" the Roll of Honor with 45 lbs. of butterfat or over to their credit. The top cow produced 91.8 lbs. and was a Jersey owned by C. Bayer of Hickman.

The Northern California Milk Producers' Ass'n of Sacramento are publishing a booklet to be distributed at the State Fair filled with facts about milk both from an historical as well as economical viewpoint. It also contains recipes telling how their Cream O' Gold dairy products can be used to advantage by the housewife.

Swine and Swinemen.

Jno. P. Walker of Visalia has purchased 5 Duroc-Jersey gilts from the Winsor Ranch at Bonita.

A. L. Stephenson, who breeds Berkshires at Los Molinos, has shipped two sows to Chas. Talmadge of Oregon.

Fred M. Johnson of Napa, who has been out of the Duroc business temporarily, is reported as about to engage in raising his favorite red hog again.

Hampshire hogs in an auction at Cantril, Ia., attained the average of $366. The top of the sale was the sow Cornelia Lookout 3d, selling for $1,225.

Farm Bureau Market Hog Auction sales last week were held at: Tulare, top, $16.05; Visalia, top, $16.20; Hanford, top, $16.30; Corcoran, no report.

All of the 49 head of swine in the "view herd" recently shipped to South America have arrived safely at Montevideo. Also the 15 pigs farrowed en route.

The Western Berkshire Congress will have a booth at the State Fair with an information officer in charge. See him and get acquainted. He will, at least, tell you all the good points about the breed.

A Farm Bureau Day event at the State Fair will be a demonstration of the Farm Bureau Auction method of selling market hogs. Several carloads will probably be handled and sold in this way on Saturday, Sept. 11th.

Anchorage Farm has found a half-ton Berkshire boar in a litter mate to Real Type, the famous boar in the Barker herd at Thorntown, Ind. This boar was bought from A. L. Stephenson of Los Molinos by E. G. Scott of Auburn at a State Fair sale two or three years ago.

H. M. Berglund, Duroc breeder of Dixon, will exhibit his show herd at the Sonoma County Fair at Santa Rosa next week. Mr. Berglund is carrying a bunch of market hogs along on stubble and alfalfa pasture with just enough grain to keep them coming. He will commence forcing for the next Farm Bureau sale in Dixon, which will probably be held in October or sooner.

The price per hundredweight, $13.50, mentioned in the closing paragraph of the article in the issue of last week on "How Shall We Market Hogs" should read $15.30. An inversion of the central figures caused the error. The total amount of business since the organization of sales should read "three" millions instead of "two" millions.

Durocs grow rapidly everywhere. D. F. Small of Willows writes that he has four boar pigs 4 months old that measure 48 inches from nose to tail, stand 28 inches high and weigh 150 pounds. They were sired by Uneeda King's Colonel and out of Liberty Bond, a granddaughter of Elberta 3rd.

Two additional special prizes have been offered in the swine department at the Fresno District Fair this year. The first is for breeders' herd of not less than 8 head, including 1 boar jr. yearling or older, 3 sows jr. yearling or older, 1 boar jr. or sr. pig, 3 gilts, jr. or sr. pigs. Fifty dollars to first, $25 to second. The second is for sow and litter of 6 pigs farrowed on or after Aug. 20th. First $15, second $10, and third $5.

Beef Cattle.

Cattlemen generally will be interested in the announcement by the Southern Pacific Company that it has reinstated the rule cancelled by the United States Railroad Administration regarding the refunding of fares of care-takers sent out to return with shipments of livestock. This practice is local to the Pacific Coast lines.

The Board of Supervisors of Stanislaus County have included in their budget for the coming year $10,000 for buildings on the new fair grounds contiguous to Modesto.

We are advised that some cattlemen and dairymen are under the impression that the law, with reference to the recording of cattle brands, is fully complied with by the person using such a brand if the same is recorded in the office of a county clerk or recorder, or if it is recorded in a County Brand Record prior to the passage of the Act of May 28, 1917. Inspectors are requested to inform anyone who may be using a cattle brand in violation of the law due to such a misunderstanding. All brands must be recorded in the Office of Cattle Protection of the State Department of Agriculture. To use a brand that is not recorded is illegal.—State Dept. of Agriculture.

"Progressive Beef Cattle Raising" is the title of a very interesting booklet just off the press and published by

HILLCREST STOCK FARM
Shorthorn Cattle
Shropshire and Merino Sheep
RAMS AND BULLS FOR SALE
Single or in Carload Lots
See Hillcrest Shorthorns at the State Fair
T. S. GLIDE, Prop. DAVIS, CALIFORNIA

Duroc-Jersey Hogs for Sale
BOARS AND GILTS
BRED SOWS
SOWS WITH LITTERS
DIABLO STOCK FARM,
E. F. PETERSEN, Supt. Danville, Cal.
G. W. EMMONS, Owner, Oakland.
They are the large type and the best blood strains to be had anywhere.
HERD BOARS AND SOME OF THE SOWS
Lucy Orion's Model, California's Defender, Diablo Orion Model, Defender Colonel 70th, Prize of Tulare Belle, Pathfinder's Queen, Great Wonder I Am Gano, Lucy Orion's Mayflower, Twin Oaks Attraction, Lady Defendress 70th and 50 others.
WEANLINGS—$15.00 EACH AT RANCH — A large number always on hand to choose from. Crates $2.50 each, included when returned prepaid in good condition.
MAIL ORDERS SOLICITED. SATISFACTION OR MONEY BACK.

OVER TWO MILLION CALVES
vaccinated against Blackleg by LIFE with ONE treatment which for Purity Blackleg Aggressin (Germ-Free Vaccine) made by the Kansas Process. Absolutely safe to use. Carload Bulletin free. Blood castrate, etc. When you vaccinate OTHER PURITY PRODUCTS—Anti-Abortions Vaccine for Cattle; Hemorrhagic Septicemia Vaccine for Cattle and Sheep; Anti-Hog Cholera Serum, and High Count Mixed Infection Vaccine for Swine. For supplies and quotes, write, phone or wire
PURITY SERUM CO., J. L. Thatcher, Mgr., Riverside, California

DIGESTER TANKAGE
Send for Sensible Folder on Feeding Hogs
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Animal Food Dept. 704 Townsend St., San Francisco

REGISTERED HOLSTEINS
Creameup Herd offers service bulls and bull calves of 34-lb. breeding. Females offered for foundation stock.
Tuberculin tested.
M. M. Holdridge, San Jose, Cal.
R. D. "A," Box 437.
Two miles out North First Street.

HOLMES STOCK FARM
MODESTO.
Registered Holstein Friesians
Prize winners at all the Shows. Inspection invited and satisfaction guaranteed. Write for prices. See us at State Fair
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915 I St., Modesto, Calif.
Registered Hog Sales a Specialty

CALF FOOD
Is bought for its fat value. AN-FO Calf Meal contains double the fat of most foods, yet costs about the same.
At your feed dealers, or Animal Food Co., Oakland.
BETTER NOURISHMENT
NO SCOURS
AN-FO GRAND CALF MEAL

WRITE QUICK!
Big Special Offer on Kerosene Engines, Power Saws and Drag Log Saws. Direct From Factory. Catalog Free.
WITTE ENGINE WORKS
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Armour's Bureau of Agricultural Research and Economics. It is full of information about the beef cattle business from ranch to market and should be in the hands of every rancher or farmer interested in growing cattle of this kind.

Sheep and Goats.

Eastern wool markets continue in a sluggish condition. The mills in operation are buying only for immediate needs.

Good lambs in Chicago last week showed signs of greater strength, with some Nevadas bringing $13.75. The foreign frozen lamb is not popular as a rule.

An auction of Nubian goats at the Bonanza Goat Farm near Eagle Rock Park was productive of satisfactory results. The top of sale was Fawny, selling for $150. The remainder of the offering brought from $37.50 to $75.

The sheepmen of Boise Valley, Idaho, have pooled their wool for marketing for four years. They started with 17,000 pounds the first year and this, the fourth year, the pool contained 255,000 pounds.

According to the National Wool Grower, "carbonized" wool is that which has had the vegetable matter—burrs, chaff, etc.—burned out by chemicals which do not attack the fiber, leaving a 100% pure wool.

Lambs in Lake County, Oregon, recently sold for $5.50 to $6, although most of them brought the higher price. Thirty thousand were shipped within a week. Half a million pounds of wool was consigned during the same period, growers taking an advance of 25 cents.

Miscellaneous Livestock.

Good draft horses are scarce on the Chicago market, a few good ones bringing $300 to $350. The general market was rather dull.

A report is in circulation that a cure for the foot-and-mouth disease in farm animals has been discovered in Switzerland. It is to be hoped that it is true.

A Bench or Dog Show will be held September 9-11 at the State Fair. Entries are numerous and many entries have already been received, assuring an excellent show.

The Animal Husbandry Short Course dates at Davis are from October 18th to November 6th inclusive, Dairy Manufacturers Oct. 11th to Nov. 6th inclusive, and Butter Making Oct. 25th to Nov. 6th inclusive.

Those who are interested in the livestock judging at the State Fair should be there Monday to Wednesday, Sept. 6-8 inc., as an effort will be made to complete the work not later than Wednesday night.

Certain phases of breeding relative to the occurrence of red in cattle that are usually black or black and white is taken up in Bulletin 313 of the Wisconsin Experiment Station just received. It is of much interest to those who follow breeding of farm animals from a scientific point of view.

The acidity of silage caused largely by the formation of lactic acid by the fermentation of the feed has an important dietetic value, regulating the bowels and checking undesirable putrefactive processes in the intestines. The favorable influence of silage on the health of animals has been commonly noted, and is probably due to the silage acids.

The "Quarter Million Dollar Special" which will leave Sacramento on September 12th for Tulare will bring within the limits of Tulare County the greatest assemblage of thoroughbred and purebred stock which has ever been gathered in this section. This special train, arrangements for which are now being made with the railroads, has been made necessary by the bookings made by the State breeders at the Tulare County Livestock and Agricultural Show to be held at Tulare on Sept. 14, 15, 16, 17 and 18. The number of animals whose entry has been arranged by their owners will be worth, it is estimated, about a quarter of a million dollars.

DAIRY SUBSTITUTES ARGUMENT REVIEWED.

(Continued from page 314.)

A Sermon Without Music.

The above incident is mentioned as a foundation for the following sermon:

It behooves dairymen to fight the encroachment of the whole breed of substitutes. Yes to fight with fang and claw. In so doing they are not fighting alone for themselves, but as well for "starving babies" whom these miserable money-grubbing mongrels would rob of a chance to grow normally.

But, brethren, we must come to this battle with clean hands. You can't hit very effectively if, to save a few cents, you are buying substitutes yourself. And how much force will your protest against Nucoa have, if San Luis Obispo does not clear itself, when it is known, that a co-operative association of dairymen is furnishing skim milk which, with cocoanut oil, goes to make Nucoa?

Of course, it may be argued that you can't control the skim after you have sold it, but—well, it won't go! That's all; it won't go! It isn't consistent, and it is bound to blunt our fangs and clip our claws.

LIVESTOCK DIRECTORY.

Rate 6c per word. Cash must accompany all orders.

SWINE.

Duroc-Jerseys.

SPLENDID 15-MONTHE-OLD Duroc boar of Elmer Lamb's Orion breeding. At 11 months weighed 400 pounds in breeding condition, good color, bone and action and a proven sire of fine pigs. Am moving away so will sell him cheap. Write at once for price and further particulars. J. C. Norton, Box 359, Nevada City, Cal.

FIFTY DUROC-JERSEYS — Mostly bred sows and gilts. Some small pigs. Three service boars and five March boar pigs, grandsons of Mary Jane Pathfinder, the five pigs sired by Lord's Orion Cherry King. One son of Orion Cherry Pathfinder, out of Lamb's Model Lady. Elmer Lamb, Ceres Calif.

DUROCS—BIG-TYPE—HIGHEST QUALITY—popular blood lines. Herd headed by Johnson's Defender, Jr., and Western Pathfinder. Bred sows and gilts and young boars for sale at moderate prices. Greenwood Farm, Witherow & Stafford, Live Oak, Cal.

BOYANNA BIG-TYPE DUROCS—Buy Durocs now. We offer bred and open sows, gilts, service boars and weanlings—all of excellent conformation and breeding. Write us and get get good ones. J. Boyd Harrold, Dixon, Cal.

BIG-TYPE DUROCS—Herd headed by California Orion King. Am offering excellent young boars at right prices. Inquiries invited. Harvey M. Berglund, Dixon, Calif.

JACK LONDON RANCH, Glen Ellen.—Exceptionally good weanlings. Bred sows and gilts. One good yearling boar and one fall boar. Prices reasonable.

ROCSTEIN RANCH DUROCS headed by Lord's Orion Cherry King. Breeding stock for sale at all times. W. M. Way & Son, Rt. 1, Box 320, Modesto.

BARGAINS in bred sows and gilts. Pathfinder and Great Wonder I Am blood. Derryfield Farm, Capital National Bank Building, Sacramento, Cal.

DUROC-JERSEYS — Fine big-type gilts, tried sows and boars. Eastern and California bred. H. P. Slocum & Son, Willows, Calif.

WINSOR RANCH DUROCS—Young boars and some top gilts bred to WINSOR'S GIANT ORION—Morris C. Allen, Mgr., Bonita, Cal.

REGISTERED DUROCS — Choice gilts and weanlings, either sex. Breeding and satisfaction guaranteed. H. E. Boudier, Napa.

BIG-TYPE DUROCS — Gilts and boars of Winsor's Giant Orion breeding. Falfadale Farms, Perris, Calif.

DECEMBER AND MARCH DUROC BOARS—Pathfinder breeding. Sterling Smith, Route 1, San Diego.

FOR THE BEST in Durocs, write June Acres Stock Farm, Davis, Cal.

Poland-Chinas.

TOHOQUA POLAND-CHINAS — Big type. A good big tried sow to sell. Has farrowed two litters of ten pigs each. Bred for August farrow. Also a dandy young boar pig from the Grand Champion sow of Glenn Co. Fair. This stuff is good, fully guaranteed and priced to sell. Ferguson and McKaig, Orland, Cal.

ELDERSLEY AND SHADY BROOK Farms big-type Poland-Chinas that make money for the Feeder, the Farmer and the Breeder. Prices reasonable. J. H. Ware, Brown's Valley, Calif.

BRED GILTS for sale. A few choice ones bred for fall farrow, to a good son of F'Big Jones, the Iowa 1920 Grand Champion. N. Hauck, Alton, Humboldt Co., Cal.

J. F. McSWAIN, Breeder of Poland-China hogs. Herd headed by Big Model Fellow. Reserve grand champion 1919 State Fair. Young stock for sale. R. 3, Merced, Cal.

WAUKEEN HERD POLAND-CHINAS — Home of King's Big Bone Leader. A few service boars for sale. Les McCracken, Ripon.

POLAND-CHINAS—Strictly large type. J. F. Lehman, Lodi, Cal.

REGISTERED POLAND CHINAS — Large type, 3 to 4 months gilts cheap. Satisfaction guaranteed. J. E. Thomas, Gilroy, Cal.

LAKESIDE STOCK FARM—Large, smooth and big-boned Poland-Chinas. Geo. V. Beckman & Sons, Lodi, California.

REGISTERED POLAND-CHINA SWINE — Prize-winners. Finest stock in the State. Bassett Bros., Hanford, California.

BIG-TYPE POLAND-CHINAS—Good as the best. Always glad to show you. Houck & Lewis, Winton.

REG. BIG-TYPE POLAND-CHINAS—Service boars and weanling pigs. J. H. Cook, R. 4, Chico.

Berkshires.

BRED GILTS.

Sired by Mayfield Rookwood 2d, a Grand Champion Boar, out of 600-700 lb. sows, and actually bred to "ACHIEVER," our English Blood Boar, the Sire that puts more bone and pork-making qualities into his pigs.

Priced reasonably and absolutely guaranteed.

Castleview Ranch, Santa Rosa, Calif.

ANCHORAGE FARM BERKSHIRES
Orland, Calif.
HERD BOARS—STAR LEADER, Junior and Reserve Grand Champion of the World. The Grand Champion carload of barrows, over all breeds, at the San Francisco Live Stock Show, was sired by a son of Star Leader. NATOMAS BARON DUKE, grand champion of California. For sale, bred gilts, open gilts, young boars and weanling pigs. Write for booklet, prices and list of sows.

BEST BERKSHIRE BOARS—Buy one and grow pigs that will mature quickly and make hogs that produce the largest percentage of salable meat. They carry the blood of the most noted individuals of the country. A few top females for sale also. Geo. A. Stingle, Lark Meadow Ranch, El Monte.

The only herd of English Berkshires in the West. Bigger, better, stronger litters. More pounds of meat for less feed. Weanling pig, $35. Satisfaction guaranteed or money refunded at once. Sandercock Land Co., 703 Market St., S. F. In charge Natomas Land Sales.

GRAPE WILD FARMS—Berkshires—Guernseys. Big-type Berkshire Boars of serviceable age, sired by Big Leader—greatest son of Grand Leader 2nd. Panama-Pacific Grand Champion. A. B. Humphrey, Prop., Escalon.

BERKSHIRE BOARS—Real herd sires. We are offering these at sacrifice prices to move them quickly. Write for description and price. R. J. Merrill & Son, Morgan Hill, Cal.

QUALITY BERKSHIRES — Young stock, both sexes. Calac Orchards, Geo. P. Upham, Martinez.

REAL GOOD BERKSHIRES — Cholera immune. Frank B. Anderson, Sacramento, Cal.

CHESTER WHITES. Several 1 and 5 mos. Both sex. Two extra good open gilts. "Zantara" No. 77685; 16-months boar worth double our price. You can afford our prices. All stock registered free. Satisfaction guaranteed. Cedarhurst Ranches, Route 2, Sacramento.

DAIRY CATTLE

EIGHT EXCELLENTLY BRED Registered Holstein cows for sale. Tuberculin tested. Just what you want. Terms liberal. Fine bull out of 24-lb. dam and sired by Segis Pontiac De Kol Burke is bred to these females. This bull also for sale. S. J. Strauss, P. O. Box 62. Phone 217, or call at 1016 Eye St., Modesto, Cal.

YOUNG BULL by grandson of Tilly Alcartra, out of dam with good record. His half sister milking 68 lbs. per day as senior yearling. Also bull calves. H. M. Cross, Merced.

OAKDALE HOLSTEIN FARM, Pacheco, Contra Costa Co., J. M. Christen, Prop., Breeder of registered and high-grade Holstein cattle and purebred Hampshire swine.

REGISTERED HOLSTEIN-FRIESIANS — Both sexes choice stock; tuberculin tested. Sunnybrook Ranch, H. H. Sisson, Mgr., Willits, Cal.

Holsteins.

PALO ALTO STOCK FARM, Palo Alto, breeders of registered Holsteins. Heifers and service bulls. Reasonable prices.

FOR SALE—My herd of registered Holsteins—three milking females and bull. A. R. O. records. Glen Harter, Escalon.

CREAMCUP HERD — Registered Holsteins. Pontiac bull calves. M. Holdridge, Rt. A, Box 437, San Jose.

REG. HOLSTEINS, both sexes. World's record backing. Kounias Reg. Stock Farms, Modesto, Cal.

REG. HOLSTEINS—A. W. Morris & Sons Corp., Importers and Breeders, Woodland, Cal.

F. H. STENZEL, SAN LORENZO—Breeder of Registered Holsteins. High test producers.

REGISTERED HOLSTEINS — Best blood lines of the breed. R. L. Holmes, Modesto, Cal.

CHOICE HOLSTEIN bulls for sale. No females. Millbrae Dairy, Millbrae, California.

GOTSHALL & MAGRUDER — Breeders of registered Holstein-Friesians. Ripon, Calif.

EL DORADO HERD OF HOLSTEINS — Alex Whaley, Tulare, California.

Milking Shorthorns.

REGISTERED MILK AND BEEF SHORTHORNS, bulls and heifers for sale; catalogue free. Thomas Harrison, Santa Rosa Stock Farm, Santa Rosa, California.

INNISFAIL HERD MILKING SHORTHORNS—Young stock for sale; both sexes. Owned by Alexander & Kellogg. Leased by J. D. Rowe & Son, Davis, Cal.

BREEDERS OF REGISTERED SHORTHORNS—Milk strain; choice young stock for sale. John Lynch Ranch, Box 321, Petaluma.

Jerseys.

SERVICE JERSEY BULL, bull calves Financial King blood, Chester White boars, prize winners. Best blood, type, production. N. H. Locke Co., Lockeford, Cal.

JACK LONDON RANCH, Glen Ellen—Two fine Jersey bulls, one ready for service.

SUNSHINE FARM JERSEYS—"Production counts." E. E. Greenough, Merced, Cal.

Ayrshires.

PENOBSCOT FARM REG. AYRSHIRES—Choice individuals, all ages, reasonable prices. Cool, El Dorado County, near Auburn. San Francisco office, 360 Fremont Street.

ELKHORN FARM AYRSHIRES — Choice young bulls at reasonable prices. J. H. Meyer, 440 Montgomery St., San Francisco, Calif.

STEYBRAE AYRSHIRES — Registered; all ages. E. B. McFarland, 414 Claus Spreckels Building, San Francisco, Calif.

NORABEL FARM AYRSHIRES—Le Baron Estate Co., Valley Ford, Cal.

BEEF CATTLE.

SHORTHORNS—The foremost beef breed—Have a limited number of stock for sale, both sexes. If you wish to start a small herd I can probably supply your needs. T. T. Miller, Hollister, Cal.

ALAMO HERD REGISTERED HEREFORDS (founded by Governor Sparks). Herd and range bulls. Reasonable prices. W. D. Duke, Gazelle, Siskiyou county, California.

RANCHO SAN JULIAN SHORTHORNS—Purebred range bulls, unregistered, for sale. Estate Thos. B. Dibblee, Santa Barbara, or Lompoc, Calif. John Troup, Supt.

THE NEVADA HEREFORD RANCH—Jno. H. Cazier & Son Co., Prop., Wells, Nevada. Reg. Hereford cattle. Breeding stock for sale.

JACK LONDON RANCH, Glen Ellen—Shorthorn bull ready for service, and some good bull calves.

WM. BRIGGS & SON, Dixon, Cal. Breeders of Hereford cattle and Rambouillet sheep.

ABERDEEN-ANGUS cattle of quality and breeding. Lilac Ranch, Escondido, Cal.

SIMON NEWMAN CO., breeders of Registered Herefords, Newman, California.

HEREFORDS — Mission Hereford Farm, J. A. Bunting, Prop., Mission, San Jose, Cal.

REGISTERED HEREFORDS—H. H. Gable, Diamond G Ranch, Esparto, California.

GEORGE CALLAHAN—Breeders of registered Herefords. Milton, California.

GEORGE WATTERSON — Breeder Registered Herefords. Bishop, California.

REGISTERED SHORTHORNS — Fair Oaks Ranch, Willits, Calif.

SHEEP AND GOATS.

FOR SALE—Rambouillet rams and ewes—purebred; the very highest grade of large smooth body; heavy shearers; the wool and mutton type. Immediate delivery of individual or carload lots. You can find none better or of higher grade. Address Glenn, Cal. Location, 8 miles south Hamilton City, 1 mile west Ordbend. Windell Orchards Co.

F. A. MECHAM ESTATE, Petaluma, Cal.—Breeders and importers of Shropshire, Rambouillets and American Merinos, both sexes. Also Red Polled cattle. Take electric car at Petaluma or Santa Rosa for Live Oak Ranch.

FOR SALE—Purebred unregistered Shropshire rams, 3 years old. Big growthy fellows. As we cannot use them will sell at the right price. Spreckels Sugar Co., Greenfield, Cal.

WRITE ME for early Rambouillet ram lambs, ready for light use, by September 1. Also a few yearlings. Carl Lindheimer, Woodland, Cal.

HARRY L. HUSTON, Winters, Calif.—breeder and importer of Shropshire sheep. Stud and range rams. Prices on application.

DR. A. S. ALMEIDA, Dixon, Calif., Breeder and Importer of Registered Shropshire Sheep. Write me for prices on Reg. Ram Lambs.

J. R. BLOOM, Dixon, Calif.—Twenty-five years breeder of purebred Shropshire sheep. Rams for sale. Single or carload lots.

DORSET AND ROMNEYS — Dorset ram lambs for sale. John E. Marble, South Pasadena, California.

SNAP FOR SALE.—1,000 head ewes. Will sell in lots to suit. Chas. G. Owens, Livermore, Cal.

HARVEY S. VAN VLEAR, Lodi, Cal.—Breeder and importer of Registered Hampshire sheep.

CALLA GROVE FARM, MANTECA, CAL — Breeders and importers of Hampshire sheep.

50 ANGORA GOATS (Bailey stock), 10 mares and horses. T. C. Still, La Panza, Cal.

KAUPKE BROS., WOODLAND, CALIF.—Breeders and importers of Hampshire sheep.

FOR SALE—600 two-year-old Merino ewes. Swall & Wilson, Box 742, Bishop, Cal.

CHAS. KIMBLE—Breeder and importer of Rambouillets, Hanford, Calif.

BULLARD BROS., Woodland, Calif.—Breeders and importers of Rambouillet sheep.

MISCELLANEOUS.

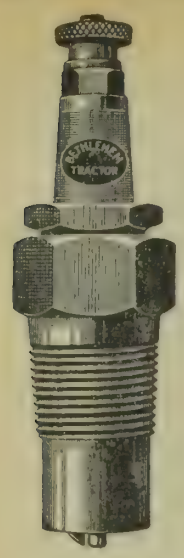
BUTTE CITY RANCH
SHORTHORN CATTLE, SHROPSHIRE Sheep, Berkshire Hogs, Shetland Ponies, Bronze Turkeys, White Plymouth Rocks. Stock for sale at all times. W. B. Dwyer and W. S. Guilford, Box P, Butte City, Glenn county, California.

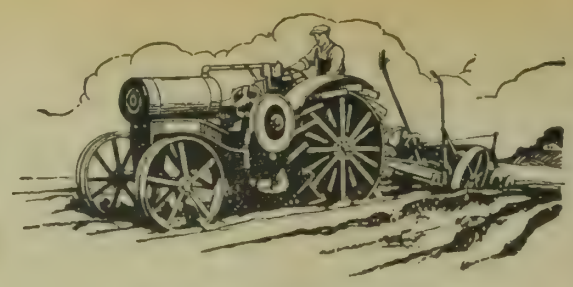
OAKDENE GOAT FARM, Walnut Creek, Contra Costa Co., Cal. Breeders of milk goats. Nubian, Saanen and Toggenburg registered grades. Bred and fed for milk production.

5 TOGGENBURG NANNY KIDS, 3 1-year-old, 2 six months old. 16 fine Cavies. $6.00. Address A. H. Flournoy, Healdsburg, Cal.

50 HEAD GOOD DAIRY COWS for sale. For further information, write, Box 573, Oakdale, Cal.

WANTED — Fresh cows. Meadowlark Dairy, Pleasanton, Cal.





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WHILE plowing, you don't want to be held up for an hour or more in the field because of a poor spark plug in your tractor. Those delays pile up costs and cut down yield.

Guard against such delays by using only Bethlehem Spark Plugs—the plugs that have met the severest tests of tractor operation.

Bethlehem plugs "pull you through." They don't go dead and leave you stranded in the field. The International Harvester Company thinks so much of Bethlehem plugs that it has adopted them as standard equipment for tractors and trucks.

Bethlehem Automobile and Truck plugs are just as trustworthy as the famous Tractor plugs. Studebaker, Marmon and 48 other manufacturers have chosen Bethlehems as standard equipment. To help you get the right plug for every purpose, we have prepared a little booklet, "Hit or Miss?", which we will send you free on request.

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Bethlehem SPARK PLUGS

"They Pull You Through"

Can a Fair Come Back?

Written for Pacific Rural Press by Thomas F. McConnell.

The Sonoma County Fair at Santa Rosa last week was a demonstration "coming back", so far as exhibits was concerned at least, and a pronounced success. From the Farm Bureau exhibits in the old "Floral Hall" through the "big top" containing the various mercantile booths, automobiles, trucks and tractors, the up-to-the-minute livestock filling all the permanent stalls and pens with a very numerous overflow in temporary quarters, the exhibition space was crowded to the limit.

An Educational Exhibition.

The education of people to grow better crops of grain, fruit and farm animals is a problem that involves the very foundations of our existence. With the phantom of expense haunting the "horny-handed sons of toil" at every turn they cannot hope to "make good" unless they raise the very best of everything at the very least possible cost. This is reasonable and a county, district, or State fair is where the producer of food and other necessities meet, with the very best of what they have grown for comparison.

Judging the Exhibits.

The comparison of the products is left to unprejudiced, well-informed individuals, who study the articles or animals carefully, indicating the best, better and good by the much-coveted and highly prized ribbons. The placings, if they are heeded and studied, the differences sought and determined by a majority of the exhibitors make the fair a success, from the most important viewpoint—that of education.

Those who win should remember there is another year coming and endeavor to not only hold their product at its established high point, but give it another boost, in order to keep first place if possible. Those who do not attain the highest honors should also look forward and improve their exhibit enough to win the blue and purple. In this way Sonoma County Fair came back successfully, and it will no doubt act as a stimulus to better farming.

Jazz.

It was in evidence—very much so; stall after stall, selling chances to "always win" some object not worth the first thought. Too much was devoted to this so-called part of the fair. People demand amusement, it is true, but it can be supplied without of "goddess of chance" and "clairvoyance" presiding.

Livestock Exhibit.

Exhibitors from far points brought cattle, sheep and hogs. Among those from a distance was the Butte City Ranch, showing a beautifully fitted flock of Shropshire sheep; A. B. Humphrey of Escalon, with Berkshire hogs and Guernsey cattle; Steybrae Ranch from San Mateo with Ayrshire cattle; L. W. Scudder of Escalon with Holsteins; Wm. Bond of Newark with Shorthorns, and Harvey M. Berglund with Duroc-Jerseys.

The local breeders were all there to see that outside competitors did not carry away all the prizes, although in Milking Shorthorns Thos. Harrison of Santa Rosa did practically that very thing.

The judges in the livestock departments were: Hon. B. F. Rush, Suisun, beef cattle; Prof. J. I. Thompson, sheep and swine; Prof. C. W. Rubel, dairy cattle.

California Cattlemens Association Notes

September 8th will be the big day for stock growers at the State Fair in Sacramento and one of the chief features of that day will be the meeting of the California Cattlemen's Association in the main Counties Exhibit Hall at 10:00 A. M. In a small way it will be a convention of cattlemen and many of the State's leading officials and stockmen will speak on topics vital to the industry.

The program includes addresses by the following: Mr. M. D. Lack, Hon. Wm. D. Stephens, Mr. G. H. Hecke, Mr. John S. Chambers, Judge Peter J. Shields, Professor C. W. McCampbell, Judge Beef Classes California State Fair 1920, District Forester Redington, Mr. F. H. Bixby, Dr. J. P. Iverson, Mr. R. N. Wilson, Dean N. H. Van Norman, Professor Hugh Baldwin, State Humane Association.

Cattlemen all over the West are watching with keen interest for the outcome of the auction sales of prime cattle to be held Sept. 1st at Lime Kiln Ranch, Nevada County, Sept. 20th, at Big Meadows, near Chester, Plumas County, and Sept. 11th at the C. C. Moore Ranch, Cottonwood, Shasta County.

These sales to be conducted by the Farm Bureau, in co-operation with the California Cattlemen's Association, will determine whether this method can meet the marketing problems of the small producer. Up to now, according to the producers, the man with a small herd has been at the mercy of buyers.

All of the large packers have been asked to send their buyers, and officials of the California Cattlemen's Association, among them President Bixby, will be present to assist in assuring smooth progress.

A DEMONSTRATION SALE

We hear of and attend promotion sales often enough so that most of us know what they are. The Farm Bureau Marketing Association on Saturday, Sept. 11th, at the State Fair, will demonstrate the efficiency of its method of selling fat hogs for the farmer. Several carloads have been consigned by farmers in the territory adjacent to Sacramento, so that it will be proof positive, and not the usual fair or exposition subterfuge.

The sale will be conducted under the auspices of the Sacramento County Farm Bureau, with the Farm Bureau Markteing Association co-operlend his assistance, and Assistant Manager Lloyd C. Trewhitt have charge of the grading. Manager D. H. Bitner has the assurance of the various meat packing firms of California that each and all will have buyers present and bidding for the stock. Every farmer who has from one to a carload of hogs and is interested in getting full value for them should attend and watch the grading and selling.

LIVE OAK STOCK FARM

SHROPSHIRES
RAMBOUILLETS
and
AMERICAN MERINO
SHEEP

We have for sale this season 400 head rams, yearlings and 2-year-olds. All purebred. Will sell singly or in carload lots.

Also 15 Head Purebred Red Polled Yearling Bulls

For further particulars apply

F. A. MECHAM ESTATE
PETALUMA, CAL.

BULLARD BROS., Woodland, Cal.
BREEDERS OF
RAMBOUILLET SHEEP
Have for immediate sale
50 Registered Yearling Ewes
50 Non-Registered Yearling Ewes
350 OTHER EWES
WRITE FOR PRICES AND PARTICULARS

Livestock Queries and Replies

Value of Carrots.—I have been feeding 25 punds alfalfa hay and 6 pounds cocoanut meal daily to each cow in my herd. I will commence feeding corn fodder soon. If alfalfa hay is worth $25, cocoanut meal $60, corn fodder $15 per ton, would it pay to feed carrots at $10 per ton?—J. C., Van Nuys.

Root crops fed to dairy cattle in reasonable amounts in connection with dry hay and concentrates, especially those of a nitrogenous nature, like alfalfa hay and cocoanut meal, would tend to increase milk flow, correct abnormal physical conditions without a corresponding increase in cost. A ration of cocoanut meal and alfalfa hay is narrow, being a little less than 1 to 4, when to produce maximum results on the average we would advise a ration of 1 to 6 or 7. Now, if we cut the cocoanut meal in half, add 15 pounds carrots, substitute 15 pounds of corn fodder for 10 lbs. alfalfa hay, we will have a ration costing 46.5 cents per day and with a nutritive ratio of about 1 to 6 or a little less. It ought to produce as much or more milk if the corn fodder is of excellent quality. If we substitute 15 lbs. of carrots for 3 lbs. cocoanut meal, we will have a ration costing 47.45 cents per day. This change will positively increase milk flow and improve condition of coat and general condition. The original ration of 25 lbs. alfalfa hay and 6 lbs. cocoanut meal costs 49.25 cents per day at prices given. We would advise feeding from 15 to 20 pounds of carrots, 10 to 15 pounds alfalfa hay, 15 to 20 pounds corn fodder, and 2 to 3 pound of cocoanut meal.—Livestock Editor.

Fistula of Withers.—I have a valuable draft mare that has dormant fistula on the withers. A swelling about the size of half an orange will appear on top of shoulders whenever she is worked. Would an operation eliminate all the trouble or would it recur? Is it any use to wait longer for it to go away?—C. M. E., Newman.

It is advisable to call in your most reliable veterinarian, but operate only when necessary. Have a "Dutch" collar made to fit so there will be no pressure for several inches around the enlargement. Work the horse every day. If the abscess should break, call in your surgeon, but until it does apply the following ointment once daily after washing with hot lysol water: Tannic acid, 1 ounce; benzoinated lard, 4 ounces. Mix and apply once daily, as directed.—Dr. E. J. Creely, San Francisco.

Twin Calves and Fleas.—Will twin calves make good dairy cows? How will I rid a place of fleas?—T. Y., Cordelia.

Twin heifers are all right and will breed and reproduce. A heifer that is twin to a bull is what is termed a "free martin," and generally will not breed. Fleas live in dust of cracks of floors and corners in any place where dust is allowed to accumulate. Clean up thoroughly. Wash and mop out, using plenty of warm water, to which coal tar sheep dip has been added in the proportion of 1 part to 50. Persistence in this will rid the premises of the pests.—Livestock Editor.

Bull Has Bronchitis.—I bought a finely fitted Shorthorn bull at auction last fall. After getting him home he was kept in a small corral with a few cows for awhile, then turned into pasture with my herd. He became pretty warm in driving him from my home to the pasture. I did not see him for a month, when I found him in very poor condition with a bad cough and a yellowish discharge from the nostrils. He was in a very bad condition. Brought him home and have been feeding him, and now, after 6 weeks, he is much better, but still has some discharge from the nostrils. Has he tuberculosis?—J. C. W., Mist.

Your bull is convalescing from a severe attack of bronchitis, due to causes you mention. It must not be presumed that every time a bovine coughs it has tuberculosis; however, a severe attack of any disease lowers vitality and predisposes to infection. It would be advisable to make the intradermal tuberculin test for safety and to satisfy your own mind. Every food given should be moistened and fed from the ground. Give the following cough mixture: Neutral oil, 27 ounces, rectified oil of tar, 4 ounces, Guiacol, 1 ounce. Mix and give 2 tablespoonfuls 3 times daily.—Dr. E. J. Creely.

Barley for Hogs.— How many pounds of barley does it take to produce 100 pounds gain in hogs? Is soaking barley 12 hours considered of advantage in hog feeding? What is the best way to feed barley to hogs?—F. M., Ramona.

Pigs weighing 50 pounds will only take 300 pounds barley to produce 100 pounds of gain. The heavier the hog the more barley it will take to produce the gain. When the hog weighs 125 pounds it will take 425 pounds of barley to grow 100 pounds of hog, and when the hogs weigh 275 pounds, 500 poundsbarley will be necessary. Soaking is of some advantage, as it softens the kernels somewhat and makes it more palatable. Ground barley will produce about 10 to 12 per cent more weight than whole barley. If 400 pounds of whole barley will produce 100 pounds of pork the same amount of ground barley will grow 110 to 112 pounds. It should be understood that much better results, i. e., more pork at less expense will be obtained if it is possible to pasture the hogs on alfalfa, or feed some skim or buttermilk along with the grain, or both.

Immunity from Anthrax.—If cattle are inoculated for anthrax, how long will the immunity last?—E. R., Hynes.

The immunity conferred by inoculation or vaccination to prevent anthrax depends upon the environment and the method employed. In some localities animals need to be immunized to a higher degree than in other places where the infection is not so virulent.

An immunity can be established by use of what is known as the Triple Anthrax Vaccine method that will last throughout the year, and especially during the hot summer months from June 1st to November 1st, or until about the time rains usually commence. If the treatment consists of vaccination with serum alone the immunity lasts from two to four weeks only.

Sodium Nitrate in Hay.—Sodium nitrate was used in the place of common salt when putting hay in the barn. Twenty-two pounds was distributed through four or five tons of hay. Is it safe to feed this hay to stock?—W. R. P., Bolinas.

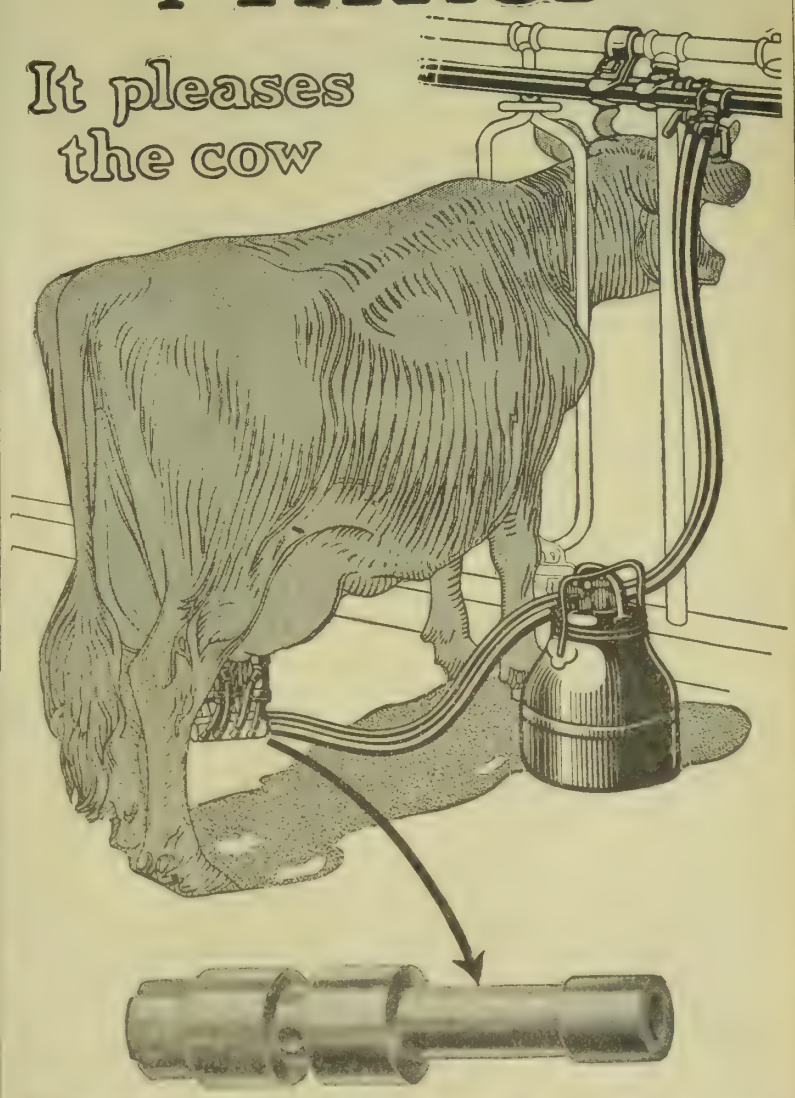
Safe enough, as a cow would probably get but one ounce per day, which could not possibly have any bad effect. The hay may not be quite as palatable, but will not be injurious. The sodium nitrate is much the same as sodium chloride or common salt. It may have a slight diuretic effect.—Livestock Editor.

Mischievous Pup.—A nice pup five or six months old, digs holes, breaks off dahlia branches, pulls up plants, and makes a nuisance of himself generally. We have whipped him, tied him up, but so far have not found a remedy.—I., Lodi.

Endure it five or six months longer and the pup will have grown into a dog and more staid ways. He behaves when he has something to keep him busy. If left to himself he has to devise his own outlet for his exuberant spirits. Confinement will only make him worse when he is turned loose. We do not believe in tying dogs up unless absolutely necessary. There is no way of making him behave except by giving him plenty to do, or amusing him.

The De Laval Milker

It pleases the cow



The only moving part of the Udder Pulsator

The De Laval Udder Pulsator is a remarkable advance in pulsator construction. It has no valves, no springs, no weights, no diaphragms. The only moving part is the small, plain piston of non-rusting, wear-resisting Monel metal, which never comes in contact with the milk, is entirely enclosed and lasts for years without oiling, adjusting or repairing.

The regular movement of the piston effects uniform action of the teat-cups, and as the piston is moved with unfailing regularity by the De Laval Master Control, all cows are milked in the same manner every day in the year.

The De Laval Milker is alternating, positive, uniform and gentle in action—requiring no adjustment of any kind. It is faster, more reliable and more sanitary than any other method of milking, and is sold with full knowledge of the fact that more is expected of it than of any other milker—due to the Company's reputation for service and satisfaction to users of De Laval machinery.

Write to nearest De Laval office for Milker Catalog, mentioning number of cows milked

DE LAVAL DAIRY SUPPLY CO.

THE LARGEST DAIRY SUPPLY HOUSE ON THE PACIFIC COAST

61 BEALE STREET, SAN FRANCISCO, CAL.

Poultry for Profit

MOST CONVENIENT TRAPNESTS.

(Written for Pacific Rural Press.)

A poultryman in the San Fernando Valley of Los Angeles county is credited by H. K. Hovey with sales of eggs averaging $3.50 per hen per year at 8 cents per egg for hatching, though he could sell his entire production at 15 cents per egg. Common poultrymen get less than half of $3.50 per year per hen. Mr. Hovey is himself a poultryman in a fair way to rival his neighbor. The high price of the eggs mentioned is justified by performance of the hens. The performance of each hen is known with certainty; and poor performers are eliminated. Hoganizing is practiced but is not depended on for the exact records of production. Every hen is trapnested. That would be some job with ordinary trapnests; and poultrymen would be pretty well justified in throwing up their hands at the thought.

Trapnests used by both of these poultrymen take only half the time and attention required by most trapnests; and this makes it possible for Mr. Hovey alone to care for 350 of them, all made by himself. The nest contains only one moving part; and taking a hen out sets it for the next one with no aggravating triggers or adjustments. They are built in batteries of ten nests each, and these are placed two deep along the side of the house, with bottoms hinged so they may be easily dropped to clean the nests. Each compartment is one foot square and two feet from front to back. Crosswise of the bottom and one foot from the front is a partition four inches high. Four inches above the top of this partition, a nail projects an inch through each side of the nest. The trap door is a wood frame covered with chicken wire. It is about 11¼ inches square, so it will fit easily inside the nest. Projecting squarely a little forward from center of each of two opposite sides of this frame is a wood strip ¼ inch thick, 1⅛ inches wide, and projecting about 3½ inches. These strips project downward when the trap is set, and a nail through each strip and through its side of the compartment acts as a pivot. This latter nail is so placed that when the trap door is slightly overbalanced toward the rear, its back edge will be directly over the partition and just high enough to rest on the nails projecting from the sides above the partition. The projections being slightly forward from center of the trap door, overbalance onto the these nails. A hen flies onto the lighting board in front of the battery, steps into the compartment and over the partition, tipping the trap door so it pivots over vertically behind her, and closes the nest. When Mr. Hoey makes his hourly inspection he reaches in, tips the trap-door to its horizontal position, thus setting it for the next one, takes the hen out, reads her number from the leg band, records it on a chart nearby, and goes to the next one.

"BAGGY CROP."

To the Editor:—I have a small flock 3½ months old, two of which have extra large crops that hang almost to the ground mostly filled with water, as well as a little grain, etc. I have tried tying the crop up but don't think this is gonig to prove satisfactory. Do you think that by making an incision and sewing the crop up, it would remedy the trouble? If not, kindly advise.—A. N. S., San Gabriel.

The enlarged or "baggy crop" is most likely due to overfeeding of solid food, such as grain, which caused a temporary impaction of the crop from which the birds recovered without assistance from their keeper. Possibly they are not yet completely free from the effect of this impaction but are still troubled with sourness of the crop or other form of indigestion. This abnormal condition of the crop is sometimes reduced to about normal size and condition by cutting out of the enlarged portion an oval or diamond shaped piece of the outside skin approximately 2 inches long and 1 inch wide and a small slit in the inside skin or wall of the crop. Wash out the interior with clean water at a temperature of about 105 to 110 degrees. The cut edges must then be sewed together in the following manner: With a needle and white silk thread (cotton thread number 60 will answer in an emergency) take two single stitches in the cut in the inside skin, leaving the ends long enough to hang out of the wound an inch. Then in the same way, take three stitches in the outside skin. Be careful not to unite the inside to outside skins when the knots are tied, and avoid getting dirt or any foreign matter between them. When stitched rub vaseline on the raw edges that are exposed. For week after the operation feed only a small ration of light mash and avoid giving any grain.

Remove the soil from houses having dirt floors and haul in clean sand, sandy loam, or ashes. A general fall clean-up will mean greater winter egg production.

Poultry Breeder' Directory

Rate, 4c. per word. Cash must accompany all orders.

BABY CHICKS from selected S. C. White Leghorn hens. Write for prices. Tupman Poultry Farm, Box 7A, Ceres, Calif.

BARRED PLYMOUTH ROCKS — "Nothing Better in Poultry." Wonderful layers. Choice hens and pullets for sale; also fine cockerels that will improve your flock. Now booking orders for hatching eggs. I have made a specialty of Barred Rocks for over twenty-two years. That's why our birds win at all the leading shows. Catalog free. Chas. H. Vodden, Box 3, Los Gatos, Calif.

SANTA CRUZ CHICKS are in demand. Our hatchery will run full blast this fall, supplying Leghorns, Anconas, Minorcas, Rocks, Reds, and Orpingtons. We also offer W. L. Hyde's cockerels from Pen 1, with trapnest record 236-284 at $5.00. Write for folder with chick price list. B. W. Archibald, Soquel, Santa Cruz Co., Calif.

PETALUMA HATCHERY — Established 1902. If you want good fall layers get chicks in the fall. We guarantee satisfaction. There will be but few chicks hatched this fall. The wise ones are buying. Send for prices. L. W. Clark, 615 Main St., Petaluma, Cal.

PEERLESS WHITE WYANDOTTES — Our 200-egg strain, bred for years for show qualities and high-egg production. Fifty cockerels, 100 pullets for sale. Trios and mated yards. Eggs for hatching. Catalogue free. J. W. Atkinson, Box 8, 130 Willard St., San Jose.

WHITE LEGHORN BABY CHIX from heavy-laying Hoganized Stock. Safe arrival of full count, live, strong chix guaranteed. Price list and interesting literature on application. The Pioneer Hatchery, 408 Sixth St., Petaluma, Cal.

BOURBON RED TURKEYS — Gold Orpingtons. The Ferris Ranch, R. 2, 144D, Pomona, Calif.

RAISE FALL CHICKS—We will have them every week. R. I. Reds, Barred Rocks, White Leghorns. Write for special circular. See why they pay. Stubbe Poultry Ranch and Hatchery, P. O. Box 67, Palo Alto.

Increase your EGG production 100% by using A. J. E. Egg Builder., no sick or drooping fowls where used. Formula sent postpaid upon receipt of $1.00. A. J. E. Laboratory, 314 Church St., San Francisco.

RHODE ISLAND REDS — Improve your color and egg capacity. Breeding stock now ready for shipment. Hatching eggs, chicks. Wm. Larm, 3915 39th Ave., Fruitvale, Cal.

BABY CHIX—Order now for September delivery from our selected, bred-to-lay Hoganized White Leghorns, Barred Rocks, R. I. Reds. Maxwell Hatchery, Madera, Cal.

BARRED ROCK, White Orpington hatching eggs, now $1.75 and $3.50. Breeding Cocks, Cockerels, Hens, Pens. R. P. Lutzi, 1217 20th Ave., S. F. Yards at Los Altos.

GOLDCROFT BUFF ORPINGTONS, Columbian Wyandottes and White Leghorns. Heavy laying strains. Breeders and young stock. Samuel Abrams, Box 13, Los Altos.

CHICKENS, DUCKS, GEESE, GUINEAS, Pea Fowl, Pigeons. Wm. A. French, 545 W. Park St., Stockton, California. Stamps.

EASTMAN'S "BRED-TO-LAY." Hoganized and trapnested. Barred Rocks. Fall Chicks. Fairmead Poultry Farm, Fairmead, Cal.

BUFF ORPINGTONS, BUFF DUCKS, BOURBON Red Turkeys, White Guineas. The Ferris Ranch, R. 2, 144 D, Pomona, Calif.

WHITE LEGHORNS, White Orpingtons trapnested. Mabel Smith, Hollister.

GLOBE "AI" FEEDS

—Judge them on Business Principles!

FEED FOR SWINE STOCK AND POULTRY

ASK YOUR DEALER

OLYMPIC

SCRATCH FEED

Gives Your Hens an Even Break

YOU don't expect blood from a turnip. Likewise, unless you have supplied your fowls with plenty of backbone and strength, you cannot expect continual egg production. The best egg mash or tonic only assists the hen—it takes a strong, robust constitution to withstand steady laying. Such constitutions are the result of feeding OLYMPIC Scratch Feed.

This strength-building feed contains the following properly balanced ingredients: Wheat, Cracked Corn, Milo Maize, Hulled Barley, Hulled Oats, Sunflower Seed and Buckwheat. Made from carefully selected whole grains, cleaned and well mixed, you'll find no better poultry feed than OLYMPIC Scratch Feed. Every handful is uniform and free from dust.

OLYMPIC Scratch Feed comes in three classes or grain sizes. Baby Chick Scratch, with tiny but uniformly ground grains, suited for the first three week's feeding. Growing Chick Scratch, a little coarser grains, that appeal to the growing youngsters until about eight weeks old, is the next step. From Growing Chick Scratch they graduate to the full sized grains of OLYMPIC Scratch Feed.

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LOS ANGELES POULTRY, RABBIT AND PIGEON SHOW.

The premium lists which have been mailed to exhibitors offer attractive awards in the poultry, rabbit and pigeon show in connection with the Los Angeles Livestock Show, October 2 to 10. There is every assurance of a large attendance. E. I. Hammond, of Riverside, who has been appointed manager of the poultry, pigeon and rabbit displays, says: "We earnestly hope all fanciers will unite with us in presenting a show second to none in the West. This year we expect displays of 1750 poultry, 500 pigeons and 500 rabbits." Entries close September 15.

Poultry classes are arranged for every breed named in the American Standard of Perfection for Poultry. All premiums are open to the competition of the world, except club prizes and specials. Poultry and rabbits draw cash prizes of $2 to $1; exhibition pens of poultry draw $5, $3, $2.

Special and Sweepstakes Prizes.

Best display, any one variety, single exhibitor, $20; second best, $10; best display by novice, $5; best display in American class, $10; Mediterranean class, $10; Asiatic class, $10. Best display, Bantams, $10; waterfowl, $10; turkeys, $10. Groups of Polish, Hamburg, French, Game and Continental classes, $10. For largest exhibit by any one exhibitor, $20.

Commercial Poultry Classes.

Best displays, $10 to $1; best layers, $5 to $3.

Prizes in Rabbit Department.

Best display by one exhibitor, $20; second best, $10; best display by novice, $5; by school boy, $2.50; cavies, $3 to $2.

Prizes in Pigeon Department.

Best display fancy pigeons, $10; utility pigeons, $10; pigeons, open to exhibitors outside Southern California, $5; largest display racing homers, $5; best bird among 15 varieties, $5; largest exhibit in pigeon department, $10.

Los Angeles County school junior poultry clubs are expected to enter 200 specimens in the poultry, rabbit and pigeon displays.

CALIF. FARM BUREAU EGG-LAYING CONTEST.

(Written for Pacific Rural Press.)
(Max Kortum, Mgr.)

During the last two weeks there was a marked change in the position of some of the leading pens at the Santa Cruz Egg-Laying Contest. Enterprise Ranch is back in second place, with R. C. Gibson of Newhall a close third, while B. F. Rose of Santa Cruz has dropped back to fourth place. The leaders are lined up as follows:

Owner	Eggs
D. B. Walls, Petaluma	1647
Enterprise Ranch, Chino	1586
R. C. Gibson, Newhall	1584
B. F. Rose, Santa Cruz	1577
Bellows Bros., Lakeside	1561
S. L. Gibson, Santa Cruz	1513
Hollis Peck, Santa Cruz	1512

High pens for the week ending July 31st:

W. J. Neef, Santa Cruz	47
Bellows Bros., Lakeside	47
R. C. Gibson, Newhall	46
S. L. Gibson, Santa Cruz	46
G. G. Barker, Santa Cruz	46
F. Stalling, Santa Cruz	45
Theo. Clark, Santa Cruz	43
Warren Wood, Santa Cruz	42
E. H. Schlink, Ramona	38
Geo. Gray, Santa Cruz	37

BLOOD CONTAMINATION AGAIN.

A number of years ago there was much discussion of this subject. Many breeders contended that once a hen was mated to a male of another breed the blood of all of the future offspring of the hen would be more or less contaminated. However, the results of careful observation seemed to practically disprove this theory, and it is now generally acknowledged that it is safe to consider the eggs as purebred when the hen has been removed "for the period of one month" from the male of another breed, and after remating to a purebred male of the same breed as the hen for about the same length of time.

Home Circle Department

OUT OF THE MOUTHS OF BABES.

(Written for Pacific Rural Press by Ralph Newman.)

Last week we reported the show put on at the Patterson Fair by the Stanislaus County Holstein Calf Club. It was stated then that the Farm Bureau would give, as an additional prize, a trip to the Calf Club Convention to be held at the University Farm Oct. 14-16. This trip is awarded to the five boys and girls scoring highest in the following: Progress made in developing calf. Neatness of record kept. Showing at end of contest. Essay on "How I Raised My Calf." Net profit. The prize went to the following five in the order named: Reuben Stammerjohan, William Stammerjohan, Willhelmina and Everett Fox—brother and sister with an equal score, 96—and Clay Stammerjohan.

Well now, the writer has spent a joyous evening going over the records and essays of these youngsters, and is sitting up late to record some dairy wisdom from the mouths of babes in the business. Here are some of the answers to the question, "Why did you join a livestock club?"

"Because I think it trains you for the future."

"I joined for experience and profit."

"Because I wanted to get a start in purebreds."

Experience, profit and the satisfaction of handling stock to be proud of—isn't that the whole story? The way the capital for this venture was raised is interesting. In some cases "my father gave me the calf." One boy "got the money to buy my calf by raising pigs and saving my money." A number went to the bank and "gave my note for the money." These notes range from $200 to $500, with three years to run. Which method was best? Surely, the thrift of the boy who saved his pig money is to be commended. Also, the interest of parents who donated the calf. But, after all, the boys who have a note at the bank to meet and interest to pay regularly are getting business training not to be sneezed at. Many a dairyman grown gray in the service could have learned from the cost-sheets of these boys. Here, every time, you will find "interest" figured in the cost of production.

The cost of keeping these calves seems high. It averaged around $40 for 80 days. They are high-priced, pure-bred calves, however, and the increased value of the calf will show a net profit in every instance—some more wisdom for the wise out of the mouths of babes and sucklings (the latter referring to the calves). I'd like to see a man spend $40 on a scrub calf in 80 days and show a net profit at the end of the ordeal.

A number of these youngsters could also teach older heads something about the technique of calf-feeding. Listen to this from a boy in the fourth grade: "Only the fourth stomach of the young calf is developed. The other three compartments do not 'function' in the digestion of feed until the calf is older." And this: "The natural feed for a young calf, both as to the 'character' of its 'nutrients' and the proportion of them, is whole milk."

Appended are two of the essays. They are worth reading.

8-Year-Old Prize-Winner.

"I am a girl only eight years old but I belong to the Boy and Girl Calf Club of Stanislaus County. I bought my calf from Geo. Kounias for $275 when it was only about four months old. I feed it alfalfa and oat hay, also some green corn, green alfalfa and grain. I always brushed it and kept it looking nice. I am going to send it to Patterson and Sacramento Fairs, with the rest of the calf club." (This girl walked off with a prize at Patterson.)

How I Raised My Calf.

"I read in the paper that the Holstein Breeders' Association of Stanislaus County and the Farm Bureau were getting up a purebred calf club for the benefit of the boys of Stanislaus County. I asked my father if I could join. I wanted to because I want to get started in purebred Holsteins. He said I could join the club if I would promise to take good care of my calf, which I did. A committee of Holstein breeders took us boys on a tour visiting all of the leading registered Holstein breeders of the county and helped us select our calves.

"I borrowed my money from the California National Bank of Modesto at the rate of 6 per cent interest. I got my calf from E. M. Morrow for $500. Her name is Rag Apple Aggie Acme. Her sire's name is Sir Aggie DeKol Acme 2nd and her dam's name is Rag Apple Alcartra. The sire of her dam is the Great King Segis Pontiac Alcartra, the bull that sold for $50,000. The sire's five nearest dams averaged 1154 pounds of butter per year. The brother of my calf's sire sold for $11,000.

"At first I fed only alfalfa hay and skim milk. Then I started to feed her a little rolled oats and bran. I gradually raised the amount, and later I added a little rolled barley. I fed her alfalfa hay twice daily and oat hay once daily. I spent a little time every day brushing and leading my calf. I clipped my calf awhile before the fair and I made a blanket which I kept on her all the time after I clipped her. I washed her occasionally."

'This boy took first at Patterson in competition with some of our best herds.)

NEW FACES IN HOME DEMONSTRATION WORK.

(Written for Pacific Rural Press.)

At least three more counties have backed their faith by works in the employment of Home Demonstration Agents.

Sacramento County is now engaged in getting acquainted with their agent, Miss Gladys Nevenzil. Miss Nevenzil received the special training at Throop Polytechnic Institution, Pasadena. She has taught Home Economics in Monrovia and Los Angeles high schools and for the last three years has been instructor in cooking and sewing at the San Diego State Normal School.

Kings County has welcomed Miss Evelyn Conklin, who received her training at the Oregon Agricultural College. For the past year she has been a demonstrator at large working from the state office and has made many friends who will congratulate Kings on securing her services.

In September, Kern County will begin to hum under the leadership of Agnes Kreutzer. Miss Kreutzer was trained and did training at the Colorado State Agricultural College. She is a sister of George Kreutzer of the Durham Land Settlement and if "pep" runs in whole families things will be lively in Kern County.

Alameda County, in the fold for some time, has a new shepherdess in Miss Mary Collopy. Miss Collopy is also from Colorado Agricultural College, where she did demonstration work. Altogether it looks like a good year for home demonstration work in California.

CANNED STRING BEANS.

Prepare string beans for canning and put one medium-sized onion for each jar. Blanch the beans and onions in boiling water, in separate kettles, for from five to ten minutes; drain and rinse in cold water. Pack beans in glass jars, placing an onion in the center of each jar; fill to overflowing with cold water, put on covers and clamps, and put jars in wash boiler on a rack. Fill boiler with water to the neck of the jars, being to the boiling point, and actually boil them for three hours. Remove the jars from the boiler and set in a sheltered place to cool over night. Next day, test covers to see that each is firm, and set them away in a dark place for future use. This is a tried and tested recipe.

RUSKIN ON COOKERY.

"Cookery means the knowledge of Medea and of Circe and of Helen and of the Queen of Sheba. It means the economy of your grandmothers and the science of the modern chemist; it means much testing and no wasting; it means English thoroughness and French art and Arabian hospitality."—Ruskin.

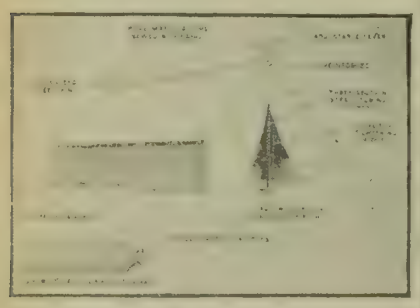
Ask for Ghirardelli's Ground Chocolate at the store where you do your trading. Never sold in bulk but in cans only. In this way Ghirardelli's retains its flavor and strength—the two most important elements of good chocolate.

IT'S simple enough—the chocolate-sweetness of Ghirardelli's makes additional sugar unnecessary. You lose nothing of its deliciousness, its flavor, its strength, when you "pass up" the sugar. For Ghirardelli's "stands on its own feet" as a complete food beverage—sufficient unto itself!

Say "Gear-ar-delly"

D. GHIRARDELLI CO.
Since 1852 San Francisco

GHIRARDELLI'S
Ground Chocolate



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7 x 7, White	$24.00
7 x 7, Khaki	26.00
7 x 9, White	28.50
7 x 9, Khaki	31.50
8 x 10, White	34.50

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PLANT NOW—August is a good month to plant. Growers who planted last July and August have already harvested over 15 tons per acre, netting $1,000 eleven months from planting. For further information, write J. B. WAGNER, Rhubarb Specialist, 1550 East Villa Street, Pasadena, Cal

America's Pioneer Dog Medicines

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DOG DISEASES
And How to Feed
Mailed free to any address by the Author
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118 West 31st Street, New York

OPPORTUNITY.

They do me wrong who say I come no more
When once I knock and fail to find you in:
For every day I stand outside your door
And bid you wake, and rise to fight and win.

Wail not for precious chances passed away!
Weep not for golden ages on the wane!
Each night I burn the records of the day—
At sunrise every soul is born again!

Dost thou behold thy lost youth all aghast?
Dost reel from righteous Retribution's blow?
Then turn from blotted archives of the past
And find the future's pages white as snow.

Laugh like a boy at splendors that have sped,
To vanished joys be blind and deaf and dumb;
My judgments seal the dead past with its dead,
But never bind a moment yet to come.

Though deep in mire, wring not your hands and weep;
I lend my arm to all who say "I can!"
No shame-faced outcast ever sank so deep
But yet might rise and be again a man. Ex.

FATHERHOOD, A PROFESSION.

We hear a great deal of the sanctity of motherhood and of the sacred responsibilities of the mother; but who talks about the nobility of fatherhood and the wonderful privilege of being a father? One would almost suppose that children had but one parent, or that, beyond the obligation of support, a father owed nothing to his children.

As a matter of fact, just what does he owe them?

In the first place, he owes them the best possible inheritance of health and natural strength. If the fathers of the present generation had been taught, as schoolboys, that they owed their children a heritage of physical health, the present generation of children would be a far healthier, happier lot of youngsters.

And having given his children a healthy heritage, the father should share with the mother the oversight of their children's well-being. I know—as everyone else does—hosts of fathers who not only fail to take any responsibility about the children's habits, but who actually, though unconsciously, work against the mother by giving surreptitious candy, by keeping the children up late to play with them and thus make her work with them more difficult. The result is that Father is very popular, while Mother is considered "awfully fussy."

On the mental side, a child, as he grows older, looks more and more to his father. Wise is the father who takes an active interest in current events or allies himself on the side of local civic improvement, for through his example his children naturally acquire a love of good citizenship.

And on the moral and religious side, how often is Father a mere figurehead in his own family? Usually it is Mother who represents the moral law, or, if Father does take a hand, it is merely as the executor of her decreed punishment. "'Wait till your Father comes home!" is either an empty threat, or, in rarer cases, a phrase filled with terror for the small rebel.

Too often church attendance is left entirely to the women. The children see Mother start off alone for church, while Father remains at home to read his paper. The notion that church is a woman's affair is formed so naturally that, later in life, it seems an instinct.

How much children miss, how much fathers miss, by this one-sided parenthood! Happy the boy who looks up to his father as an ideal of bodily vigor, wisdom and goodness. And this does not mean that Father must stand on a pedestal. Far from it! Anyone who has read the charming letters of Theodore Roosevelt to his children sees, as in a mirror, the picture of a father utterly devoted to his children, and utterly adored in turn. Whether he is leaping from haymow to haymow in a wild game of tag, or reading aloud with his children gathered around him, he is always their chosen companion, their best friend, their greatest hero. And there are many devoted fathers! Francis E. Leupp gives us a charming picture of one in his little book, "A Day with Father."

Reversing a well-known quotation, we may say, "Happy is the father who knows his own child!" Happy because there is no more delightful study than that of the development of a child, as he progresses from infancy, through childhood to youth. Happy because of the inspiration that comes from the companionship of children. Happiest of all because, in the trying times of their youth and early maturity, he will be able to understand his children. He can guide and counsel them, instead of standing helplessly by—an outsider. If only American fathers would know their children, they would find them more interesting than any business in the world, and as for the children, who can measure their gain?

SPICED CRABAPPLE.

Make a syrup of the proportion of one quart best cider vinegar to three pints best brown sugar. Takes spices in the proportion of two teaspoons whole cloves and four tablespoons cinnamon to a gallon of fruit. Tie spices in a bag and put in the syrup. Boil and skim the syrup for about fifteen minutes, then put in apples a few at a time, cooking until thoroughly heated. Watch carefully and if the skin begins to crack, remove from syrup, placing them in a stone jar. When the apples are all cooked, pour the boiling syrup over them. Boil the syrup—do not cook the fruit again—and pour boiling hot over the fruit for three successsive days. When they are finished, place the fruit in the jar to the depth of two or three inches, sprinkle over them bits of cinnamon bark and a few cloves, add another layer of fruit, then spice and so on, until the jar is full. Place cover on jar and tie down with a cloth. The syrup should boil hard for ten minutes each day, but the last time it should boil until like thin molasses. All that is necessary to keep the apples is to have syrup enough to cover and to keep the fruit well under. If desired, cling peaches may be spiced the same way.

LOGICAL INQUIRY.

Kind Old Lady (who has just given Ted some candy)—"And now what do you say, my dear little man?"

"Got any more?"

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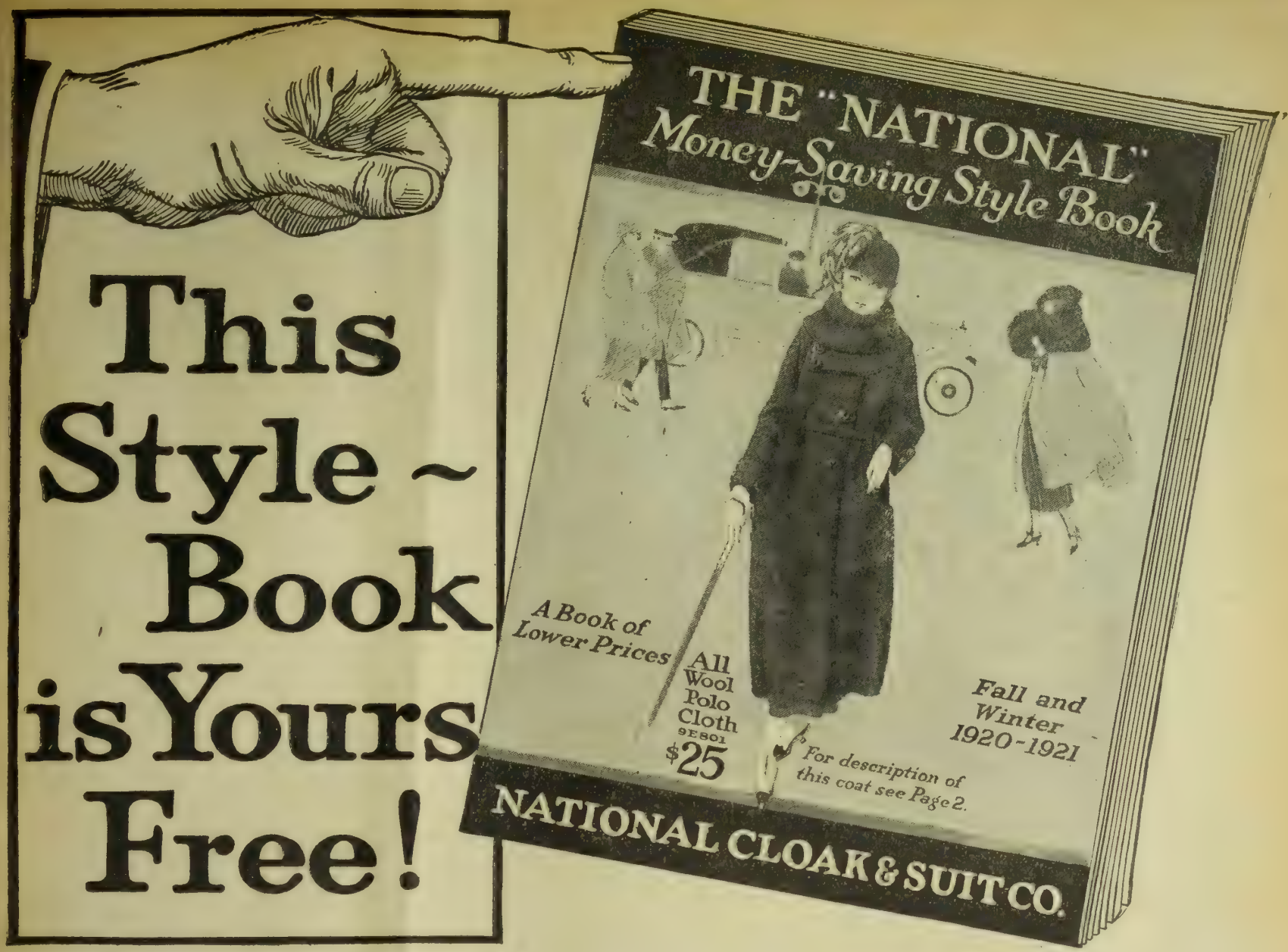

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THE MARKET REPORTS

Compiled from Independent Sources.

SAN FRANCISCO

San Francisco, September 1, 1920.

WHEAT.

There is no spot trade in wheat. So few offerings are being made on the market that quotations have risen in the past week.

Wheat ..... $3.90@4.00

OATS.

Prices are the same and the market continues to be exceedingly dull. Buyers are not willing for lower prices.

Feed, Fair ctl ..... $2.85@3.15

BARLEY.

No changes are reported in the continuing quiet barley market. Almost no samples are being shown in the exchange, and no activity is anticipated.

Feed barley ctl ..... $2.35@2.45

CORN.

Very little corn has arrived. The same prices are still hanging on, and although there is scarcely any demand dealers are hopeful of the market picking up shortly.

Eastern white ..... Nominal
do, brown ..... $3.40@3.75
California ..... $3.80@3.85

FEEDSTUFFS.

The jobbing demand is still small. Bran shipments from the East which have been expected for some time have not yet arrived, but are expected any time. However, the demand for bran as well as other feedstuffs is still very light. Mill runs are quoted at $63.50 to $65, middlings from $75 to $77.50, and bran from $63 to $64.

Rolled Barley ..... $51.00@52.00
Rolled Oats ..... $60.00@61.00
Alfalfa Products ..... $45.00@52.00
Cracked Corn ..... $80.00@81.00

HAY.

Prices are unchanged and trading has been on a hand-to-mouth basis during the past week. Receipts for the week were 2235 tons. Receipts for the previous week were 1670 tons. The heavy arrivals are thought to be due to a desire to ship before the increasing freight rates become effective.

Dealers are not stocking up this season and increasing light arrivals are expected during the next two weeks, as consumers have read the published reports of the Federal Bank and the trade bureaus to the effect that large quantities of hay are being cut all over the country. This has had the effect of assuring the consumer of plenty of hay during the coming winter at probably lower prices than are quoted now. Choice wheat hay and oat hay is, however moving fairly well this week. The biggest portion of the California crop is still in the hands of the producers.

Old Hay ..... Nominal
Wheat Hay, new ..... $26.00@28.00
Tame Oat Hay, new ..... $23.00@25.00
Barley Hay, new ..... $17.00@20.00
Alfalfa, new ..... Nominal
do, 2nd cutting ..... $21.00@25.00
Stock Hay ..... Nominal
Barley Straw, bale ..... Nominal

FRESH FRUITS.

(Wholesale prices paid by commission houses.)

Cantaloupes are plentiful, with a fair demand continuing. Pears are off the market. The berry market is shattered. Strawberries are poor in both supply and demand. Further declines are expected in the berry market, which is growing daily weaker.

Heavy apple arrivals continue, with all grades moving fast. The grape market is weak, as is the market for other deciduous fruit. The market is a little better for grapes. Watermelons are coming fast and moving well at no change in price.

Apples, Gravenstein, fancy $2.35
do, choice $1.75
do, Alexanders $1.75
do, Red Astrakhan ..... Nominal
Plums ..... $1.25@2.00
Apricots, lb. ..... 5@7c
do, box ..... $1.25@1.50
Peaches, 4 baskets $1.25
Pears ..... $2.00@4.00
Figs, box, 1 layer ..... $1.00@1.25
Strawberries, 6 12-oz. boxes ..... 75@90c
do, 6 8-oz. boxes, drawer ..... 50@65c
Blackberries, drawer, 12-oz. drawers 30@40c
Raspberries drawer ..... 70@85c
do, 8-oz boxes ..... 30c@40c
do, 8-oz. boxes ..... 40@50c
Cantaloupes, Standard ..... $1.00@1.25
do, Ponies .....
do, Flats ..... 50@60c
Watermelon, lb. ..... 1@1½c

POULTRY.

The poultry market is firm, and receipts have been medium heavy during the week. The better grades, of which there is a scarcity, are moving very fast and prices, which have decreased may rise still higher. This is especially true of hens. The poorer grades however, are not doing so well, and may decline in price during the coming week due to their abundance with the small market.

Hens ..... 40@45c
Roosters, young ..... 42@45c
do, old ..... 17@20c
Fryers ..... 40@45c
Broilers ..... 55@60c
Turkeys ..... 25@30c
Ducks ..... 25@30c
do, old 23c
Belgian Hare, live ..... 18@20c
do, dressed ..... 22@25c
Jack Rabbits ..... Nominal

BUTTER.

The advancing market is due to a shortage of supplies. A very firm market is noted, and further advances on prices are thought likely as local markets are drawing on the San Francisco market. Butter is seven cents higher than it was a year ago.

	Thu.	Fri.	Sat.	Mon.	Tu.	Wed.
Extra	63	63½	..	64	65½	63½
Firsts	59½	58½	..	58½	62½	62½

EGGS.

Eggs have continued their phenomenal advance in all grades. Dirties closed the week especially high. Both the supply and the demand are good, the situation being the same practically as it was this time last year. Shipments are being made to New York, where very high prices are quoted. Although receipts here are heavy and may be still heavier next week, the exceedingly high prices on other markets is expected to hold the prices here up to their present level.

	Thu.	Fri.	Sat.	Mon.	Tu.	Wed.
Extra	59½	62	..	64	64½	63
Ex. Pullets	52½	52½	..	56	57	56
Dirties	49½	49½	..	50½	50½	50½
Undersized	32	32½	..	36	34½	37½

CHEESE.

California Young America Thirds have appeared on the market at 13 cents. The market continues weak and dull, with no prospect of any change in the near future. An oversupply of Oregon cheeses which came in last week are dragging on the market.

California Flats, fancy 27½c
do, Firsts 23c
Oregon Triplets 26c
Cal. Y. A. Thirds 13c

HONEY.

The market is exceedingly weak, with no movements. Arrivals have been very light. Prices are expected to drop very soon to conform to the sugar market.

POTATOES, ONIONS, ETC.

(Wholesale prices quoted by commission houses.)

The potato market is firm, with ordinary receipts. The Stockton potato market is much higher than here. Onion arrivals have been heavy during the week, and the market is weak except for the best grades. Receipts of all vegetables have flooded the market and the demand is so poor that prices which have dropped may decline further. This is not true of tomatoes, however, which are holding their own in the face of a good demand.

Turnips ..... $1.25@1.50
Peas, Halfmoon ..... 12@13c
Beans, wax, lb. ..... 5@6c
do, green, lb. ..... 4@5c
Carrots per sack ..... $1.25@1.50
Green Corn, each ..... $1.50@2.50
Lettuce, head doz ..... 25@30c
Cucumbers, Alameda, lug box $1.00
Tomato, River, large box ..... 50c@1.00
Rhubarb, Strawberry, box 40 lbs. $1.50
Summer Squash, box, 35-40 lbs. ..... 50@75c
Egg Plant, box ..... 50@75c
Potatoes, New River, cwt. ..... $2.50@2.75
Onions, yellow, sack ..... $1.00@1.25
do, Red ..... 75c@85c
Green Onions, box, 25 lbs. ..... $1.25@1.50

BEANS.

Beans have been very weak. Prices have dropped, and indications point to further declines. The market is very dull.

Bayos ..... $12.50@14.00
Blackeyes ..... $6.75@7.00
Cranberries ..... $6.50@6.75
Pinks ..... $6.00@6.25
Red Mexican ..... $7.50@7.75
Large Whites ..... $5.50@5.75
Small Whites ..... $5.50@5.75
Limas, Ass'n prices, South $11.42
do, Baby, Ass'n prices, South $11.42
Limas, S. F. prices ..... $10.50@10.75
do, Baby, S. F. prices ..... $10.00@10.25

DRIED FRUITS.

There have been no changes in the Association's prices and no changes in other quotations because of the dull market. Indications are that the market will pick up shortly.

Extra fancy Moorpark, lb. 33c
Fancy Moorpark, lb. 30c

Growers Quality.

Growers' quality—Fancy, lb. 26½c
do, lb. 24½c
do, Choice lb. 22½c
do, Slabs, lb. 20c
do, Standards, lb. 18c

Raisins—The following prices have been established as the opening prices of the California Associated Raisin Company for the 1920 crop of raisins:

Muscat, Sun Maid, seeded, pkg, 36-16s. . 21c
do, Fancy, . . 36-16s 21c; 48-12s 16½c
Bulk, seeded, Baker's Sun Maid, 25-lb. bx. 20c
do, Fancy Sun Maid 25-lb. boxes 20½c
Loose, 1-crown recleaned lb 20c
do 4-crown, recleaned lb. 24c
Layers, 3-crown, flat pack, 5-lb. box..$1.30
do, 3-crown, flat pack, 5-lb. box..$1.30
Clusters, 4-crown, flat pack, 20-lb box $4.70
do 4-crown flat pack 5 lb. box $1.40
Sun Maid 100 lb boxes $21.00
Thompson Seedless, Sun Maid, recleaned, lb. 20½c
do, Sun Maid bakers, lb 21½c
Sultanas, Sun Maid, recleaned, lb. 20½c
do, Sweat-box, layers, lb. 19c

..Figs—Following prices have been established as the opening prices for the 1920 crop of dried figs.

White Adriatic, 12-10 oz $1.25; fancy, $1.30
do, 12-8 oz. ..... $2.00; fancy, $2.05
do, 50-6 oz. ..... $3.10; fancy, $3.20
do, 70-4 oz ..... $3.30; fancy, $3.40
Adriatic, bulk Standard 50-lb boxes, lb 9c
do, bulk, fancy, 50-lb. boxes, lb. 13c
Black Mission, Standard, 50-lb. boxes, lb. 7c
do, Fancy, 50-lb. boxes, lb. 12c
Prices f. o. b. Fresno.

Peaches.—Following prices have been established as the opening prices of the California Peach Growers for the crop of dried peaches.

Yellows, Standard, lb 15½c
do, Fancy, lb 17½c
do, Extra fancy, lb 18½c
do, Slabs, lb. 15¼c
Muirs, Standard lb. 15¾c
do, Fancy, lb. 18¼c
do, Extra fancy, lb. 19¼c
The above prices are bulk basis.
Shipment: September, October, November.
Seller's option. The above prices are guaranteed against Association decline until January 1, 1921.

Prunes—Following prices have been established as the opening prices of the California Prune and Apricot Growers, Inc., for the 1920 crop of Prunes.

Sunsweet Brand, 20-30s, flat, lb. 25c
do, 30-40s, bulk, lb. 17c
do, 40-50s, bulk, lb. 15½c
do, 50-60s, bulk, lb. 13c
do, 60-70s, bulk, lb. 11½c
do, 70-80s, bulk, lb. 10½c
do, 80-90s bulk lb. 9½c
do, 90-100s, bulk, lb. 9½c
First half September shipment, ½c premium; last half September shipment, ¼c premium. The above prices apply only to contracts already issued.

SPECIAL DECIDUOUS REPORT.

Sacramento, September 1, 1920.

The deciduous fruit market continues firm; some varieties, such as Bartlett pears and plums, are some higher than one week ago. Reports down to the last minute from Eastern auction markets are: Bartlett pears average in several markets $6.17; two cars averaging $7.36 and $7.42. Howell pears averaged $4.15; B. Hardy, $4.90.

Plums: Gros, average $2.45; Grand Duke, $2.75; Giant, $2.63; Kelsey, $2.90, one lot selling up to $4.75.

Peaches: Elberta, $2.35; Orange Cling, $2.03; Mebevit Cling $2.45; Phillips Cling $1.70; Strawberry Cling, $2.20; Lovell, $1.25.

Grapes: Tokay, $3.40; Malaga, $2.93 one lot selling up to $4.75; Malvoisie, $3.15; Thompson Seedless, $2.30 per crate.

Special Livestock Market Report

San Francisco, Sept. 1, 1920.

CATTLE—Quite a number of beef cattle of good quality are arriving from the ranges of Nevada at the present time, while the supply from California points seems to be slackening up. A heavier movement in this direction may be expected next month. The local market still shows a preference for low-priced stuff, though there is a limited demand for prime beeves at premium prices, for which the supply is adequate.

Steers, No. 1, 1000-1200 lbs. ..... 9½@10c
do, 1200-1400 ..... 9@9½c
do, 2nd quality ..... 7@8c
do, thin ..... 6@7c
Cows and Heifers, No. 1 ..... 8@8½c
do, 2nd quality ..... 6@7c
do, thin ..... 2@4c
Bulls and Stags, good ..... 4@5c
do, fair ..... 3@3½c
Calves, lightweight ..... 10@10½c
do, medium ..... 8@9c
do, heavy ..... 7@8c

HOGS—Receipts of hogs on the San Francisco market are not over-plentiful and many of these grade poorly, feeders letting go of their stock before it is properly finished. Points easterly are shipping freely this way on account of the low hog market at Eastern packing centers. With the exception of a slight advance in lightweights, quotations are stationary. The tone of the market is strong.

Hard, fat, grain-fed, 100-150 lbs. 15½c
do, 150-225 lbs. 16½c
do, 225-300 lbs. 16c
do, 300-400 lbs. 15c

SHEEP—The oversupply of lambs to this market continues, though there is not the demoralization felt here that characterizes the Eastern situation, where heavy arrivals of New Zealand and South American frozen carcasses has knocked calculations galley-west. A decline in our quotation of milk lambs is noted this week. Wethers and ewes just about hold their own.

Lambs, milk ..... 8½@9c
do, yearling ..... 7½@8c
Sheep, wethers ..... 7@7½c
do, ewes ..... 5½@6c

Los Angeles, Aug. 31, 1920.

CATTLE—Steers are still plentiful, and the market for them slow and weak. Cows are scarce, and good ones firm and in good demand.

Per cwt. f. o. b., Los Angeles:

Beef steers, 1000@1100 lbs. ..$8.50@10.00
Prime cows and heifers ..... $8.00@8.50
Good cows and heifers ..... $7.00@7.50
Canners ..... $4.50@5.00

HOGS—More coming in, and the tone of the market the past week was weak. The high prices drew some hogs in from the Central West. But while buyers were more independent, sales were not actually lower of good hogs. The tendency of the market however was downward in sympathy with markets East.

Per cwt. f. o. b. Los Angeles.

Heavy, average 275@350 lbs. $12.00@12.50
do, 225@275 lbs ..... $14.00@14.50
Light ..... $15.50@16.50
Rough docked 20 lbs. piggy sows 40 lbs. and stags, 40 per cent.

SHEEP—Plenty of sheep and lambs coming in, and no demand for ewes and wethers. Lambs however, were in very good demand at quotations.

Prime wethers ..... $6.00@7.00
Yearlings ..... $6.00@7.00
Prime ewes ..... $5.00@6.00
Lambs ..... $8.00@10.00

Portland, Ore., August 30.

Cattle steady; receipts 2013; choice grass steers, $9.50@$10.50; good to choice $8.50@9.50; medium to good, $7.50@8.50; fair to good, $7.00@7.50; common to fair, $6.00@7.00; choice cows and heifers, $7.25@8.00; good to choice, $6.25@7.25; medium to good, $5.25 to $6.25; fair to medium, $4.25 to $5.25; canners, $2.75 to $4.25; bulls $5.00 to $6.00; choice dairy calves, $13.00@$15.50; prime light $11.00@$13.00; medium, $9.00 to $11.00; heavy, $7.00@$9.00; best feeders, $6.50@$7.00; fair to good, $5.50@$650.

Hogs steady; receipts 695; prime mixed, $16.50@$17.00; medium, $16.00@$16.50; smooth heavy, $13.00@$15.00; rough, $10.00 to $13.00; pigs, $12.00@$15.00.

LOS ANGELES

Los Angeles, Aug. 31, 1920

BUTTER.

A fairly active and advancing market was had the past week. In sympathy with an advancing market in San Francisco and firm markets East, extras were bid up 2 cents the early part of our review week, and there was very good buying by the consuming trade at this improvement. And in the face of better receipts. Arrivals for the week 273,100 pounds. We quote.

California extra creamery 63
California prime first 61c
California first 60c

EGGS.

There was a further advance in this market the past week and a good demand for what eggs are coming in. Receipts by rail for the week 648 cases against 471 cases the week before. While the higher prices brought in a few more eggs the supply of fresh eggs was not equal to the demand, and cold storage stock had to be drawn on to help out.

Fresh ranch, extra 61c
do, case count 58c
do, pullets 52c

POULTRY.

Receipts were not so good the past week, and the tone of the market was firmer. Broilers were in light supply and good demand at full quotations. Fryers in fair demand and steady. Light and medium hens were slow of sale and market for them weak. Heavy hens in good demand and steady. But few turkeys coming in, with demand good for what are arriving. Ducks continue slow of sale and the market for them is weak.

Geese not wanted

Broilers 1 to 1½ lbs. 31c
do, 1½ to 1¾ lbs. 34c
Fryers, 2 to 3 lbs 32c
Hens ..... 25@32c
Roosters (soft bone), 3 lbs and up 28c
Ducks ..... 17@20c
Turkeys ..... 40@41c
Geese 25c

VEGETABLES.

Offerings not so good the past week and tone of the market is firmer. All choice offerings found ready sale, but poor and off stock is slow of sale. String beans scarce and strongly higher. Lima beans also brought a little more money. Cucumbers and summer squash were also higher under the influence of lighter offerings and are in good demand. Peas were steady and higher, and so was good corn, and both in good demand.

Potatoes, local, cwt ..... $1.90@2.00
do, Northern, cwt 2.00
Onions, Stockton, white cwt ..... 1.90@2.00
do, yellow cwt. ..... 1.90@2.00
do, local crate ..... 60@75c
Lettuce, crate ..... $1.25@1.50
Rhubarb, per 30-lb. box ..... 50@1.00
Peas, lb. ..... 12@13
Carrots, doz bunches ..... 30@35
Summer Squash, local, lug ..... 1.00@1.20
String beans, green, lb. ..... 10@12
do, wax, lb. ..... 10@12
do, Kentucky, lb. ..... 15@17
Cucumbers, lug ..... 50@75
Tomatoes, home-grown, No 1 lug ..... 50@60
do, No 2 ..... 25@35c
Bell peppers, lb. ..... 3@4c
do, Chile, lb. ..... 4@5c

FRUITS.

There is little new to note in this market from a week ago. Choice and fancy offerings in good demand, and prices generally steady, but few changes to note. Grapes are coming in more so and the market is lower, but demand very good at the decline. Plums are all unchanged and selling very well.

Plums, Santa Rosa, lb. ..... 8@9c
do, Satsuma ..... 7@10c
do, Black Dimond, lb. ..... 8@10c
do, Burbank, lb ..... 5@6c
Nectarines, lb ..... 7@8c
Peaches, Freestones, lb. ..... 5@6c
do, Clings, lb. ..... 5@7c
Figs, lb. ..... 7@12c
Crabapples, lb ..... 4@5c
Grapes, Malaga, lb. ..... 6@7
do, Muscat, lb. ..... 5@6
do, Thompson Seedless, lb ..... 7@8
do, Black Hamburg, lb ..... 6@9
Tokays, lb ..... 9@10
Apples, Red & Wh Asteakhan, bx $2.25@2.50
do, Skinner's Seedlings, packed box ..... $2.00@2.50
do, Gravensteins, packed box $2.00@2.50
do, Bellflowers, 4 tier ..... 1.85@2.00
Pears, Northern, lb ..... 4@9c

MELONS.

Market very well supplied the past week and demand fair for all choice and fancy stock. Cantaloupes a little higher under a slight falling off in the receipts.

Home-grown Tip-top, stand ..... $1.00@1.50
do, Rocky Ford, standard ..... $1.15@1.50
do, Pineapple standard ..... $1.00@1.50
do, Paul Rose, standard ..... $1.15@1.20
Honey Dew and stand crate ..... 1.00@1.25
Casabas, lb. ..... 1½@4c
Watermelons, lb ..... ¾@1c

BEANS.

The past week was another very dull one in this market. There was nothing doing whatever. Prices are still quoted steady and when business is resumed with the marketing of the new crop it is expected to be done at present quotations. The new crop is said to be short and growers will evidently be firm in their views.

Limas, per cwt $10.00
Large white, per cwt ..... $5.25@5.50
Small white, per cwt ..... $5.25@5.50

HAY.

A steady and fairly active market was had the past week for all choice offerings. Receipts were light and buyers took hold more willingly. Alfalfa and grain hay both meeting with a better demand than for some little time. There was no disposition to advance prices, however, as the supply of hay in the country is said to be pretty good.

MARKET COMMENT.

Grapes Moving by Trainloads.

In our last issue we stated that grape shipments would greatly increase, and by the present time, it was predicted, daily shipments would reach the 200 carload mark. We now find that we greatly undershot the mark; on Saturday, 28, there were 291 carloads of wine and table grapes shipped from all grape districts of California, by refrigerator freight and express. Up to the present time the Eastern markets are standing up well, under comparatively heavy arrivals. However, it is now a question as to the effect these extreme heavy arrivals will have on the markets. Fortunately, however, the major portion of the shipments are of the wine grape variety. Now, to what extent they may serve as table grapes, we judge, will depend largely upon the interpretation of the Volstead act, by the purchaser of that variety of grape. Should the interpretation be broad, consumption at the table—in the fresh state—will be materially lessened, which of course will add greatly to the value of the Flaming Tokay, Malaga, Muscat, Emperor, Cornichon, Thompson Seedless, etc., known to be standard table grapes. The last decision rendered by John F. Cramer, Prohibition Commissioner, has revived the "kick" in the supposed dead wine grape, so much so that prices for wine grapes have gone over the top, and as to whether they have reached the peak, we have been advised, depends somewhat on transportation facilities.

Cantaloupe Shipments Prohibited.

The new freight tariff, that went into effect August 26, put the "kibosh" on cantaloupe shipments. We learn from reliable sources that when this order went into effect there were 2,000 carloads of fancy cantaloupes in the fields in the Sutter Basin and the territory between Fresno and Lathrop, Turlock being by far the largest shipping point. The following figures will show what the grower was up against. Picking and packing a standard crate of cantaloupes 30 cents, cost of crate 30 cents, hauling 5 cents, shipping and selling charge 15 cents, making a total of 80 cents. Add to this a freight charge to Chicago and other Middle Eastern markets, $1.11, and the total is $1.91. Under the new tariff the rate from Turlock to Chicago will be $1.42 per crate. Add the 80 cents home charges and we have $2.22 that a crate of cantaloupes must sell for in Chicago before the producer receives one penny. The new tariff rate to New York City is $1.87; add 80 cents, which totals $2.67 that a crate must sell for in New York City before the grower receives a sou. Under ordinary Eastern market conditions such figures will make the production of cantaloupes in California absolutely prohibitive.

Bartlett Pears About Done.

But for the remaining few cars of Bartlett Pears in the foothill districts, Tehachapi, Lancaster and Little Rock, the season would be at an end, and it may be aptly put the close of a perfect season as far as prices are concerned. When the Pioneer Fruit Company sold a carload of Tehachapi Bartlett Pears in Philadelphia, September 24, 1918, at an average of $5.60 per box, we had the entire population of Tehachapi, Piute squaw pear packers included, doing the jazz act. But this season, barring a temporary slump, the car that sold at figures below that called for an explanation from the concern who shipped it. This season's prices will go down into history. Even at the present time Bartletts of inferior quality from valley shipping districts are selling at record prices, and we expect to hear of something exceptional from the late mountain shipments.

Plum Shipments Over.

The plum is practically in the discard as far as shipments to Eastern markets are concerned. Daily shipments are reduced to two to five carloads, practically all of which is going from the foothill districts. This will go down into history as one, if not the greatest, seasons experienced by the California plum shippers, not from point of tonnage, but prices realized. We have been in the game a few summers, but fail to recall a season that would hardly come in for "second money" in a race with this one.

CALIFORNIA FARM BUREAU MARKETING ASSOCIATION.

Report of Sales.

The following shows the number of hogs sold, the average weight, price, and buyer:

Tulare, August 24—94; 186; $15.75; Joe D. Biddle. 75; 202; $15.55; Virden Packing Company. 30; 187; $15.00; Patterson. 93; 1633; $14.75; Holiday Bros. 3; 323; $14.05; Virden Packing Co. 36; 136; $14.00; Patterson. 2; 163; $14.75; Holiday Bros. 12 332; $12.00; Patterson. 20; 239; $11.00; Holiday Bros. Four cars, 23 consignors.

Visalia, August 24—80; 208; $15.75; E. B. Miller. 71; 182; $15.05; E. B. Miller. 1; 300; $14.05; E. B. Miller 7; 298; $13.05; E. B. Miller. 32; 141; $12.55; E. B. Miller. 8; 92; $11.55; E. B. Miller. 20; 96; $8.00; Burke & Wimp. Two cars, 10 consignors.

Hanford, August 26.—93; 187; $15.70; Joe D. Biddle. 55; 196; $15.05; E. B. Miller. 78; 145; $15.05; Joe D. Biddle. 63; 269; $13.00; Joe D. Biddle. Three cars, 24 consignors.

Classified Advertisements.

Rate, 4c. per word. Cash must accompany all orders.

COUNTRY LANDS.

ORANGE GROVE BUNGALOW FARM, 21 Acres, Equipped, $3500.

On good road, near city; 19 acres under productive cultivation borders lake; orange grove, grapefruit, pears, plums, figs, grapes, guavas, all bearing; good 7-room bungalow, 3 piazzas; barn, poultry house, magnificent lawn, shrubbery, rose bushes, oak and magnolia shade; owner retiring; includes horse, wagon, machinery, tools; quick-action price only $3,500, easy terms. Details page 35, Strout's New Illustrated Catalog Semi-tropical Orange Groves and Farms. Copy free STROUT FARM AGENCY, 503 F. A. Wright-Callender Bldg., Los Angeles, Calif.

FOR SALE—5 acres almonds, full bearing, with crop. Water right in Clark Colony Water Company and Greenfield Water Company fully paid up. Price $3,000 if sold at once. Address, F. J. Greer, Owner, Greenfield, Calif.

IN THE HEART OF CALIFORNIA. 560 acres in Sacramento Co., 18 miles from Capital. This is level, deep, red, with some high well drained adobe. No shallow bedrock soil. Has been used for grain and general farming by present owner for 40 years. Will grow any kind of fruit, nuts or grapes and the best of alfalfa with little leveling. Water 16 ft. from surface. This land will stand the acid test. Finely located for subdivision. Price $100 per acre. Eben B. Owen, Elk Grove, Sacramento Co., Cal.

FOR SALE—116 acres on Cow Creek, 102 inches gravity water for irrigation; 90 acres under cultivation, 35 acres in alfalfa, some fruit trees; 2 acres in full-bearing olive trees. 7-room farm house, large dairy barn, electric lighted. Situated 11 miles from Redding, 1½ miles from store and postoffice; near school. $2500 down, balance on easy terms. Address owner, E. C. Waters, Olinda, Shasta county, Cal.

FOR SALE—40 acres—10-year-old orchard, 4 in apricots, 10 in almonds and balance in summer fallow. Three-fourths mile from highway on the Turlock Main Canal. For particulars, inquire, G. W. Bowles, Hickman, Cal.

FOR SALE—in Lake County, 28 acre fruit and grain ranch; 11 acres in orchard, 1100 pear trees, some peaches, prunes and black walnuts. Box 422, Lakeport, Calif.

MISCELLANEOUS.

BIG MONEY AND FAST SALES—Every owner buys Gold Initials for his auto. You charge $1.50; make $1.35. Ten orders a day easy. Write for particulars and free samples. American Monogram Co., Dept. 111, Glen Ridge, N. J.

REMANUFACTURED PIPE

All sizes standard pipe and wrought iron screw casing. All kinds of fittings. Guaranteed good as new. Write for prices. Weissbaum Pipe Works, 160 Eleventh street, San Francisco.

FOR SALE—One 20 horsepower International gas engine with friction clutch pulley and 50-foot 10-inch belt. Just overhauled, in excellent condition. Box 367, Visalia, Calif.

30 H.P. SAMSON TRACTOR, Model X Practictlly new. H. G. Stevenson, Jr., Winters.

AT LAST! Farmers' account book that shows exact profit or loss and whether liable for income tax. Postpaid $5.00. M. W. Dunnigan, with Houghton Mifflin Co., 278 Post St., San Francisco, Cal.

RELIABLE CABBAGE SEEDS—I grow them. You want them. Let's get together. Write for special offer on what you need. Isaac F. Tillinghast, 32 Podel St., Santa Rosa, Calif.

WANTED—Position as manager of large ranch. Experienced in fruit, vineyards, sheep, grain and general farming. Lawrence Haven, 52 North Morrison Ave., San Jose, Cal.

ALL SIZES OF PIPE and screw casing, both new and second-hand, dipped and undipped. Guaranteed. Prices right. Shecter Pipe Works, 304 Howard St., San Francisco.

AGENTS — Mason sold 18 Sprayers and Autowashers one Saturday; profits, $2.50 each. Square deal. Particulars free. Rusler Company, Johnstown, Ohio.

FOR SALE—3000 apple boxes, 3000 orange boxes. Have been used once. In good condition. Farmers' Sales Agency, 901 35th Ave., Oakland, Cal.

WANTED — Salesman capable of earning $250-$350 a month selling groceries wholesale to farmers (commission). Read "Mary's Man Wins," page 310.

CROLEY'S BALANCED HOG FEED—The cheapest feed to fatten hogs. Write Geo. H. Croley, Townsend St., San Francisco, Calif.

FOR SALE — Mariout Barley Seed—clean and good quality, weighing over 100 lbs. per sack. J. D. Rowe & Sons, Davis.

FOR SALE—3 John Deere Corn Binders, with truck attachment and one Husker and Shredder. Webber Bros., Byron.

APPLES FROM GROWER. Bellflowers. Bulk pack. $1.50 per box. Edward A. Hall, R. 1, Box 39, Watsonville, Cal.

CARRUTHERS FARMS, LIVE OAK, CAL-fornia. Shorthorn cattle and Berkshire swine of quality and select breeding.

RANGE FOR TURKEY RAISING. Unlimited range as well as feed. Good terms. John G. Mese, St. Helena, Calif.

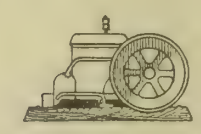
SHEEPMEN—I will pasture and care for your rams. A. Esparcia, Felix, Calif.

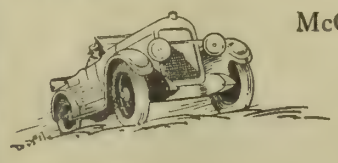
Mariout Barley

HIGHEST QUALITY GOOD CLEAN SEED FROM TESTED, HEAVY YIELDING STOCK.

H. G. STEVENSON, JR. WINTERS, CAL.

Renew the Power of your Engines for next Season





After a season's hard work most gas engines need new piston rings. They wear out just like any other moving part.

Worn or imperfect piston rings not only waste fuel by allowing it to leak past them—but waste power, which is more important. The gas that leaks past poor piston rings can never be power.

Examine your piston rings now. If you need new ones—buy McQuay-Norris LEAK-PROOF Piston Rings—which have increased gas engine power, saved fuel and oil and decreased carbon for ten years.

Your dealer has these genuine, time-tested rings or can get you proper sizes promptly from his jobber's complete stock. Made in every size and oversize for every make and model of gas engine.

Write for this Booklet →

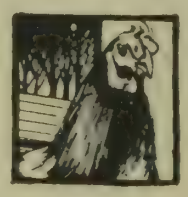
which explains why worn or imperfectly designed piston rings waste power and money. Address Dept. AL

McQuay-Norris Mfg. Co., St. Louis, U. S. A.

A special ring for top piston grooves of engines that pump oil. In lower grooves always use McQuay-Norris LEAK-PROOF Piston Rings for complete compression—power.

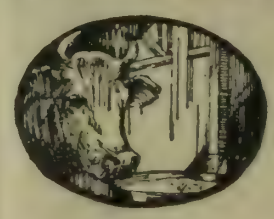
8

SURELAY



"The hens that PAY are the hens that LAY"

SUREMILK



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SPERRY BABY CHICK FEED

All the food values Nature intended a growing chick to have

Stock and Poultry Feed Dept. SPERRY FLOUR CO. San Francisco Cal.

In the Yellow-Striped Sacks

VOL. C—No. 11 Fiftieth Year

THE PACIFIC RURAL PRESS

SAN FRANCISCO SEPTEMBER 11, 1920 LOS ANGELES

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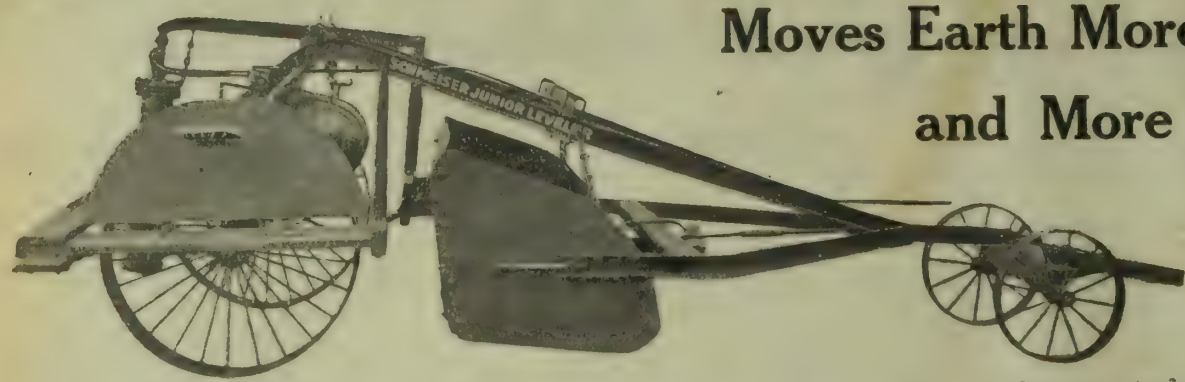
COMPLETELY MOTORIZED RANCHES are increasing. The photos above, taken on the ranch of Malmsbury and Shreve, show all the power required on a grain ranch except an automobile. The 60-horsepower tractor turns the 24-foot harvester on square corners, with no waste motion, in Baart wheat shoulder-high, cutting an average of fifty acres per day. The motor-truck and trailer haul 115 sacks, totaling about seven and a half tons per load, making four trips per day, six miles, to Red Bluff. You might make money by motorizing your farm more or less completely. You can learn a lot about it by attending the State Fair Power on the Farm Exhibit now on at Sacramento, or the First National Tractor and Implement Show, at Glendale, near Los Angeles, September 20 to 26.

Schmeiser Land Levelers

Moves Earth More Efficiently and More Economically



With the Schmeiser Land Leveler and your tractor, you can move earth at a cost of 10 to 25 cents per cubic yard, where the same work with Fresnos and horses would cost from 40 to 50 cents per cubic yard.

This saving is effected through the increased speed of operation and the minimizing of operating costs, a Schmeiser Giant Land Leveler with a capacity of 4.35 cubic yards of earth equalling the capacities of nine Fresnos.

In addition, the Schmeiser Land Leveler dumps its load and levels the surface in one operation, pulverizes the soil and settles the fill each time it unloads and will work on ground so hard and rough that it is impossible for a Fresno and horses.

There's a Schmeiser Land Leveler for every size tractor. The 8, 10, and 12-foot sizes are operated by compressed air and are suitable for any tractor developing from 35 to 120 H. P.

The Schmeiser Baby Land Leveler, as illustrated below, is made with a 5, 6 or 7-foot bucket, and is especially designed for all small tractors. It is operated either by the tractor driver or by an operator on the Leveler, and will move more earth in a day than three Fresnos.

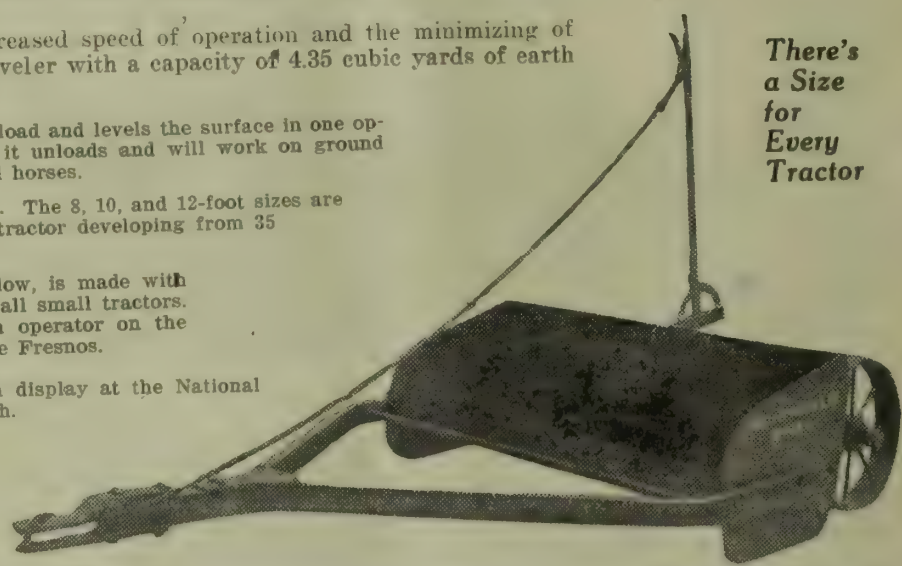
A full line of Schmeiser Land Levelers will be on display at the National Tractor Show at Los Angeles, September 20th to 26th.

WRITE TODAY FOR DESCRIPTIVE FOLDER A.

SCHMEISER MANUFACTURING COMPANY

AGRICULTURAL IMPLEMENTS

There's a Size for Every Tractor



THE WORLD'S BEST BUILT TRACTOR

THE

STUTES-MAR

ROLLER TREAD

GIANT
For Strength

MIDGET
For Size

May be Seen at the

NATIONAL TRACTOR & IMPLEMENT SHOW

Los Angeles--September 20-26

Stutes-Mar Tractor Co.

General Office, San Jose, Cal.

San Francisco Office:
75 FREMONT ST.

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SUNNYVALE, CAL

HORTICULTURAL JOTTINGS.

Bud trees whenever the bark slips, until about the middle of September.

There are now fifty-nine contestants entered in the Farm Bureau contest in Sutter county.

H. A. Walton and sons of Tudor, Sutter county, are processing 100 tons of grapes a day and placing them on the dry yard.

Sanger is reported as one of the busiest shipping points in the San Joaquin valley. Every fruit-packing plant is running on full time.

The prune packing houses in the Santa Clara Valley have been working at top speed filling orders for shipment during September.

Refrigerator-car shortage is beginning to cause uneasiness among the fruit shippers in the grape districts throughout the San Joaquin valley.

The drying plant of H. A. Walton & Sons Co. of Tudor has been processing about 100 tons of grapes a day and placing them in the dry-yards.

Livermore valley vineyardists report that there will be about half a crop of grapes in the valley this season. This shortage is due almost entirely to lack of moisture.

Irrigation now, with heavy-bearing apple trees and late pears is good for this year's crop; and, better, it will greatly aid next year's crop by strengthening the fruit buds.

Eighteen tons of almonds were hauled to the warehouse of the Sutter Almond Growers' Association on the first day the warehouse opened for this season's business.

Sutter county is not satisfied with producing the greatest tonnage per acre of cling peaches, but now comes forward with a muskmelon that weighs 37 pounds. What next?

Wylie M. Giffen, president of the California Associated Raisin Company, has purchased 4,000 acres of land known as the Allen land near Mendota. The land is unimproved.

Around three-quarters of a million dollars will be the value of the peaches, apricots and tomatoes packed by the Consolidated Canneries of California at their Porterville plant this season.

The California Associated Raisin Company have increased the salaries of the employees of the company who have been with them upward of one year. This increase will average from 15 to 20 per cent.

O. Johnson, who was employed in an orchard north of Yuba City, has made what is believed to be a record in picking peaches. He picked 105 boxes of Phillips, or about two tons, in 5½ hours.

B. B. Mack, speaking at a meeting of the stockholders of the Mt. Ida Packing Company recently, made the statement that more California ripe olives have been eaten in the United States during the past thirty days than in the past six months.

It is announced that the new $21,000 plant being erected at Santa Clara will be completed in time to handle the walnut crop of the valley this season. The association is planning to build several additions to the plant, each with a capacity of 500 tons.

G. H. Hecke, Director of Agriculture, invited the fruit men of the State for a conference at the State Fair grounds Friday, September 10, to discuss with the growers problems in connection with preparation, handling and marketing of their products.

An Exeter vineyardist reports disposition of his raisin crop from a five-acre four-year-old vineyard of grapes that produced 15 tons of raisins, for which he received from Rosenberg Bros. a price of 24 cents a pound, aggregating a total return of $7,200.

The excess of fruit shipments from the Fresno district this year over those of last year is more than 1000 cars. Shippers are experiencing difficulty because of great quantities of wine grapes and the consequent shortage of cars for the shipment of table grapes.

The Valley Fruit Growers' Association have named basic prices for picking grapes, based on a 22-pound tray, on 4½ cents for Muscats and 4 cents for Thompsons. Ton rates for Muscats is $27, and for Thompsons $25. This represents an increase of about ½ cent per tray over last year's price.

California Peach Growers, Inc., announce that they will complete the merger of the peach and fig industries by January 1, 1921. The concern will be known as the California Peach and Fig Growers, with the same officers as at present. Steps are being taken to increase the capitalization from $1,000,000 to $3,000,000.

In order to refinance the Valley Fruit Growers' Association and make possible the addition of many community labor camps a drive among the members to raise $6,000 has been inaugurated. This is an organization of orchardists and vineyardists, maintaining employment offices to handle the seasonal labor problem.

Estimates which placed the 1920 California prune crop from 180,000,000 to 200,000,000 pounds still are holding good, and unless bad weather interferes with the fruit drying the next few weeks this year's crop will total close to 200,000,000 pounds in comparison with the 1919 crop of 250,000,000, the largest ever grown in the history of the industry.

In the interest of more and better fruit, the orange tree is to submit its family record for expert scrutiny. Through these experiments there will be developed a system of "tree eugenics." G. Harold Powell, General Manager of the California Fruit Growers Exchange, believes that the plan is one of the most important ever considered by citrus growers, and that with it the industry will make immeasurable strides during the next few years.

Through the efforts of H. P. Stabler, Horticultural Commissioner of Sutter county, there will be established a Sutter County Weather Bureau for the benefit of the fruit growers, and especially to aid those who are drying their fruit by the sun process. Mr. Stabler will get his information from the commissioners to the north and south of Sutter of the approach of a storm. He will then relay the information to the farmers throughout the district.

Not to be outdone by slow freight and premature decay, Dalton Cross of Turlock has devised a plan to ship cantaloupes to Eastern cities by spraying the melons with sulphuric acid, and then packing them in excelsior. This prevents decay in transit. Many shipments have gone through, arriving in a satisfactory condition. This may yet work wonders by changing the method of preservation from ice to acid.

Where is the kick? If any, it must be in the price. We have before us a report issued by the Connecticut Agricultural Experiment Station, in which it is stated: "Six samples of wine were examined, chiefly for alcohol content in connection with suspected illegal sales of alcoholic liquors. One of these, which was sold at the rate of $70.00 per gallon, contains only 0.47 per cent of alcohol by volume. Another sample was artificially colored with amaranth."

AGRICULTURAL NOTES.

The sixth cutting of alfalfa was put up in August by Carl Iverson of Los Angeles County.

Stanislaus County will produce 105,000 sacks of rice this year on 3,500 acres, valued at over $500,000.

In 1860 the Hawaiian Islands produced 500 tons of sugar; this year's output will approximate 600,000 tons.

Blackeye beans were contracted at 6 cents per pound this summer by C. G. Page of San Bernardino County.

At the Fresno District Fair, which opens September 27, there will be about 170 exhibitors, about double the number in 1919.

The sweet potato season about Turlock opened last week. It is expected that the price will be 3 or 3½ cents to the grower.

The Tipton-Porterville-Lindsay District shipped from that territory last season only 15 carloads, against 100 carloads up to the present time this season.

Fire destroyed the gin of the Independent Cotton Company of Calexico last week. The loss was $20,000, which represented the building, machinery and a quantity of cotton.

It is no use to bury sandburs deep according to W. W. Hitchcock of Kern County. If they are turned up near the surface five years later they will grow. The sure way is to burn them.

Between $25,000 and $35,000 has been subscribed by the Wasco, Kern county, cotton growers, for the purchase of a cotton gin, which will be equipped to gin long staple cotton this year.

The cotton production for the United States this year has been forecast at 12,783,000 bales by the Department of Agriculture, which based its estimate on the condition of the crop on August 25, which was announced as 67.5 per cent of normal.

The members of the National Farm Bureau Federation party who came to California to investigate co-operative marketing, ended their two weeks' tour of the State last week. They left Sacramento for Portland, Or. Members of the party have secured an understanding of the basic principles of co-operation as applied to California products. It is their purpose to work from these ideas a plan for marketing grain and other farm staples, said John G. Brown, chairman of the party.

The Wise Grower
Is Ordering His Trees NOW

Owing to the shortage of Nursery Stock the only sure way to insure delivery of the trees you want is to order right now. We can still accept orders for almost all standard varieties of fruit, with the exception of Apricots, on which we can fill orders of only very limited size.

WRITE FOR PRICE LIST.

Elmer Bros. Nursery

"The Nursery That Helped to make Santa Clara Valley Famous."

76 So. Market St., SAN JOSE, CALIF.

Order your TREES now

MAKE SURE NEXT SEASON'S PLANTING
MANY VARIETIES WILL BE SCARCE

Orders Booked Now Will Be Given Preference

WE ARE ALWAYS PLEASED TO ANSWER QUESTIONS REGARDING BEST VARIETIES TO GROW, SOIL, IRRIGATION, PRUNING, ETC.

ROEDING TRUE TREES FRESNO, CAL.

FANCHER CREEK NURSERIES
FRESNO, CALIFORNIA

Mariout Barley

HIGHEST QUALITY GOOD CLEAN SEED FROM TESTED, HEAVY YIELDING STOCK.

H. G. STEVENSON, JR. WINTERS, CAL.

Hydes "Banner" Strawberry Plants

Original strain from stock holding the World's Record for production.

35,000 Pounds Per Acre, 1919 Crop.

16 years' experience in supplying the most successful growers insures the quality of our stock.

We also offer select strains—NICK OHMER, NEW OREGON, MARSHALL, KLONDIKE, MAGOON.
Clean, Vigorous, Properly Grown Plants.

Write or Wire.

H. A. HYDE CO., Watsonville, Calif.

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W. H. SCHRADER - - Advertising Manager

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THOS. F. McCONNELL - - Livestock
RALPH NEWMAN - - - - - Dairy

EDITORIAL

PARITY IN POLITICS

THE first charge made against us by our subscriber, whose letter we printed last week, was that we used several columns of "almost unbearable" badness to answer five words of truth. Fortunately that is a crime for which it is easy to "do works meet for repentance." It is simply a mathematical problem, and so we propose to divide the editorial space in this issue equally between our readers and ourselves. Of course, if, in the space occupied by our readers' editorials, there should be commendation of our past editorial behavior, we are no more to blame for that than Uncle Sam is if the deacon's barrel of sweet cider gets up a kick of its own after it is rolled into the cellar. Surely our reader will not take back his dollar because other readers impose upon his patience. So, here goes for equality of editorial space between our readers and ourselves.

My Dear Editor: In your comments on mv modest tender of what abilities I have to help place a farmer at the top, you read into my communication a meaning that was not intended by me. I had no thought of method of reaching such a goal; and certainly it is not for me to "start out after candidates like a greyhound after a jack-rabbit," or in any other manner, save as was suggested in my former letter. "You have started something; may we help finish it?" All ambition politically I have is to help good, able farmers to office, provided such farmers may be found; and the thought I had in my former letter was that such men as named could qualify without doubt; and really, since you made the progressive suggestion of seven commandments as a guide to the desired end, it occurs to me that there are men whose lives and capacities are commandments, or platforms personified, and my suggestion is that the farmers capture the organizations of both great parties and direct the ship of state, and dominate the civic affairs completely. To this sort of a crusade I would like to subscribe, and help (not do) the job; and whether it is your way, the farmers' way, or our way, I find myself just where I was at the beginning, with a desire to help.—W. W. H., Fair Oaks.

We are glad our Fair Oaks reader-editor was not thrown off the scent by our suggestion that he was in danger of exalting personality over principle in the time-honored political way. We are sure that he is right that men can be found whose lives embody the principles which should be politically enforced in this country. Our point simply is that emphasis enough should first be placed on principles, so that farmers can see to what they can agree as essential to well-being and justice in this country; and settle that before the detractions and side-issues of personality are allowed to intrude. We may be impracticable in this belief but we have a conviction that if attention enough is given to discussion of principles of absolute and relative rights in farmers' organizations there will be revealed in such discussion men and women who will justify our associate's anticipation of individuals to hold office "whose lives and capacities are commandments." Therefore we expect that candidates will grow out of revelation of principles and that principles will not need to be forced into candidates as at present. For there seems to have arisen in this country an "irrepressible conflict" of principles—in a way like that which arose sixty years ago, and that which is radically right must contend with that which is radically wrong. It is capable of being fought out by ballots if the people can be made to understand that they are voting for what they believe to be right and against what they believe to be wrong and that they vote for Jones and against Smith for that reason and for no other. If they do that we do not care how they do it.

FIFTY-FIFTY IN FINANCE.

To the Editor: Almost half a billion dollars of loans have been made to American farmers under the Federal Farm Loan Act in the three years the land banks have been in operation. Inasmuch as the Farm Loan Act has been assailed in the courts, and is an object of attack by its enemies in Congress, you and your readers may be interested to know just what has been accomplished under this act in behalf of the farmer. The total of loans made by the Joint Stock Land Banks is eighty-one millions. The total made by the Federal Land Banks is three hundred and forty-four millions—making the total cited above. We hope for your co-operation in preserving the integrity of the Federal Farm Loan Act.—W. W. P., Washington, D. C.

Our Washington reader-editor helps greatly to enforce the claim that we made last week that farmers should wake up to what may need to be done to save their direct trade in money from the financial middlemen who are trying to destroy it. Members of Farm Loan Associations who are handy at figures can perhaps calculate how much it would have cost them as borrowers to get that half-billion dollars placed to their credit if they had been forced to get it in the old way of fees, commissions and high interest. But we have another reader-editor of the national capital, viz.:

To the Editor: I am sending you a statement by the Farm Loan Board. Believing that it contains matters of interest to many of your readers, and thinking it possibly may escape your notice, I send it to you for such use as you may desire to make of it.—W. H. J., Washington, D. C.

And indeed a very interesting question does arise as to what use we shall make of this statement, in view of the editorial reform which we are introducing this week. Shall we run it into our reader's editorial to swell out his half and thus get a lot of space in which we may indulge ourselves in the "almost unbearable" to an equal extent? No, indeed; we shall be generous rather than just and give of our own space to the statement. It seems that the Farm Loan Board is being assailed by the claim, on the part of the old line of money changers, that the farm loan banks are "busted"—than which there is nothing worse to say about a bank. The fact is, however, not only that the farm loan banks have not "busted" but they cannot "bust." They do not depend upon current transactions. Their loans are made for a long term—mostly 34½ years. On these loans each bank has an annual income of from one-half to one per cent—regardless of new business. As the total amount of loans now in force is $344,475,709, their net earnings for the month of July—$257,000—were the largest for any month in their history—because, as their current business was stopped, they reduced their expenses and thus increased their net income. Dividends have been paid and will be paid as usual. So far as bondholders and stockholders are concerned, the banks are functioning normally.

But of course that is not all such banks are for. They are to continue making new loans to farmers as fast as people will buy their bonds. They cannot do that now because their enemy, old-line loan dealers, have thrown them into the soup-kettle of the Supreme Court. Therefore it is up to the farmers, as we showed last week, to elect a Congress which will cure the burns which the Supreme Court may inflict and start the banks off again upon their function of fair financing of farming.

'ALF-AND-'ALF ON THE TARIFF.

To the Editor: More than 50,000 pounds of European walnuts have been laid down in the Eastern markets during the last nine months, which is greater than previous importations in any twelve months. Owing to the terrific break in foreign exchange, Europeans are shoving practically all their walnuts into our markets because when the returns are changed into their money they get a good profit, though they are offering their walnuts at less than the actual cost of producing California walnuts. Unless a reasonable protective tariff is placed upon such importations, to offset Europe's ridiculously low cost of production and the advantage she gains by reason of her lower standard of living, the California walnut industry may suffer a long period of unprofitable production.—C. T., Los Angeles.

Yes, that is so sure that we could not make it surer in five columns of the "almost unbearable." And the worst of it is that it will be true of nearly all the special products upon which California depends for livelihood and development. Figs are much in the same fix right now and others might soon be if our Eastern friends had not learned to make home-made booze of them. If California lets any free-trader get to Congress this fall it may help to knock several industries flat, and if prohibitionists think that California products ought not to be protected because they are wrongly used they may only open the way for an incalculable amount of cheaper booze-timber from Europe. Surely every free-trade vote may have a kick in it this year.

THREE FOR ONE.

To the Editor: I have just been reading your valuable editorial in the Rural Press of August 21st, and heartily congratulate you on your comments on "American Citizenship" vs. a "Citizen of the Universe."—H. M., Davis Creek.

To the Editor: Just a word of appreciation of the wit and wisdom contained in your editorials. Then, too, your staff writers tell the truth about economic horticulture of this State, which is helpful to the fellow who has a consuming desire to locate within its borders and extract a living from the soil.—P. D. B., Los Angeles.

To the Editor: I like the Rural Press, but wish you could paste, sew or nail it so it would stay together, even if you had to double the price to do so.—E. B. H., Woodlake.

And so we start out after one dollar and get three—and one subscriber wants the paper nailed to him!

JOY OF LIFE IN CALIFORNIA.

Californians are properly ready to take high places in national and world affairs, partly from the delights of looking down from a high shelf, partly because they feel competent to function in high places. It is the duty of Californians to respond to calls of this kind, both to justify their personal claims to the satisfaction of it, and to secure for California recognition as a producer of masterful men and women. But Californians should remember, and the outside world should understand, that there is always an element of sacrifice involved in expatriation from California. This is not a matter of reasoning, but of personal feeling; it is not demonstrated by an argument, but by an exemplar. We have one. The world probably knows no Californian better than it knows the talented and charming Mary Pickford. And this is what the world says, by the pen of Horatio Bottomley, a leading London journalist and member of Parliament:

Mary Pickford is the Ambassadress of Sunshine to a warworn, weary world. And we sorely needed her. But having come, we must not let her go. I am proud to know that she is a daughter of our Canadian dominion, and, as such, she is eligible for a seat in the House of Commons. If only she would take it! How she would automatically remove the prejudice at present existing against women M. P.'s. Come, Mary; won't you join us? There is no seat you could not win.

And what does Mary say? Listen:

Being entitled "Ambassadress of Sunshine" is delightful! But that seat in Parliament! Really, I beg to be excused; not because I do not appreciate the honor; but think! I'd have to quit living in California!

Therefore, Horatio, you may worship from afar, but you cannot have our Mary. All distant desirabilities have to be measured in terms of absence from California, and do not often demonstrate the equivalent of it.

QUERIES AND REPLIES

By the Editor.

Inquirers Must Give Full Name and Address
Answered Questions also on other pages.

Pear Root-Aphis.

To the Editor: I have 12-year-old pear trees that are very sickly. The pears remain small and woody and do not ripen. The trees lose their leaves in August. The leaves remain small and curl up. In digging around the roots I find a white cotton-like deposit on the ground and on the small roots. Is this aphis? and is this the reason for the trees being sickly? What is the remedy?—Subscriber, Martinez.

Presumably it is woolly aphis. Some pears are quite subject to it. The Japanese root is less injured than the French seedling. The behavior of your trees is attributable to reduction of vigor by the aphis—assisted probably by lack of moisture and manure. It is just the time of the year for debility of the tree to manifest itself. Kill the aphis by removing the soil from over the main roots and soak the rooting soil with properly made soap and oil emulsion. The aphis can also be checked by spreading about ten gallons of wood ashes around the tree near the trunk. The rains will leach this down to the pests. We have practically cleared out the aphis from garden trees in this way.

Corn Ear-Worms.

To the Editor: Can you give me a remedy for worms in the corn? I think they are started by a green-and-black-spotted ladybug.—W. D. L., Palo Alto.

The "green lady bird" or diabrotica is bad enough, but it must not be blamed for the corn-ear worm, for it has nothing to do with it. The worm is the offspring of a grayish or brownish moth about an inch long. The offspring of the diabrotica feed underground on the roots of weeds, etc. There is no satisfactory treatment for the corn ear-worm. Some success is had by dusting the silk with lead-arsenate powder as soon as it appears. Also in garden practice ears can be saved by using a small hand oil-can with carbon bisulphide—squirting a little into the top of the ear when the silk has gone brown. The silk has then done its business of pollination and the worms are killed as they are beginning their work.

Famishing Loganberries.

To the Editor: My loganberries are dying, or drying up. There was only about half a crop of berries on them this year, although they looked healthy at first, with lots of blossoms on them. When the berries began to form the vines seemed to die or dry up. The ground is rich and well cultivated, but I have not watered them any at all. Do you think they need to be sprayed. Do they need to be irrigated?—J. L. H., Elk, Mendocino Co.

Surely they need water—this year, of course, more than ever, because even in your district the rain was too little to carry them through. This year's crop is probably gone, but you should put on some water as soon as possible to keep the plant from dying outright before fall rains come. You may have enough usually to carry these plants, but too little last winter. In most parts of the State they require irrigation—more or less, according to soil and rainfall.

Squash Bugs.

To the Editor: I have quite a large plot of Hubbard and Pike squash and have been doing nicely but have trouble with squash bugs killing the vines. How can I get rid of the bugs? I have been throwing air-slaked lime on the bugs, but that does not seem to affect them very much.—W. P., Los Molinos.

Add five per cent of black-leaf tobacco extract to the air-slaked lime; let it dry thoroughly and powder it and blow the dust forcibly upon the bug-colonies and you will be doing what now seems to be the best warfare on these very baffling bugs.

Hill-Sprouting Potatoes.

To the Editor: Kindly tell me the cause for potatoes putting sprouts from the new potatoes. My vines look well; the soil is good and there seems to be plenty of moisture, yet the potatoes all have sprouts on them. Should I dig them now? They were planted for late potatoes and are not matured as the skin slips on them.—C. E. V., Napa.

Sprouting of immature potatoes is due to some check to their regular development, followed by conditions which favor second growth. This is generally due to irrigation after the soil has been allowed to get so dry that growth was checked, but it can probably result from irregular sequence of natural conditions also. The tubers will probably get no better than they now are and may be a lot worse.

Sunburn, Borers or Drouth.

To the Editor: Almonds planted last February just before the rains, made two feet of growth, gummed just above the ground, and died. Water table, twelve feet down. Trees protected by yucca protectors.—J. J. M., Modesto.

To the Editor: Some of my 2-year-old apricot and prune trees have a kind of a thick glue which comes out of the tree near where the trees begin to branch, and also on the trunks of trees. what is the trouble and remedy?—J. W., Brentwood.

The trees are probably sunburned for lack of whitewashing or use of protectors in such a way that bark is not fully covered. There may also be borers at work as is usual in cases of sunburn. Cut in and look for borers and if you find burrows get into the end of them with a wire. There may however be gumming without sunburn or borers and it is then generally due to the fact that the soil has been kept too wet or, more likely, allowed to get too dry.

Dry Plowing Effects.

To the Editor: Does dry plowing wear the soil worse than wet plowing? Would foul seed interfere with wheat or barley on land dry plowed?—I. R. H., Millville.

Dry plowing is a rougher treatment and rather harder to get down to a good seed-bed, but we are not aware that bad effects of any kind result to the soil itself. Plowing when the soil works most easily leaves it in its best condition, but we would rather chance it dry than too wet. Weeds are apt to be worse on dry-plowed land if the crop is also dry-sown, because the crop has no start of them. Dry plowing, followed by harrow or disk after the weed seed has sprouted and then sown, gives the crop a better chance.

Roadside Dodder.

To the Editor: I planted the roadside with clean, home-grown alfalfa seed and got a good stand, but the dodder is showing in dozens of places. I wish to plant the whole eighty acres. Will the dodder damage the crop? Is there any way to kill it? It is full of blossoms now.—F. C. L., West Sacramento.

The roadside was probably sown with dodder seed which was shaken out of alfalfa hay which was hauled along the highway. Have a gasoline torch ready and burn up every plant which shows the start of it, or go out with a bundle of straw and burn it up that way. Do it just as you see the first sign of it, for it flowers and seeds quickly, first near the ground and then higher up. There is no safety for your field while you are growing dodder on the roadside.

Those Deadly August Days.

To the Editor: I see in your paper an inquiry in regard to killing poplar trees by O. W. M. There are three days in August to kill trees. They are in the dark of the moon when the "sign" is in the "heart." This does not occur every year. An almanac will tell when the sign is in the "heart" after the moon is full.—W. A. V., Clovis.

As we do not believe in signs, this is too much moonshine farming for us; however, as we are disposed to be liberal but not radical about signs as other things, we can sincerely say with the poet: "Them's as likes 'em can 'ave 'em."

Killing Wild Gourds.

To the Editor: I have gourd vines in my fields, with enormous roots and gourds the size of a tennis ball to a baseball. How can I get rid of these vines?—R. P. F., San Diego.

We know no way except to chop off the root-crowns pretty deeply to remove the whole sprouting top, or pour a half-pint of gasoline on the root-crown. Either way will take care of the future of the treated plants, but probably your land has seed enough to keep you busy for some time.

Pruning Currants.

To the Editor: Please tell me when and how currants should be pruned.—E. T., Briceland.

Prune in the winter for growth; removing weak wood, thinning out shoots to prevent the bush getting too bushy and cutting back about one-half new shoots which you wish to retain. It is a good idea to pinch tips after fruit gathering to develop low growth and escape long canes and straggling fruit clusters.

Distinguishing Roots.

To the Editor: Is there a way to determine the kind of roots certain nursery stock is worked on? For instance, could it be determined if peach trees were on almond root, peach root, or plum root?—J. A. R., Paso Robles.

There are differences in shades of color and in perience, but we are not able to tell in words how markings which one gets to recognize by ex- a beginner can be sure offhand. However, in the cases you mention the peach root is bitter, the almond is not; and the chances that you will get a peach on a plum root are so small in California that it is negligible. No experienced nurseryman grows peaches on plum roots in this State, though it is done in Europe.

Bean Thrips.

To the Editor: I am enclosing some leaves from a "Kentucky Wonder" bean vine. Can you tell me what pest killed them and what I can do to head him off next time? It seems to attack the early plantings of beans. Later plantings are not bothered at all.—E. H. H., Tuolumne.

It is bean thrips, a very minute transparent or whitish insect, with the general aspect of a "cootie," which silvers the leaves and covers the surface with innumerable black dots. Watch for them early in the season and spray from time to time with nicotine wash. Kentucky Wonders are quite subject to this pest. Possibly the later plantings come on between broods, however.

Redwood Posts in "White Rock."

To the Editor: I have to set redwood posts in white rock about five feet deep. The ground is dry and no alkali. Does this rock contain anything that might eat up the posts?.—P. D. Cordelia.

Presumably not, but the water which will collect in undrained holes to such tight stuff may hasten the rotting of the posts. We would bore holes just large enough to take the posts, and pour them full of liquid cement which will keep them firm and dry.

Storing Casabas.

To the Editor: At what stage should Casabas be stored? Many of mine are now straw yellow, but hardly ready for eating. My guess is that for keeping they should go under cover.—W. S., Walnut Creek.

Let them get fully matured but not shriveled, and then store in the shade of an open shed or building with open underpinning, and look out for rats.

Rooting Berry Tips and Canes.

To the Editor: When shall I lay down tips and bury canes for a number of plants of Logan and Mammoth berries?—E. E. R., Los Angeles.

You might have done it a month ago, but do it now, and there will be time to get rootings for next February's planting if the soil is moist enough to keep the plants active.

The Papaya.

To the Editor: Is it possible to grow the papaya in this section of California?—T. M., Durham.

It is unlikely. It requires exceedingly little frost, and besides it does not like the cool wet of our winter, even when it escapes frost injury.

Winter Growth of Rye.

To the Editor: Will rye make more and earlier green than barley if started with early fall rains or irrigation?—R. D. W., Colusa.

Yes; considerably better. It will make better use of scant moisture between rains and keep on better if the soil gets too wet.

CALIFORNIA WEATHER RECORD

The following rainfall and temperature record is furnished the Pacific Rural Press by the United States Department of Agriculture Weather Bureau at San Francisco for the week ending September 6, 1920:

Station—	Rainfall Past Week	Rainfall Seasonal To Date	Rainfall Normal To Date	Temperature Highest	Temperature Lowest
Eureka	.00	.60	.28	66	50
Red Bluff	.00	.31	.08	102	48
Sacramento	.00	.00	.03	102	52
San Francisco	.00	.00	.01	74	52
San Jose	.00	.00	.07	88	52
Fresno	.00	.00	.00	100	59
San Luis Obispo	.00	.00	.05	88	54
Los Angeles	.00	.00	.00	86	59
San Diego	.00	.00	.00	76	63
Winnemucca	.00	.66	.34	90	46
Reno	.00	.44	.42	92	46
Tonopah	.00	.94	.82	86	52

Finest Farm Power Exhibit at the State Fair.

Written for Pacific Rural Press by R. E. Hodges.

A rolling stone gathers no moss. But who wants to be a mossback? "Mossback" is a term properly applied to people who stay at home, mentally. The way dad did is good enough for them. The methods of old are the methods of gold for the mossback. The implements he already knows are more to be desired than the new fangled contraptions that he doesn't understand. Likewise the crops that dad grew on the same land were much more to be desired than those produced by the mossback son. Nature and humankind are changing, and he who adapts himself to the changes most promptly is the one who produces more valuable crops than moss. This merely leads up to the point we wish to make—only he who keeps himself posted on the progress being made by his fellowmen can hope to amount to much. Various ways of keeping posted might be mentioned, reading being the cheapest and most convenient, but not always adequate. Seeing is believing. Seeing is understanding. And seeing is remembering.

That is why the leaders of men in every State and nation frequently gather together the results of progress where they may see and believe and understand and remember and build for the future on the solid results of past effort. Those gatherings are called expositions or fairs. Without them, there would be less interchange of thought and more duplication of effort to accomplish results already accomplished by others unbeknownst to us.

Visitors Posted on Improvements.

In an industry of such universal and constant interest to every farmer as the design and manufacture of machinery by which he can do differently and better with less effort, it is especially necessary that he should keep himself posted on all improvements. In an industry so new and yet so promising as the tractor industry is to every farmer, there must be many changes. Many faulty designs are offered. Each new design may be ultimately called "standard equipment" or it may be discarded. The man who keeps himself posted on the progress of tractor design, plow design, motor trucks, pumps, farm electric lighting plants, seeding, cultivating, and harvesting machinery, gas engines, land levelers, dairy machinery, etc., he it is who is wisest to choose the designs that result in his farm being pointed out with pride by all the real estate men in his community.

Fortunate are those farmers who realized this enough to make whatever sacrifice was necessary to study the old and the new at the State Fair "Power on the Farm" exhibit, Sept. 4 to 12. Fortunate are those who, in studying, asked questions of the various attendants in charge of exhibits and discussed the new ideas with attendants of other exhibits; and fortunate are those who shall have taken time to absorb the full cafeteria course of instruction carried out all of the week following this writing (for our report must go to the printer after only the first day at the exhibit).

Machinery All Together.

The aviators who daily fly over the Power on the Farm exhibit see a quadrangle of tents with a comfortable open space in the center and a great variety of the largest tractors, stationary threshers and combined harvesters overflowing beyond one end of the quadrangle.

The Fair visitor watching aviators, parachuting fliers, and equine speedbreakers from the grandstand of the racetrack is compelled to notice the biggest tent west of Chicago, 600 feet along the near side of the quadrangle, with American flags tugging at their stations above the tent poles, and labels along the crest of the tent between them so big that everyone can read "Tractors, Electric Lighting, Lighting Plants, Pumps, Cultivators, Plows, Belting, Magnetos, Carbureters, Sprayers, Motor Trucks, Harvesters, Threshers," etc.

Approaching the quadrangle, the Fair visitor passes through an archway befitting the magnitude of this exhibit. Passing directly into the end of the tractor tent, a 600-foot vista of tractors and tractor implements, with a few motor trucks—it rivals the biggest circus he ever saw, not only in extent but in attractiveness of decorations. Yet the main business of the show is not obscured, the exhibits are there, almost too close together for comfort over that entire 60,000 square feet of floor space. No department of the entire State Fair of anything like the same magnitude was nearly ready at the opening moment, surely a great credit to the exhibitors and to the industriousness of Manager George Collins of the Power on the Farm Exhibit.

Many Farm Electric Plants.

The visitor might have turned slightly to the right for inspection of seven different farm electric plants now offered to California farmers, all set close together for comparison. At night this lineup is one of the most brilliant parts of the entire Fair. These exhibits also were all ready when the Fair gates first opened.

Passing the electric light plants, he would be disappointed at the very unrepresentative motor truck and trailer exhibit—high class what there is of it, but mostly not there. This is partly due to poor organization of motor truck dealers and partly to the fact that many of them are tractor dealers who prefer to have their trucks and tractors together in the tractor tent.

Cafeteria Instruction for Tractor Users.

One of the best features of the exhibit is in the next tent beyond the one intended for trucks. This is 70 feet square and railed off into compartments, each labeled with a big card, "Valve Grinding, Piston Ring Fitting, Ignition Trouble Finding, Carbureter Adjusting, Devices for Handling Low Grade Fuels, Bearing Fitting and Adjusting, Magneto Timing and Care." Each compartment has the right sort of equipment for illustration and one or two instructors to tell the best things they know on their subjects to all visitors who will stop, look, and listen. All classes proceed constantly as long as anyone cares to listen or ask questions, and you will be surprised at the new kinks the visitors pick up regardless of how long they have been performing the operations mentioned.

This tent is in charge of Prof. L. J. Fletcher of the Agricultural Engineering Division at University Farm. For helpers he has members of University Farm faculty and specialists, service men from the manufacturers or dealers handling the equipment discussed. We hope to elaborate some notes from these classes in other articles.

Big Concrete Sump for Pumps.

Completing this side of the quadrangle is another great tent in which a concrete sump has been installed about five feet wide, eight feet deep, and 130 feet long. This is filled with water for use of centrifugal, rotary, sprayer, and turbine pumps. Pump men were not so prompt with their exhibits as the tractor and implement men, so we can only say that more are expected.

One feature of this display is a splendid installation of newly marketed centrifugal pumps claimed to have 80 per cent efficiency. Another is a 300-gallon 300-pound pressure four-cylinder spray pump.

Dairy Supplies Absent.

The dairy supply people voted to stay out of the Fair this year, largely because the Fair directors decided that it was right for all machinery to be shown in the Power on the Farm exhibit, which is located at some distance from the cows. The supply men wanted to be close to the cows in order to be convenient for visitors interested in the dairy cattle exhibits.

The suggestion has been advanced and has received some approval from Fair directors, that the entire machinery exhibit be moved bodily toward the Holstein cattle sheds, occupying space now taken by the horse show tent and some paddocks. On the dividing line between cows and machinery could then be located the dairy machinery, forming a logical gradation from one to the other.

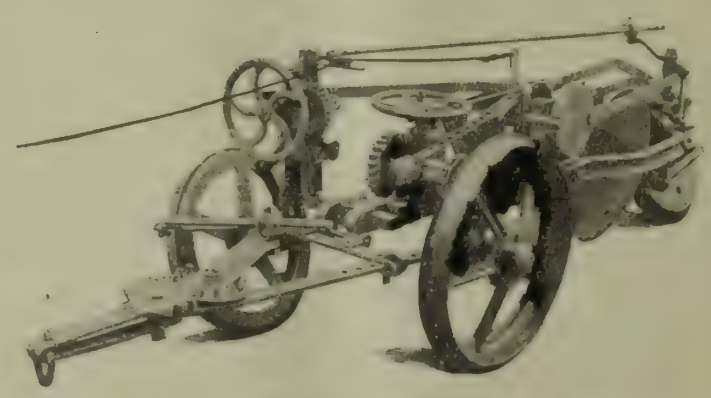
Tractor Changes Noted.

As mentioned in previous articles, this year's State Fair shows a remarkable advance over any previous event of its kind in three departments, livestock, county exhibits, and machinery. Of these three, the one with most universal appeal to farmers is machinery. Of all the machinery none has such universal appeal as tractors and the implements that go with them. In the tractor tent, twenty-nine different makes of tractors are exhibited, besides two which probably will come late. There are at least fifty different models. At least ten of the models shown there have never been on public exhibition in California before. Some of the makes previously shown in California, such as the Rumely, Moline, Bean, Monarch, Indiana, and some still handled only locally in Southern California did not exhibit at the Fair, for one reason or another. Many of the well-known makes had recent improvements. There were scarcely any of freakish construction this year. The principles required in tractors to be used in California are coming to be recognized by manufacturers, and the ultimate general standard of design seems to be making its appearance. The smallest tractor manufactured is there. The largest farm tractor used in California is there. Numerous models of all sizes between are there. But it is noticeable that practically all of them are built for the medium sized farms which are becoming more numerous in every part of our thousand-mile State as subdivision of large ranches proceeds. New track-type models seem as common as wheel-types. In the latter, only one three-wheeler is shown and it has no name. In the former, one new model has a single tiller wheel, but it aids the steering ability of the wheel by using independent clutches on the tracks.

Implements for every irrigation, cultivation, seeding, and harvesting operation are shown independently and hitched to tractors. Seed bed preparation receives most emphasis. Implements from those for deepest subsoiling with eleven standards down to the shallowest weed cutting with the smallest tractor are displayed. All kinds, shapes, and common sizes of plows are abundant in many models. Most of the disk cultivators are smooth edged. Land levelers seem to have been more interesting than any other line during the past year, if we judge by the new models. Feed chopping and grinding and threshing machinery is belted to tractors. Carbureters, spark plugs, magnetos and gas engines are featured.

Another Opportunity Soon.

Most certainly, the farmer who spent several days asking questions in the Power on the Farm exhibits made the biggest wages of the year for the time spent. Putting the ideas here gained into service on the home ranch will as surely command increased profits, increased respect from neighbors, and greatly widened influence in community affairs. To those who did not grasp this opportunity, there is yet a similar and perhaps a greater opportunity in the First National Tractor and Implement Show of the West, to be held near Glendale, Los Angeles County, Sept. 20 to 26.



THE NEW "KNAPP"

Tractor Disc Plow

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WRITE FOR DETAILS.

SEE THIS PLOW AT THE NATIONAL TRACTOR AND IMPLEMENT SHOW OF THE WEST, AT LOS ANGELES.

KNAPP PLOW COMPANY, Inc.

PLOW MANUFACTURERS

4th & Margaret Sts. San Jose, Calif.

The State Fair Stages a Splendid Fruit Display.

Written for Pacific Rural Press by W. S. Killingsworth.

All roads lead to Sacramento this week, where there is to be found an elaborate display and profound example of all things that have joined in making California the greatest empire west of the Rockies. That the pioneers who blazed their way into this Eden long before it became a sovereign State wrought well, is evidenced by the fact that in little over an half-century there has been accomplished the greatest agricultural and horticultural development the world has ever witnessed. We speak advisedly when we say that the horticultural productions of California exceed in amount, value, variety and quality of product the fruits of any State in the Union. The co-operative spirit and magnanimous efforts of the State Board of Agriculture have made it possible that the products of the soil may be assembled at the annual State Fair, in competition, one section with the other. This annual event resolves itself into a great school whereby the fruit growers and farmers may learn of the changes and improvements that are constantly taking place. One section meets another, there is an interchange of ideas; while very little may be said, the fact that much may be gained, is evidenced by the willingness on the part of all to pass the ideas along.

Seen in a Tramp Around.

In a tramp around this 100-acre agricultural park we find that never before have there been so many entries in all departments as there are this year. Twenty-seven counties are represented, and among the exhibits in those counties are to be found every commercial product in existence in California. Not only are these exhibits from orchard and farm, but from forest and mineral resources as well. The timber production is displayed in splendid form. Around the replica of the completed State Fair which graces the center of the big rotunda of the Agricultural Pavilion is a diadem of California gems. A rare and valuable collection of all the minerals of the State have been assembled by the State Mineralogist, which are shown in glass cases set in the form of a circle surrounding the replica. In this collection are perfect specimens of minerals, ores, stones and rocks, also gems from all but one county of the State, showing what represents California's mineral wealth, the value of which in 1919 was $196,000,000. From rim to center and from cellar to dome are to be found the achievements since the curtain was drawn in the last event, which tells a marvelous story of development such as can only be expressed by a showing of the products of efforts to improve. The farmers and orchardists do not seem to realize the true value of this great event, what it means to the agricultural and horticultural future of the State. As we view it, it is of paramount importance and should be given the moral support of every Californian; such being liberally manifested, the financial support will be forthcoming.

A Pleasure Denied.

At this writing it would be a pleasure to go into detail, giving a full expression of our opinion of the horticultural exhibits; but owing to the fact that we are acting as one of the judges we will withhold the many nice things it is our intention to give in detail for a future article. However, we feel that we are in no way "letting the cat out of the bag" when we make the statement, without equivocation, that, on the whole, it is the finest display of fruit we have ever witnessed—and during the past thirty-five years, actively engaged in the business, we have come in contact with some fruit. Aside from the redeeming qualities of the fruit itself, the attractive manner in which it is displayed is exceedingly noteworthy.

Some County Exhibits.

Let us begin with a partial resume of what one finds in passing through Agricultural Hall. There is Fresno, the "Sun Maid," queen of the great San Joaquin valley, with an unending chain of varieties, fresh from tree and vine, which dazzles the eye of even the old-timers at the game. The fruit in itself is a marvel of beauty and excellence, to say nothing of its arrangement, which has required the hand of an artist. Her agricultural exhibits are strictly in line with those of horticulture for which Fresno County is so well and favorably known. It will truly be interesting to learn of the stand she takes in the prize contest.

Kings.

Kings County occupies a prominent space in the center of the north wing of Agricultural Hall, and one needs but to turn in that direction to find an exhibit of exceptional beauty, the attractive feature being the artistic arrangement by which the fruit display looms up at a mere glance. The main or center exhibit consists of a large star mounted on a pedestal which acts as a support for a smaller star on top. The lower star is the foundation upon which the peach exhibit rests and is by far the largest of its kind on exhibition, more than twenty varieties of commercially packed as well as an equal number of varieties in open display. In addition the commercial pack and plate display of plums is an attractive feature, consisting of practically all of the commercial varieties. The pedestal in the center of the main large star is ladened with commercially packed grapes. In order that the upper star may be shown to advantage it is brilliantly illuminated on all sides. From this star are suspended large and highly colored bunches of grapes showing the varieties grown in Kings County. The canned and dried fruits form an attractive feature of the exhibit. The agricultural display is very striking, both as to quality and variety. All grains grown in the county are represented in an artistically arranged star. The back wall of the exhibit represents the corn production of the county. But the strong feature of the Kings County exhibit is its display of peaches and grapes.

Placer.

On entering Agricultural Hall, on the left, stands a wonderful display of agricultural and horticultural products of Placer County. One at all familiar with the fruit productions of California does not ask if Placer County's exhibit was good, whenever she makes an attempt at a display of her products at the State Fair. The greatest display of pears it was ever the writer's pleasure to witness was Placer County's exhibit that was destroyed when Agricultural Hall burned some years ago. That exhibit might have been burned, but the "pattern" must have escaped destruction, as the present exhibit has the "ear marks" of the one destroyed. So great is Placer County's variety in commercial production of tree fruits that were they given space to exhibit their remarkable qualities we fear the general space allotment would be much smaller than it is at present. Where space, caring for a display of the actual fruits is lacking, such has been offset by a work of art, in the shape of three recessed paintings, which realistically does the subject of fruit growing in Placer County justice. The lighting effect makes the exhibit a thing of beauty.

Stanislaus.

Stanislaus County comes well to the front with a most substantial display of the innumerable products for which she is so well noted. The system adopted in assembling her products for exhibition purposes from the various sections of the county has worked well and to the satisfaction of the exhibitors, as no section was overlooked, being in the hands of its own committee. Hence Modesto, Turlock, Patterson, Oakdale, Waterford, Hughson, Denair, Ceres and Riverbank are here in their best "bib and tucker," with a display that marks the achievements that have been wrought in a remarkably short duration of time, in sections for a long while, considered practically worthless, more noticeable, however, with the coming of water. Those sand-dunes have been converted into an agricultural and horticultural area of wealth and prosperity.

San Joaquin.

San Joaquin County is here because she is here, and in coming she shows the world that she is on the map, as the topography of this miniature empire of wealth and prosperity lies before us, displaying another work of art on the part of some one well acquainted with the products of the delta and uplands alike. A large portion of this exhibit comes from what was not many years ago the "muck and mire" of the San Joaquin river and slough tributaries. The inventive genius of man has converted this vast area into the richest and most productive farms on the globe, the banks of the Nile not excepted. The unchallenged display of her fruits, vegetables and cereals are prima facie evidence of the aforesaid feeble assertion.

A Personal Reminiscence.

The writer was raised on a plantation, and finally selected the fruit business as a profession, and he took his first degree loading watermelons into cars for interstate shipment. During our time and generation at this strenuous and non-profit pastime we thought that we produced the largest watermelons in South Carolina that ever decorated a vine, but when we stood for the first time in front of the Butte County exhibit and gazed upon what they told us were watermelons, and we have no cause for doubting their word, although we have not seen the contents of one yet, we at once apologized for our ignorance of Butte County's reputation as a melon producer. We will not mention the size of the pumpkins they have on exhibition, but leave that to those who have a better control of their imagination. Aside from these agricultural vine monstrosities, the horticultural vine productions are in fine form; the same may be said of her tree exhibits, especially apples and peaches.

Northern California

Northern California Counties' Exhibit—counties in association: Modoc, Siskiyou, Trinity, Lassen, Shasta—have a most creditable exhibit of all the orchard and farm products produced in those counties, as well as mining, recreation, lumbering, home economics and dairying.

Cheaper and Better Highways at Less Cost.

Written for Pacific Rural Press by R. E. Hodges.

Whether to sacrifice quality in favor of quantity in our State Highways must be decided by each voter before he goes to the polls in November. The ballot will contain a proposed initiative law providing that a State Highway Finance Board may offer the unsold portion of the $40,000,000 4½ per cent highway bonds authorized at the election of 1919 at any rate of interest not to exceed six per cent, and that the State shall pay all interest on highway bonds yet to be sold, thus relieving the counties of that burden.

As the 4½ per cent bonds have proved practically unsalable at par, and as they must be sold at par, the expedient was devised of selling them below par and making up the deficit out of the Federal road aid money. This yielded some ready cash for the use of the State Highway Commission, and the courts have recently validated such financeering. Some county supervisors have invested money in 4½ per cent bonds in order to get certain mileages built. But only a small percentage of the bonds have been sold; and highway construction is being held up on that account. Six per cent interest would probably sell them and highway work would proceed.

The question before the people right now is whether they want highway building to proceed under present costs of labor and materials and under the present policy of the State Highway Commission. A favorable vote will be considered an endorsement of that commission and its methods of building the highways.

There seems no reasonable doubt that the people of the State feel that they would lose more by delaying highway construction than they could gain by any possible drop in costs of labor and materials. The answer to that part of the question seems clear.

But whether the people wish to continue spending money for such pavements as the Highway Commission is likely to build, is a question much debated. This journal and many others have pointed out the "abominable" condition of many miles of our State Highways and the excessive costs of maintenance. We have questioned the economy of makeshift pavements which go to pieces years before they have been paid for. We have urged that highways be built to withstand the heavy motor truck traffic which is proving indisputably to be most effective and economical in solving our grave transportation problems. All of this is on the general ground of ultimate economy as well as the present safety of current traffic; also the pressing need of transportation to relieve scarcity on the markets and high prices to consumers at the same time that congestion at producing points decreases prices to producers.

Too Much Mileage Required by Law.

But a more pressing force seems to require in practice a revision downward from the principles of highest economy. With the voting of heaped-up millions of dollars for highway construction, the Legislature and the people have specified that the money shall build a certain mileage and that the quality shall be determined by the State Department of Engineering.

For the Future.

Quantity plus quality is supposed to equal nearly $40,000,000. The variable factor is quality. To get quantity as decreed by the law-makers, the State Highway Commission has adopted specifications in regard to width thickness, materials, etc., that have caused much dissatisfaction with the resulting highways. Criticisms have also been made of their engineering gyration in routing the highways and inspecting the work of contractors. The latter two criticisms are details which, if justified, require correction.

Better Build for Present Needs.

The greater problem is that of specifications. Shall we build for the future; or just for the present? Shall the thickness be such as will endure the heaviest loads found economical to haul by motor truck? Shall greater endurance be gained by using different materials, better foundations or different surfacing? Shall width be made great enough for safe passage of wide motor trucks? Shall steel reinforcement be used to avoid breakdown of the pavements? What can be done to avoid damage due to the swelling and shrinking of adobe on which pavements rest? How shall the alkali be avoided which has rotted certain lines of concrete paving? Why not use asphaltic concrete, whose first cost and maintenance are both cheaper than those costs of cement concrete? The general policy adopted by the commission contemplates the building of the greatest mileage possible with strength to endure reasonably well the ordinary present-day traffic restricted by law as to weight.

"If we had built for the future, laying better highways and only half the mileage," says Chairman N. D. Darlington of the State Highway Commission, "the people would have lost the value and advantage of the half that would not have been built. Such loss would have been far greater than the cost of repairing and rebuilding sections which have gone bad. We think it would be poor business policy to sacrifice mileage in order to build for future needs which might never materialize. It is better to build for present needs, and then as certain stretches require strengthening and widening we will have the money to meet the demand. None of the mileage already laid is entirely lost, for it makes the best kind of foundation already graded for a new pavement."

All that remains is to add another layer under specifications which are shown by experience to be better; and the new layer will not be subjected to breakage by a weak subgrade such as may be held responsible for much of the present bad condition of highways. In a number of cases a concrete shoulder two or three feet wide has been built on each side of an old pavement, the surfaces of the shoulders being two to four inches higher, and the highway between them being covered with two to four inches thickness of Topeka surfacing to bring shoulders and highway to the same level. The shoulders widen the pavement enough so it is unnecessary for vehicles to run over the edge in passing other vehicles, a practice which is responsible for most of the frazzled edges of our highways. Widening of practically all of the State Highways is recognized by Mr. Darlington as a necessity.

Steel Reinforcement Adopted.

In a number of other cases, an additional layer of concrete is being laid on top of damaged pavements, using steel rod reinforcement to avoid future breakage. The strength of even reinforced concrete in a slab two or four inches thick even on such a good foundation might be questioned, and only time will tell.

A marked improvement in specifications was put into force last spring when the Commission ordered that hereafter every foot of concrete highway to be laid should be reinforced with steel rods. They are ⅜ inch in diameter, twisted, laid crosswise of the pavement 18 inches apart, with a line of them along each side to give additional support to the edges. Such reinforcement is considered the service equivalent of two inches added thickness of concrete, not because it adds that much actual strength, but because it holds the concrete from breaking under the heavy jars to which it is subjected and supports weak spots. Where conditions demand it five-inch reinforced concrete pavements are now being laid. So on our new highways, we can hope for fewer holes and lower cost for maintenance.

Old Highways 90% Good.

But with all the weaknesses and faults that have developed Mr. Darlington and State Engineer A. B. Fletcher publicly maintain that the 4-inch cement concrete pavement has in general justified itself. The volume of traffic is eight or ten times as great today as when four-inch paving for State Highways started about eight years ago; and the weight of individual loads has greatly increased.

"In spite of the increase in volume and weight of traffic," they say, "ninety per cent of the highways are in as good condition today as when they were laid. Contraction cracks normally from crosswise shortly after concrete hardens. On the ten per cent that has gone bad, the causes were generally conditions regarding which adequate previous experience was not available."

A Huge Unnecessary Waste.

Granting the expediency of sacrificing quality in favor of greater mileage, we still object to the huge waste involved in spending nearly $40,000 on a type of pavement which has a ten to twenty per cent higher first cost than a better type and a great deal worse maintenance cost. The State Highways in Fresno County cost $226 per mile per year for maintenance according to a statement credited to State Highway Engineer J. B. Woodson of the Fresno Division. Asphaltic concrete in Kings County of which 103 miles were completed in 1916 have cost $4 per mile per year, as reported April 30, by Kings County Engineer K. May. Most of the $1,559.78 maintenance cost of that mileage in four years was spent on one stretch about a mile long where the highway crosses a lakebed on a soft subgrade. This 103 miles is today in excellent shape.

Asphaltic Concrete Lowest Maintenance.

Asphaltic concrete was laid on the main street of Visalia in 1894 twenty-six years ago. According to City Engineer L. H. Gadsby of that city, there has been absolutely no expense for maintenance or repairs on this heavily traveled street which gets hot in the summer; and it is in excellent condition today. Acequia street in the same city was paved with coarse asphaltic concrete in 1910; and so tightly has the asphalt been bonded to the gravel used as its coarse aggregate that where the gravel is exposed on the surface it has worn flat but has not become loosened. There are no signs on either street of "flowing," "rolling," "rutting" or any other failure.

The city of Palo Alto in Santa Clara County laid 28,830 square yards of asphaltic concrete in 1910. City Engineer J. E. Byxbee states that the total repairs on this pavement up to date have been $4.15 to fix up a patch of 48 square feet. The pavement is still smooth, true to grade, and in excellent condition.

The city of Lodi in San Joaquin County laid 2,500 feet of six-inch cement concrete with two-inch sheet asphalt surface in 1912, according to City Engineer L. F. Barzelotti. In the same season they laid 1950 feet of 3½-inch asphaltic concrete with one-inch asphaltic surface. Since that year they have let contracts for several miles of asphaltic concrete and none for cement concrete.

The city of Marysville laid several blocks of asphaltic concrete in 1912. This is a good condition today, and never had a cent spent on maintenance, according to City Engineer W. M. Meek.

Asphaltic Concrete Costs Less.

Until eighteen months ago the first cost of asphaltic concrete at points far from the Kern County refineries was greater than that of cement concrete. This situation has been reversed. Bids on both kinds to be laid in various parts of the State have shown in the past six or eight months that the first cost of asphaltic concrete is ten to twenty per cent less than that of cement concrete in almost every part of the State. Yolo and Yuba and Alameda Counties are conspicuous examples that have come to our attention.

Additional advantages of this material as outlined by Chief Inspector H. E. Leyden for Fresno County are that if the subgrade gives way, the asphaltic concrete also gives but does not break or crush and the hole may be quickly filled with more of the same material without digging it out and blocking the highway for a month.

Now, with outstanding examples of asphaltic concrete efficiency, low cost, low maintenance, and short time blocking of traffic to be seen in every part of the State, and with glaring examples of crushed cement concrete highways, swearing auto drivers on the detours, higher first cost, and heavy maintenance cost, do we want the State Highway Commission to spend our $40,000,000 for more of the extravagantly wasteful cement concrete-and-steel highways when the cheaper and better asphaltic cement is plentifully available, and is being used by counties and municipalities all over the State? Are the farmers, who are more vitally interested in costs and advantages of good highways than any other class, going to vote to permit the Highway Commission to spend their money wastefully? Or are we going to insist on their using the materials and specifications which have proved most economical from every angle? If the Commission gives satisfactory assurance on the latter point, the six per cent bond interest proposal is sure to carry.

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It contains valuable information—the result of 20 years of most successful alfalfa culture. Tells the conditions for fall planting; how to prepare the seed-bed; the type of seed to select; the best cultural methods.
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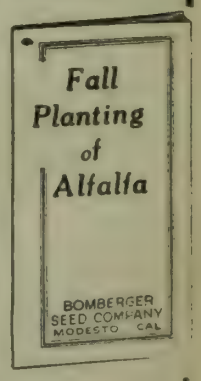

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"The use of a truck on Goodyear Cord Tires has increased my land value by bringing my farm closer to town. Power machines, assisted by this pneumatic-tired truck, offset my labor shortage. The Goodyear Cords on my truck have traveled about 10,000 miles to date. Solids can't go into the soft fields; pneumatics go through easily—haul 450 crates to 40 by team. Hard to sell a second-hand truck on solids here."—Glenmore Green, Farmer, Fort Valley, Georgia

EXTENSIVE rural experience, like that related above, has confirmed the tendency of farm land prices to increase when Goodyear Cord Tires are used to cover long or difficult hauling routes.

Fertile acreages, ten to twenty-five miles from the nearest town, have become more profitable and hence more saleable due to improved transportation on these able and rugged pneumatics.

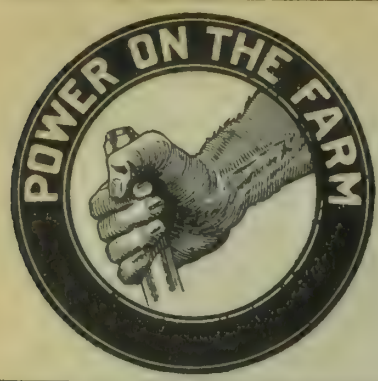
What formerly was a tedious and jarring haul by either team or motor truck, has become a brisk, smooth trip due to the grip, cushioning and spryness of the big Goodyear Cord Tires.

These virtues frequently enable short cuts to market, bring more markets within easy-hauling range and pave the way for the safe, punctual transit of perishables and shrinkables.

The huge strength of Goodyear Cord construction, developed with the manufacturing care that protects our good name, makes possible the utmost utility and economy of this type of pneumatic tire.

Detailed information, concerning the manifold advantages of pneumatic-tired trucks and general farm motorization, will be sent on request by The Goodyear Tire & Rubber Company, Akron, Ohio, or Los Angeles, California.

GOODYEAR CORD TIRES



FARM MOTOR TRUCK USERS

Seven hundred and fifty-three farmers who own and use motor trucks were asked by the United States Department of Agriculture for their opinion as to the greatest advantage of owning a motor truck. Ninety-one per cent said "Saving time." A quarter of them had found better markets since buying trucks. Nearly one-fourth of them were twenty miles or more from their new markets. Only 18 per cent were less than five miles. The roads on which three-fourths of them usually travel are all or part dirt. Nearly half of the trucks were of 1-ton size, and most of those who had smaller ones wished for greater capacity.

The average life of the trucks was estimated at six and a half to seven years. They averaged 3,820 miles per year, working 173 days per year. Operating half-ton trucks costs an average of 8 cents per mile, three-quarter ton truck about 13 cents, ton trucks about 12 cents, two-ton trucks about 20 cents. The average cost of hauling crops, including 50 cents an hour for driver, was about 50 cents per ton-mile with half-ton trucks, 34 cents with three-quarter-ton trucks, 26 cents with ton-trucks, and 18 cents with two-ton trucks. The favorable operating costs of two-ton machines was offset in the minds of most users by the greater charge for depreciation, figuring the same life for all sizes.

Four-fifths of the users stated that trucks decreased their costs for hired help, the average estimate being $324 per year saved this way. As compared with horses and wagons, trucks saved half to two-thirds of the time handling materials to and from the farm.

Ship or deliver eggs at least twice or three times weekly.

A REAL TRACTOR CLOD CUTTER

A tractor clod-crusher that would be hard to beat on heavy land is that made by L. M. Higgins of Santa Barbara county for a tractor of about eight or ten horsepower on the drawbar.

Five 4x4-inch angle irons about 7½ feet long lie parallel , about 15 inches apart, with their angles downward. Crosswise at their ends are 4x4-inch angles to which each of the parallel angles is bolted with two bolts at each end. The crosswise angles project a little at the front end where they are bent inward to ward the clod-cutter away from trees if carelessly driven.

Teeth are of flat steel about an inch wide and eight or ten inches long. They project through the rear side of the angle irons, and rest against the upper face of the forward side, thus projecting backward at an angle of 45 degrees downward. They are held in place by thread-ended hooks which fit over the teeth and through the forward side of the angle, with a nut to tighten the hooks. Teeth are sharpened and may be bent if the ground is to be stirred. They are "staggered" on alternate angles in order not to follow in the path of those in front, and they were set to go four or five inches deep. It took Mr. Higgins alone two and a half days to make the machine. He drilled the holes, of which there are 310, before attempting to put it together. He says it does four or five times as much good on heavy land as a peg-tooth harrow. The total weight is about 550 pounds.

FANNING MILL FOR BEANS.

Blackeye beans have a reputation in Stanislaus county for splitting too much when run through regular bean threshers. For this reason many of the growers thresh them out on a canvas, by running a heavy roller repeatedly over the vines and forking the vines frequently out of the way. Then they hire a fanning mill to clean out the chaff. Such a fanning mill owned by J. Olivas was recently noted by the writer where it had just finished cleaning 100 sackfuls in two hours. Owners of the beans had spent two afternoons with two teams and four or five men tramping and rolling that many beans, piling them in the center of the sheet to keep threshed beans out of the way of unthreshed ones. When this pile became so big the fanning mill had to come and clear them out of the way before more could be threshed out. The fanning mill requires a man to take care of the chaff, one sack-sewer, and two or three men to pitch beans into the hopper. Mr. Olivas charges 10 cents per sack for fanning the beans, and he says threshers charge 60 to 75 cents a sack for threshing what beans they do not lose with the straw. The question is thus brought up whether bean thresher manufacturers have failed to design efficient bean threshers, or whether their sales departments have failed to reach bean growers with their message of efficiency and economy.

FARMERS APPROVE AUTO-TRAILERS.

"Great saving of time. Reach more distant markets. Avoids taking horses from farm work. Costs one-third to one-half what it would to haul by team. Perishable products reach market in better condition." These are remarks made by the users of two-wheeled trailers by which automobiles are enabled to do light-truck duty. Twenty-one users of such trailers answered a questionnaire. Nineteen had been using their trailers over three years. Thirteen reported they had no repair bills. Unanimously they said that trailers give them more time on the farm. Fifteen said their products were delivered better by trailer than by wagon. Live cows, pigs and sheep were among the cargoes, which included everything else that could be safely piled on. One man hauled 150,000 pounds of potatoes on his trailer—several trips.

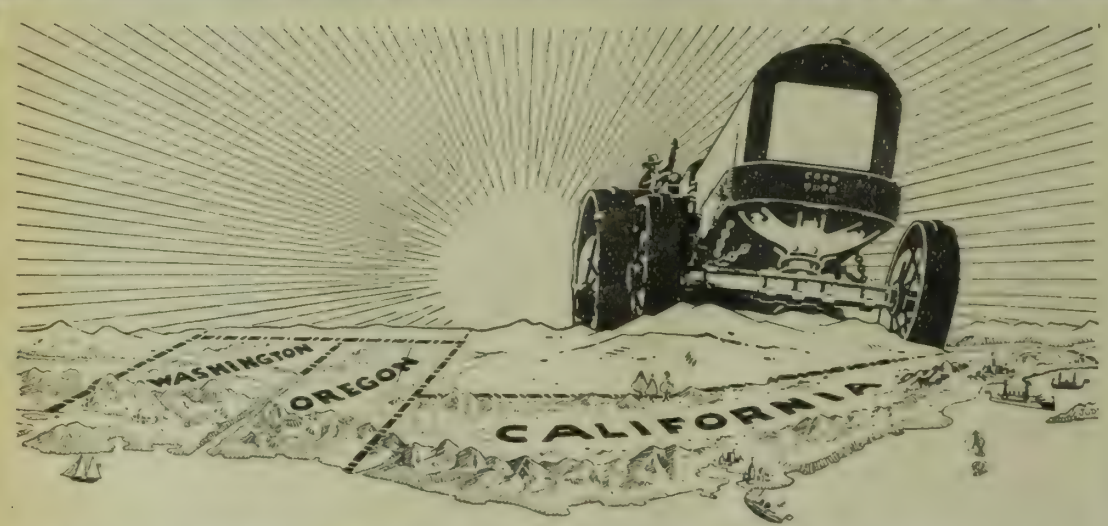
SOD REQUIRES REDUCED PLOW WIDTH.

The tractor balked. It was pulling three plows in Bermuda sod with a little side draft. It would plunge into the sod with a right good will; but the side draft would throw its front end over into the plowed ground. Then it would have to turn around, for there was no backing up with plows in that sod. Good judgment in putting on only two bottoms for that job would have saved a repair bill.

PULL EASY ON GEAR SHIFT.

There is great leverage in the gear shift of a tractor, but the gears can't be shifted unless the teeth are in position to mesh. So there is no sense in pulling hard on the lever. When you do you are likely to spring the gear shift, and make trouble thereafter.

The Sixth National Tractor Show will be held at the Ohio State Fair grounds in Columbus, Feb. 7 to 12. The First National Tractor Show of the West will be held Sept. 20 to 26 at Verdugo Woodland, near Glendale, in Los Angeles County.



NATIONAL TRACTOR & IMPLEMENT SHOW OF THE WEST

Verdugo Woodlands—Glendale—Los Angeles

September 20-26

The greatest Exhibition of Tractors, Trucks, Trailers, Farm Power Implements and Accessories ever held on the Pacific Coast. A Big Business Show for Busy Farmers—the 1920 Get-together Meeting of Agricultural Interests in the Southwest.

A Show You Can't Afford to Miss!

More than thirty new Tractors; an imposing array of modern Trucks; a huge exhibit of Implements of all kinds; Threshers, Farm Lighting Plants, Road Building Equipment, Household Appliances, Paints, Lubricants, Motor Accessories. Reasonable hotel rates. Free Camping Grounds for Autoists.

Remember the Date--Be There!

DIRECTION OF

Tractor & Implement Dealers Association of Southern California

GUY H. HALL, MANAGER.

A GOOD POWER PROGRAM.

"If forty farmers get together anywhere, any time, and ask for a week's short course in power machinery, we want to make it possible for them to get it," writes Secretary George Collins of the California Tractor and Implement Ass'n.

"We want a permanent building at the State Fair grounds where power-farming machinery may be permanently on display. We want to see farm advisors equipped to carry the gospel of Power on the Farm onto the farthest ranches of the State, and we are out to help them raise the sinews of war. We want agriculture taught in all the high schools, and we want power farming taught there as an important feature of sound agriculture. We want the schools to spread the word that only by more and more production per man can the nation be fed or the individual farmer survive the competition of his progressive power-using neighbors. We want the use and upkeep of power machinery taught in every conceivable way, in order that every farmer may reap its advanta .s to his own profit and for the permanence of agriculture itself. We want to keep boys and girls on the farm by making farm life attr ctive with lighting plants, household conveniences, and machinery to lighten heavy jobs and speed up slow jobs.

For every person in the U. S. in 1919, sixty tons of mercandise were moved a mile by motor truck, as pointed out by the Federal Motor Truck Co.

STATE FAIR FRUIT DISPLAY

(Continued from page 335)

Los Angeles County, as usual, is here with all that goes to make up an exhibit for which the Southland is so well noted. Her entire exhibit is magnificently magnificent.

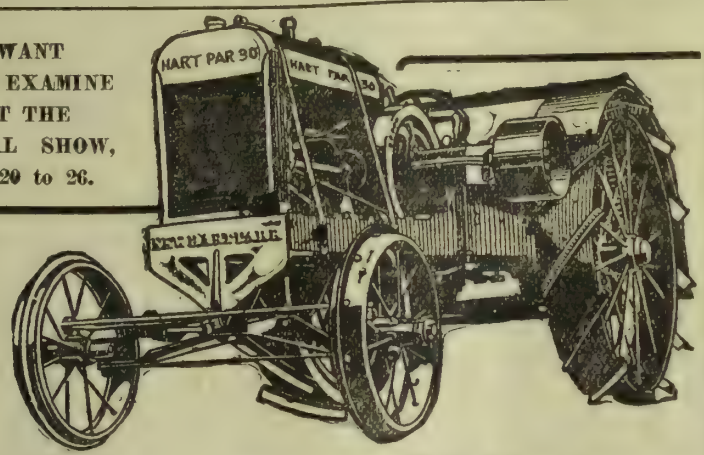
Yolo county is here again in all her splendor of by-gone days, complacently sitting back with that satisfied air of "I-don't-want the-first-prize-again," which is of course commendable, and shows the spirit of a sport, now that she is not in the contest. As one of the judges we feel at liberty to say that if she were, it's dollars to doughnuts she would have some who have the first-prize chip on their shoulder looking for that chip in the ruins after the show is over.

Sacramento county—the heart of California—has an exhibit to which they may all doff their hats. It's a gem—a thing of beauty—a masterpiece of artistic arrangement. A collection of fruits that she may be justly proud of, and one that is attracting the attention of every one who visits Agricultural Hall. Sacramento county is acting as hostess; therefore she has declined to enter the prize contest, which no doubt brings a sigh of relief to many of her sister counties.

However much we would be delighted to elaborate on the splendid displays of all counties exhibiting at the fair, space will not permit of it. As time goes on we will let the readers of the Rural Press know what Colusa, Calaveras, Glenn, Humboldt, Mendocino, Monterey, San Luis Obispo, Santa Cruz, Solano, Tehama, Alameda and Kern counties had on exhibition at the sixty-sixth annual State Fair.

Visitors to the First National Tractor and Implement Show of the West at Glendale, Sept. 20 to 26, will pay 25 cents admission fee. It is a "business show."

WE WANT YOU TO EXAMINE IT AT THE NATIONAL SHOW, SEPT. 20 to 26.



A Tractor With a Kerosene Guarantee

A Rigid Guarantee is Written in the Order

THE MOST POWER FOR THE LONGEST TIME AT THE LOWEST COST

The kerosene shunt was developed in the Hart-Parr factory. No other Tractor has it. It means not only additional horsepower, but it means *perfect kerosene combustion.*

The man who has owend tractors, and knows how to judge, readily recognizes the merits of the HART-PARR "30." It is built for the farmer, not the mechanic. Every working part can be gotten at easily, and adjusted standing on your feet.

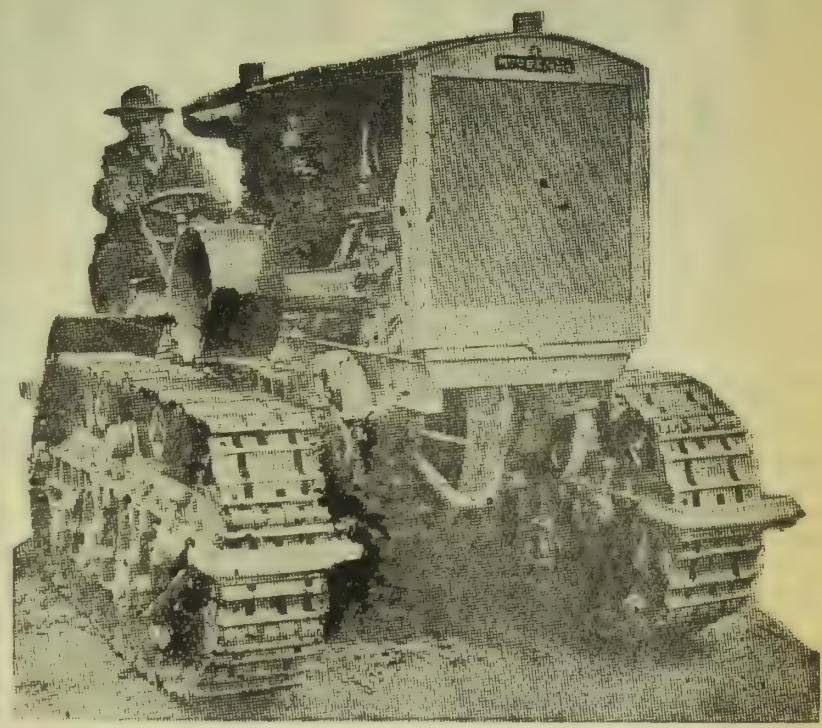
Don't fail to analyze the boot-strap test.. You'll be surprised by the wonderful power and the flexibility of the motor on kerosene. It goes from no load to full load without touching the throttle, and doesn't miss a shot.. Neither does the motor race when the load is taken off.. Let us explain it.

DISTRIBUTOR

Southern Border Motor Co.

204 N. Los Angeles St. Los Angeles, Calif.

Member of Tractor and Implement Dealers' Association of Southern California.



THIS IS THE

New Model B. All Steel Monarch Tractor

THIS MODEL AT THE

NATIONAL TRACTOR AND IMPLEMENT SHOW

SPACE E—5-8-9

SOME OPEN TERRITORY FOR LIVE AGENTS

ROBERT H. GREEN

CALIFORNIA DISTRIBUTOR

219 N. Los Angeles St. Los Angeles, Cal.

Your Soil Needs Humus and Nitrogen Bacteria

Melilotus Indica Supplies Both

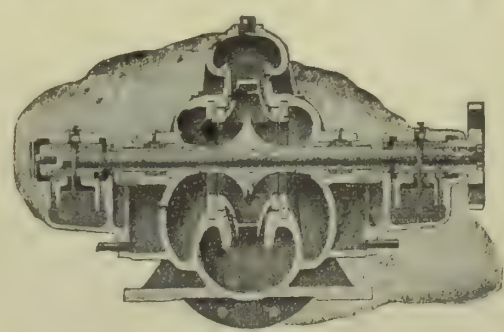
Now is the time to plant it. Buy only seed that has a quality test tag on every sack. It protects you against seed of low germination.

Buy from your local dealer or from

Aggeler & Musser Seed Co.

Look for the Tag LOS ANGELES, CAL.

DE LAVAL IRRIGATION PUMPS



High Efficiency Saves Power

Above is pictured a cross section of the De Laval double suction single stage pump.

Notice the smooth, easy passage for the water. This produces high efficiency, and therefore saves power. Note the double suction principle and labyrinth rings.

The pump case of the De Laval is split horizontally. This feature permits of inspection without destroying pipe connections.

This is one of a series of advertisements explaining the different parts of the De Laval Irrigation Pump.

Write us and learn what can be saved with High Efficiency Pumps.

HERZOG ELECTRIC & ENGINEERING CO.

179 STEUART STREET, SAN FRANCISCO

The Fitch 4-Drive Tractor

The Fitch 4-Drive Tractor is standardized as much as possible, every part of the assembled equipment being world famous for quality and efficiency

Power is furnished by the Climax heavy duty, long stroke tractor motor.

Differentials, Brown - Lipe - Chapin nickel chrome steel bevel gear front and rear.

Rear Axle, Timken David Brown worm and worm gear.

Transmission, furnished by Cotta Transmission Co. Three speeds forward, one reverse. Gears always in mesh.

Front Drive, Brown - Lipe - Chapin nickel steel bevel gear.

Carburetor, Byrne-Kingston, burning gasoline or kerosene.

Bearings, eleven Timken roller bearings are installed throughout the tractor.

Gears, R. D. Nuttall, World Famous nickel steel heat treated gears. Every gear with a serial number, encased in dust proof housings, and running in a bath of oil.

Magneto, Dixie.

MEET US AT THE TRACTOR SHOW AT GLENDALE

DISTRIBUTORS

Wm. F. Lutz Co.

219 EAST FOURTH ST. SANTA ANA, CALIF.

DRY PLOWING BY TRACTOR PREFERRED.

(Written for Pacific Rural Press.)

Not only are tractors useful to do the old-time farm operations more quickly, more cheaply and better than they have been done before, but they also make possible certain new operations of great value. Dry plowing has numerous advantages on many soils, not the least of which is the possibility of getting this slow operation done while the weather is good. The practice is gaining favor with those who have consistently followed it, especially on adobe and other heavy soils. It takes less power to turn dry adobe than to wait until it is wet, for in a wet condition it wastes too much power by slipping. Experiences the of James Mills Orchard Corporation in Glenn County and C. F. Adams in Colusa County are of great interest. We quote their answers to our questions:

Every year the James Mills Orchard Corporation dry-plows five hundred to one thousand acres. The majority of the dry plowing has been down on the Corning and Kimball series of soils. We find by turning these over with a heavy disc plow that we are able to work them up into a fine, granular condition. We are then able to harrow this down, work up a good seedbed, and drill in our seeds immediately after the first rains.

When these soils are not dry-plowed there is only a very short time after the rains start that it is possible to handle them well. In some places they hold the water, while on the knolls the water runs off, and the ground remains dry. It takes considerably more power t o plow these dry rather than wet, but we get the results from it.

Where Horse Tools Failed.

We are farming a large amount of land now which was not farmed in the days of horse tools, because of the fact that when they waited for the knolls to become wet enough to plow, the horses could not wallow through the holes. Even last year, which was an exceptionally dry year, these soils produced ten to twelve sacks of barley, while in other years we have had yields of twenty-six sacks. This goes to show that the soil was not farmed with horse tools not because of the fact that they could not produce the crops, but because of the difficulties in handling the soils with horse tools.

The Elder loams on our property are seldom dry-plowed, this chiefly because of the fact that they are such rich soils that it is very difficult to thoroughly clean them of wild oats, etc., without first allowing the early rains to germinate the seeds before the plowing. We have had excellent results, however, from dry plowing where we had the equipment to thoroughly disc up the lands after the first rains had germinated the weeds in the plowed soils. This, I believe, is the ideal method of handling all of the soils in this vicinity, as by so doing you are able to prepare an absolutely clean, fine seed-bed, and you are able to get your seed into the ground considerably earlier than by the regular winter plowing method.

It is true, however, that in our soils it requires at least 25 per cent more power to do the work. We have been using for this work 75-, 60- and 40-horsepower tractors.—James Mills, Jr., Ranch Manager.

Tractor on Dry Land.

I have used a tractor on dry land plowing, as much as 320 acres in one tract. A 75-h.p. tractor was used with disc plows—10 discs. The soil was ordinary adobe, and the work of the tractor was easier on dry ground than on wet. The plowing of dry ground is harder on discs, but it requires less draw-bar pull from engine, as there is less cohesion in the soil. I recommend dry plowing, for the reason that the dry period is of definite length, and reasonably certain as to time.

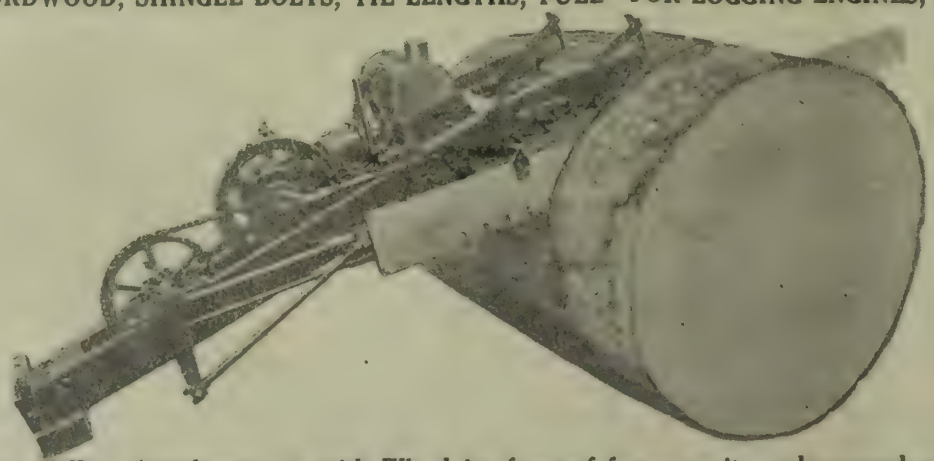
Wet adobe is not workable unless it is merely moist; and the time limit of moist earth is very uncertain. If you wait for just the best conditions to plow, you may miss a crop.—C. F. Adams.

DIAMOND "H" GASOLINE DRAG SAW

Designed for

CUTTING LOGS INTO CORDWOOD, SHINGLE BOLTS, TIE LENGTHS, FUEL FOR LOGGING ENGINES, CLEARING LAND, ETC.

SELLS AT THE RIGHT PRICE



OVER 10,000 OF THIS MODEL IN USE

Can be furnished with Tree-Felling Attachment, or with Wheel in front of frame, so it can be moved around like a wheelbarrow.

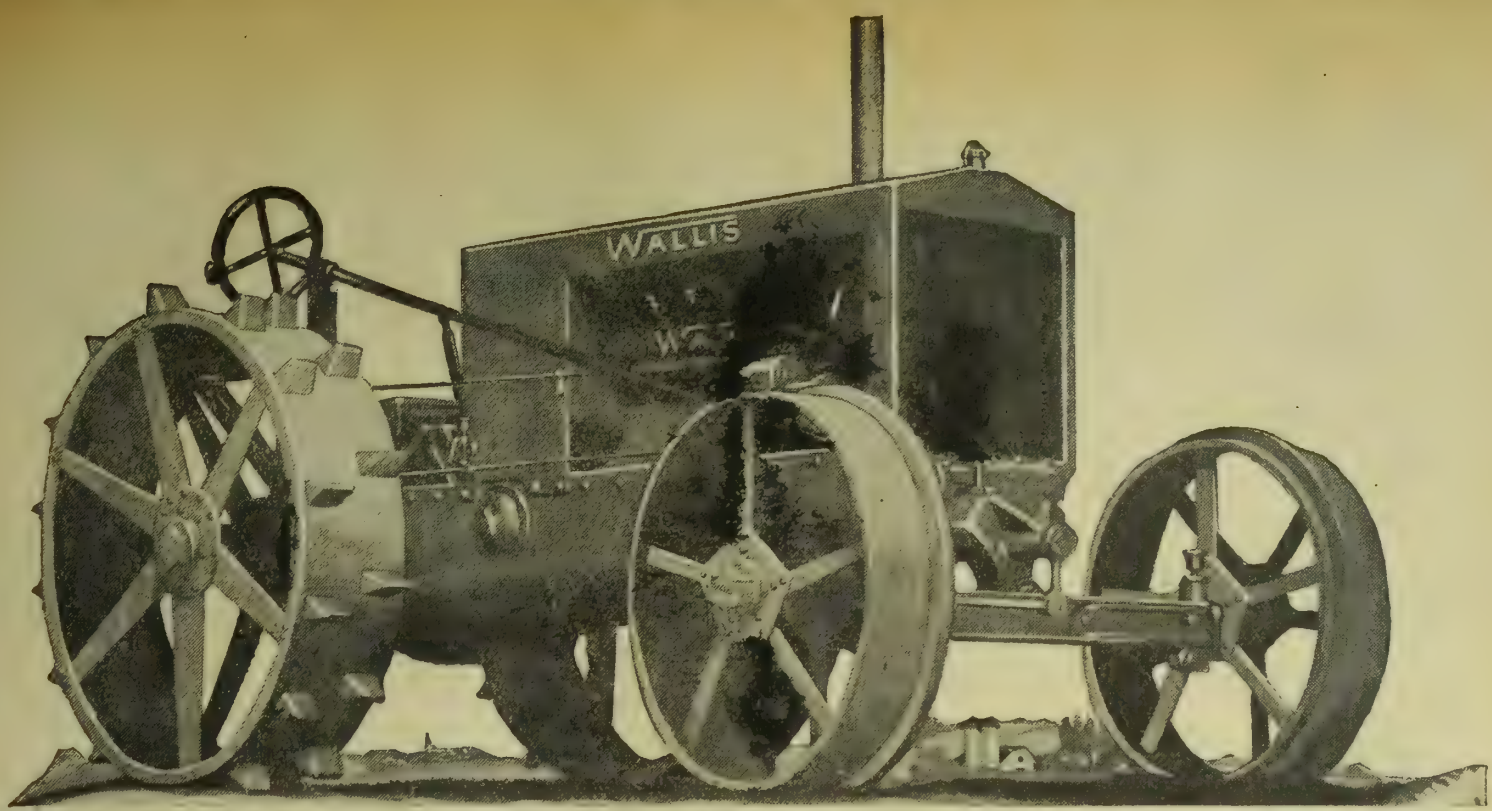
WE CAN ALSO FURNISH A FOUR-CYCLE ENGINE OUTFIT

"EVERYTHING FOR WORKING OF WOOD"

Harron, Rickard & McCone

San Francisco *Los Angeles*

California



"There's the Wallis"

A center of great interest at the show will be the Wallis, AMERICA'S FOREMOST TRACTOR. Fresh from another year of splendid performance on the farms of the West and Middle West, the Wallis comes to the California Show with a convincing record of performance.

The Wallis has proved itself the tractor of the future as well as of the present. It has more drawbar horsepower per hundred pounds of weight than any other tractor on the market! It is the only tractor with the famous U-shaped frame that has revolutionized tractor design. The U-shaped frame, together with the cut and hardened steel gears, enclosed construction, sturdy, heavy duty engine, and many other features, have made it AMERICA'S FOREMOST TRACTOR.

The Wallis has come to California to stay. The California branch is organized to serve the special need of California farmers. We invite you to ask members of this branch to show you why Wallis power means more acres per hour, whatever the field operation.

See the Wallis — talk with Wallis owners — and visit our branch.

J. I. Case Plow Works Company
Racine, Wisconsin

California Branch: 240 East Sixth Street, Los Angeles

WALLIS
—more acres per hour

NOTICE: We want the public to know that the WALLIS TRACTOR is made by the J. I. CASE PLOW WORKS COMPANY of Racine, Wisconsin, and is NOT the product of any other company with "J. I. CASE" as part of its corporate name.

When You Flew a Kite

you recognized the value of three-point suspension

Three-point suspension equalized the strain. With each gust or shift of wind the three leader-strings distributed the tension, and that's all that saved your kite frame.

Tracks and body-frame of the Best Tracklayer are connected on the same principle—at three points. Uneven strains and shifts of tension are taken up and evenly distributed. This relieves motor, transmission and frame from injurious twists and jolts. It means longer life for your tractor with fewer repairs. Tracks of the Best also oscillate independently, which lessens the bumps and jars and keeps ground traction uniform.

Design, materials and workmanship are the all-important factors in tractor success. Best Tracklayer design is the result of long years of tractor-building experience. So is the selection of correct materials for the different parts. Workmanship and plant equipment are the same as you will find in the plants manufacturing the highest-grade automobiles. The features that have made possible the reputation of the Best Tracklayer for power, dependability, long life and low cost of operation are described in our complete catalog. If you are interested in tractors we will be glad to send you this book. Write us.

C. L. Best Gas Traction Co.

SAN LEANDRO CALIFORNIA

BURY WATER PIPE DEEPER.

(Written for Pacific Rural Press.)

Steel irrigation pipe is expensive and hard to get. Prices have not gone up appreciably; but according to D. L. Johnston of the Pacific Pipe Co., who have had contracts with mills and have been well supplied, the mills are refusing to quote prices on future shipments and such prices are likely to go up this fall, partially on account of increase in transportation rates.

Redwood pipe are much cheaper than steel pipe and are practically permanent so long as they are kept wet. But their inability to be satisfactorily repaired after once drying out counterbalances more or less of their advantage in first cost where they may be subjected to intermittent drying and wetting.

Cement pipe are more expensive than ever on account of the rise in prices and materials.

With any kind of pipe except the movable surface disjointable type there is too much money invested to allow any small neglect in placing them to multiply their deterioration. They must be buried deep. Loosely it may be said that a dollar spent in doubling the depth will save two dollars later in digging alone to replace pipe prematurely destroyed because of shallow burial; and the cost of new pipe then is that much added loss.

Mr. Johnston recalls a case where his company took up about ten miles of six-inch riveted steel pipe, part of which had been buried about a foot and part of which had been buried about three feet. The latter was in perfect condition two years after it was laid and the tar was still on it; while the pipe buried only a foot deep was roughened and pitted by electrolysis and rust on the upper surface. Mr. Johnston believes that steel pipe buried under two feet of dirt will last at least one-fourth longer than if buried only one foot, but he recommends at least 18 inches depth.

Deep burial not only seems to avoid electrolysis, but it also removes the pipe from changes of temperature which expand and contract, buckle and warp and crack pipe long exposed. Changes of temperature and moisture are both minimized at greater depths than pipe are ordinarily laid in California. Deep laying minimizes expansion and contraction of steel and cement pipe; it reduces alternate drying and wetting of the outside of wooden pipe with its alternate swelling and cracking; and it prevents wooden pipe from becoming useless so soon when water is accidentally withheld from them. Deep laying reduces the weathering and the damage from shocks to which concrete pipe are subjected on the surface, and it minimizes or entirely avoids the contraction cracks. In case of the throbbing of pumped water through pipes, the joints weaken and leak too soon unless supported as they are by the dirt when buried deep. In San Francisco, pressure pipe are laid with their joints surrounded by concrete blocks poured in place to add that support to what the sandy subsoil could give. So the money invested in digging a foot deeper before laying underground pipe of any kind is likely to prove one of the most profitable investments on the ranch.

IRRIGATION SUFFERS FOR POWER SHORTAGE.

(Written for Pacific Rural Press.)

A prospective car shortage is not the only trouble now confronting the fruit growers. We learned today from one of the large orchardists of the State, whose ranch is equipped with an up-to-date irrigation system, the water pumped from wells by electric power, that he had been notified by the power company who was supplying him with power that he would have to cease pumping, as all power companies are now forced to conserve all power possible for actual necessities. The writer is familiar with the conditions on this ranch, and we know that if the cherry orchard, which has been regularly irrigated through the season, is deprived of an irrigation during the month of September, the owner stands to lose heavily. The trees have taken on a vigorous growth, and the buds are now in a state of development, and should they be deprived of this September irrigation there is grave danger of their being blighted to the extent that they will dry out, and further development will cease, which would be disastrous, to say the least. We see no way out of the dilemma should the trees be deprived of what we believe to be of great necessity.

We are of the opinion that should the power companies place an embargo on the apparently indiscriminate waste of so much power, allowing such to be used where it is most needed and will do the most good, there will be little inconvenience and loss compared to what will happen in many cases if such is not properly handled. When an orchard has been irrigated from its infancy, a lack of irrigation at the proper time will damage the trees to such an extent that they will suffer from the effects for years to come and the possibilities are they may never recover to the extent of becoming perfect trees again.

SMALL TRACTOR—BIG WORK

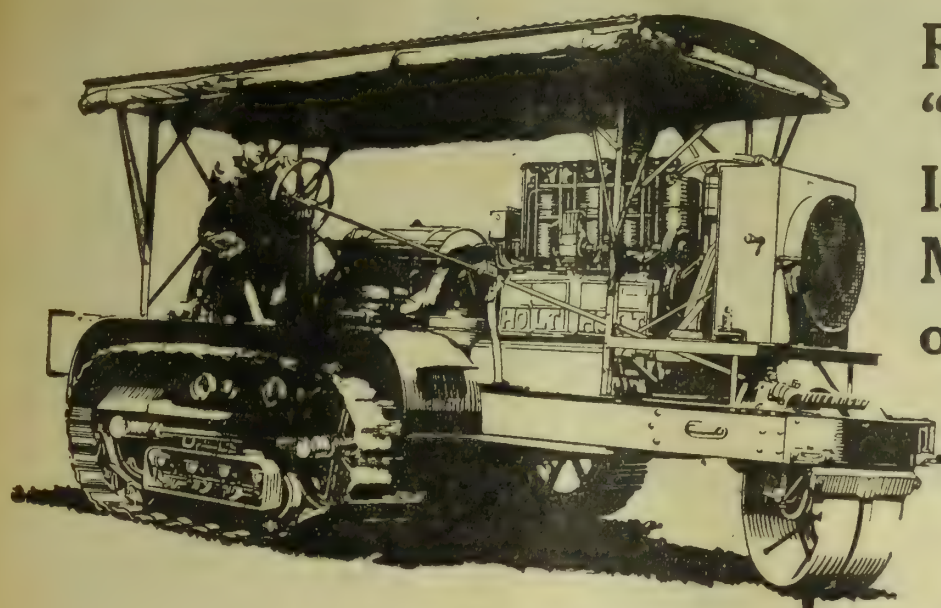
In six and a half months D. W. Randolph of Orange County plowed about 100 acres of orchard, disked about 200 acres, harrowed 100 acres, dragged 100 acres, and cultivated 30 acres of interplanted Lima beans with a 2-wheel 9-18 tractor and implements in which the total investment was about $2,000. Mr. Randolph had driven an automobile before the tractor was purchased; but he soon found that a tractor requires different care from an automobile, because it is working near 100 percent capacity all the time. Nevertheless, his only trouble was at the beginning, when the engine carbonized on account of using too much oil. He also had troubles starting the engine on bum gasoline. That was because he did not adjust the carburetor for a richer mixture when starting cold. Now he does adjust the carburetor and his starting troubles have gone. Lugs on the wheels project three or four inches, and did catch limbs of trees until he put on sheetiron fenders over them. A 2-row cultivator combined with the tractor enables Mr. Randolph to cultivate his own 10-acre orchard interplanted to Lima beans, in three-quarters of a day. It is only necessary to watch the outside of the right wheel, drive the tractor with his hands, and guide the cultivator with his feet. Even at the bginning it was seldom that any plants were unintentionally cultivated out.

MORE RESERVE POWER IN TRACTORS.

Manufacturers ought to design and build tractors so that no part would be strained when the machine is working up to its rated capacity, says A. W. Hudson, a tractor dealer of Southern California. Various parts should be proportioned according to the strains to be endured, and the horsepower rating should allow considerable reserve. This is done on some tractors, but in certain university tests others of the tractors failed to develop their rated belt power and some of them worked their maximum to develop their rating. The safe rating is one that gives at least ten per cent greater maximum power. Some tractors have developed maximum power 65 and 70 per cent greater than their rated loads. These engines should stand up under any reasonable service; while those which must do their best to equal their rating are likely to go to pieces quickly in the hands of farmers.

A potato-digging machine is declared by W. P. Whitsett of Los Angeles County to be an absolute necessity. Not enough labor could be obtained to dig his crops; and the machine leaves the ground deeply worked, smooth and soft. Vines are generally so big that coulters are used, and even then it is often necessary to pull vines ahead of the digger.

How Much Power Do You Need?



Remember This— "Caterpillar" 75 Tractor Is by Far the Most Powerful Tractor on the Market Today

Don't underestimate your power needs. Don't try to do heavy tractive work with inadequate power. Overloading causes 60% of all upkeep expense. Eliminate that 60%. Buy a "Caterpillar" 75 Tractor—a machine with plenty of power for pulling an 11½-foot land leveler, the biggest size ground drive harvesters, a subsoiler or deep tillage plows, absolutely without danger or fear of overloading.

Remember that the extra big power of the "75" entails little additional first cost or operating expense and no extra labor or maintenance cost. Every week in the year there are times when you'll wish you had that extra power. *Play safe on power*, as well as on service, on durability, on performance—make your choice a tractor of proved performance—the "Caterpillar" 75 Tractor.

"Caterpillar" 75 Tractor stands first in power—it has become the standard machine for deep plowing, subsoiling, chiseling, leveling and other heavy work.

It stands first in economy, using less fuel and oil than other tractors of considerably less horsepower.

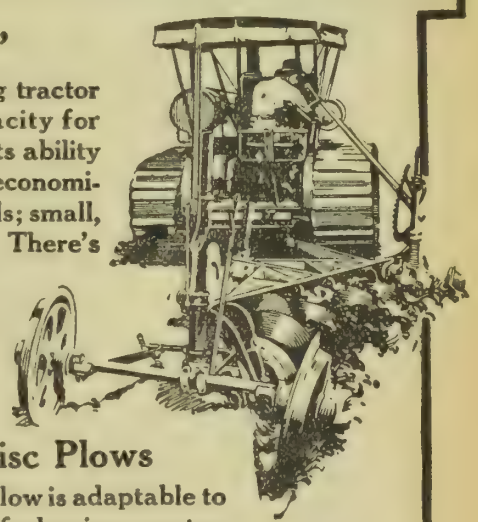
It stands first in accomplishment—results behind the drawbar. It is geared right—on direct drive it handles a big width of plows at the proper plowing speed.

It stands first in accessibility—a more important advantage than most people realize, for in the course of a year it means a considerable saving of the time necessary for cleaning, oiling, adjusting, etc.

"Caterpillar" 75 Tractor works on any ground surface without power-loss due to slippage. It turns as short as the implements can follow. Its durability is proved by the fact that the first "75s" built, seven years ago, are still in successful service. It is backed by *real* factory service, that insures success and eliminates delays in the field. It is built better, especially since the adoption of rigid Government standards during the war, than any other tractor.

You can get immediate delivery of a "Caterpillar" 75 Tractor if you place your order without delay. Buy now and be equipped to do your work properly, economically, quickly.

The "45"



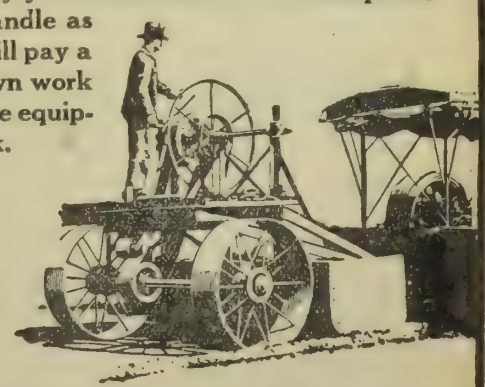
The "45" is a big tractor in power and capacity for work—a small tractor in its ability to do the light power jobs economically and to work in orchards; small, irregular shaped fields, etc. There's a special low-built, shield-protected model for orchard work that every orchardist should investigate.

"Caterpillar" Disc Plows

The "Caterpillar" Disc Plow is adaptable to every kind and condition of plowing—extra deep plowing, soft land, Bermuda grass, side-hills—convertible into a moldboard plow if desired. The only four wheel plow built. The only plow that positively overcomes side draft. Plows any width without running the tractor on plowed ground. Besides all these features it has the strength and durability that eliminate breakdowns and delays in the field.

"Caterpillar" Land Levelers

Here is a tool that will do your leveling at minimum cost and in just the way you want it done. It's as simple as an anvil, as easy to handle as a wheelbarrow. It will pay a big dividend in your own work and is highly profitable equipment for contract work.



THERE'S ONLY ONE

CATERPILLAR

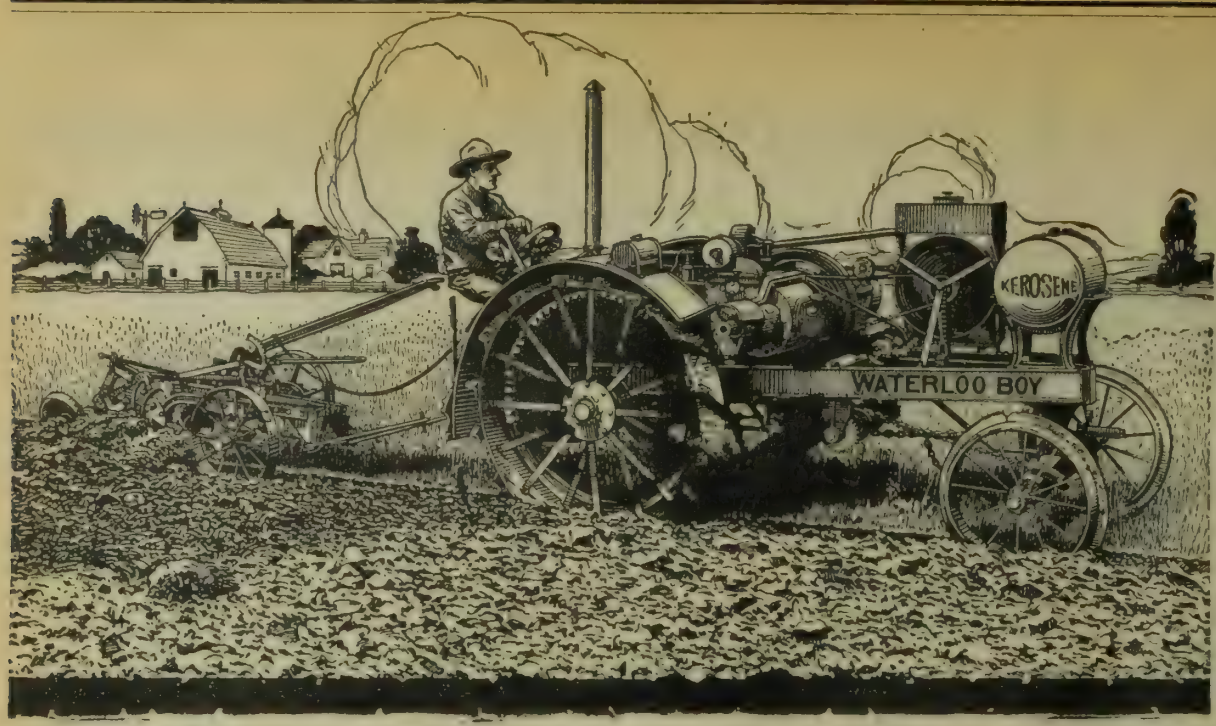
HOLT BUILDS IT

The Holt Manufacturing Company

Stockton, California — San Francisco, Balboa Building

Peoria, Illinois — Los Angeles, 117 So. Los Angeles St.

REPRESENTATION IN EVERY PART OF THE WORLD



Power You Can Rely Upon

To make you the most profit, each of your different farm operations must be timely. Often weather conditions call for extraordinary effort. It is then that you can count on the dependability and rugged power of the Waterloo Boy.

WATERLOO BOY
BURNS KEROSENE COMPLETELY

It gives you dependable service at small operating cost. Its twin-cylinder engine develops full 12 H. P. at the drawbar and 25 H. P. on the belt, using kerosene as a fuel. A patented manifold converts every drop of this low-priced fuel into power. Two gallons of kerosene per acre is the average amount used when plowing.

The cooling system always holds the engine at the proper temperature. While the motor runs at the right temperature for perfect lubrication, enough heat is maintained to insure complete combustion and full power. The radiator holds thirteen gallons of water. You don't have to stop in the field every few hours and fill it.

The Waterloo Boy is especially strong and rugged. Its various parts are designed to meet every possible strain. Every part is easy to get at. The engine runs without vibration. Its well-balanced weight provides proper traction in soft ground.

Buying a tractor is an important investment. We have a booklet describing the Waterloo Boy fully. Drop us a postal card or letter today. Address John Deere, Moline, Illinois, and ask for booklet WB-5 38

JOHN DEERE
JOHN DEERE MOLINE, ILL.
THE TRADE MARK OF QUALITY MADE FAMOUS BY GOOD IMPLEMENTS

MARIOUT BARLEY SEED
FOR SALE

This seed yielded twice as much as common barley on my ranch this year.

Have a few hundred sacks of good clean seed left. Order early.

Julius Trescony, - San Lucas.

Want to Be a Salesman? **Write Parks Bros.**

Lou's Best Girl

"I sold Watkins' line six years. Then my wife fell sick. Misfortune came with a rush. I went broke. I read this ad: 'Wanted—Salesmen to sell Parks Bros.' Quality Groceries Wholesale to Farmers. Goods Guaranteed "Satisfaction or Money Back." 20 per cent saved.' I got the job. First year I made $2,822; second year $3,234; third year, $3,654. My Best Girl is now well and happy. Comfortable home. Making money. She says, 'Lou, you've got the best job in the the world.'" Another man like Lou can get a job. Do you want it? Full time work only. Tell me your age, experience, occupation for five years past.

P. R. H. HUNTTING, Care Parks Bros., Portland, Oregon.

(Read "Harry's New Job," next issue.)

AGRICULTURAL AND MECHANICAL SERVICE

Over 17,000 Tractors in State.

Please give the actual number of tractors in California, by counties if possible.—Subscriber, Sonoma County.

The best figures existing on this subject are those recently compiled by the Standard Oil Co., each of whose various substations throughout the State keeps accurate information regarding the tractors in its field. Their fields are not bounded by county lines; but they cover the State, and their total is as accurate as a compilation of this size can be expected. From their reports, the number of tractors in each county has been worked out in a way which is not far from exact in any case. Tractors in California August 1, 1920:

County	Number of tractors	County	Number of tractors
Alameda	134	Orange	1241
Amador	2	Placer	85
Butte	478	Riverside	594
Calaveras	8	Sacramento	622
Colusa	276	San Benito	169
Contra Costa	154	San Bernardino	397
Del Norte	4	San Diego	255
El Dorado	9	San Joaquin	655
Fresno	1010	San Luis Obispo	246
Glenn	318	San Mateo	55
Humboldt	84	Santa Barbara	572
Imperial	804	Santa Clara	649
Inyo	37	Santa Cruz	114
Kern	499	Shasta	60
Kings	353	Siskiyou	39
Lake	16	Solano	368
Lassen	52	Sonoma	431
Los Angeles	1668	Stanislaus	498
Madera	245	Sutter	382
Marin	13	Tehama	157
Mendocino	78	Tulare	1410
Merced	331	Tuolumne	6
Modoc	64	Ventura	392
Monterey	241	Yolo	768
Napa	162	Yuba	170
Nevada	6		
		Total	17,380

This indicates that Los Angeles county leads in number of tractors, Tulare, Orange, and Fresno following with over 1000 each. Alpine, Mariposa, Mono, Plumas, San Francisco, Sierra, and Trinity counties are not recorded as having any. These are the most mountainous counties of the State. It is interesting to note that Imperial county, which has a reputation for the warmest summers of any county in the State, is not far from the 1000 mark herself. Apparently the ranchers there believe that tractors stand hot weather pretty well. Stanislaus, San Joaquin, Sacramento, and Yolo counties, thickly populated with farmers but rather thinly "populated" with tractors, should offer an inviting field for the tractor salesman.

Quit Lifting the Gate.

A cheap but conveniently opened big swinging gate was recently observed on the ranch of R. B. Wardlow in Riverside county. It is built like an ordinary panel gate with the following differences: Its pivotal end is a vertical 4x4 extending a few inches above the top panel. It is rounded at the lower end which rests in a bowl-shaped iron. The central vertical brace of the gate extends a few inches

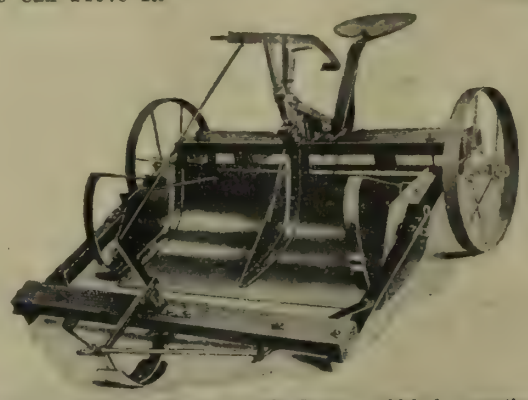
RHUBARB Wagner's GIANT

PLANT NOW—August is a good month to plant. Growers who planted last July and August have already harvested over 15 tons per acre, netting $1,000 eleven months from planting. For further information, write J. B. WAGNER, Rhubarb Specialist, 1550 East Villa Street, Pasadena, Cal.

THE MISKIN SCRAPER

IS THE BEST SCRAPER ON EARTH

And We Can Prove It. **Write for Circulars.**



The above is a cut of the Famous Miskin Scraper, which in operation, easy draft, greater capacity, and better work, has many advantages over common Fresno and wheel scrapers now on market. Made in 2-horse, 3-horse, and 4-horse sizes. The four-horse size can be operated by small tractors from the tractor seat, by tractor driver.

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above the top board. From its upper end to the upper corner of the swinging end of the gate a light board helps carry the weight. From the top end of the central brace to the top of the pivotal 4x4 and eight or nine feet beyond is a moderately heavy pole fastened solid to the 4x4. The extension of the pole passes directly over the top of a squared-off fencepost anchored beside the 4x4. Through the pole and into the top of this fence post is a vertical pin on which the gate swings. The pole extension and any weight which might be hung on it counterbalance the weight of the gate and permit it to swing easily.

Regulates Flow into Furrows.

In running a certain head of water down several furrows, one furrow may get more than its share unless precautions are taken. To reduce the flow by shoveling in some dirt doesn't work well in light soil because it soon washes out. A piece of gunny-sacking at the head of the furrow with some dirt thrown on it is found quite handy in regulating the flow. Let the sacking double back over the dirt, if necessary.

Heavy Feed on White Sand.

A remarkable growth of cattle feed on white pure sand was the filaree crop that grew on about two acres in Los Angeles county last spring. It was brown and dry in July, covering the sand in rough masses like clover hay eight to twelve inches deep. Seed was being gathered by one man from this patch to sow on the hills.

CULTURAL PREFERENCES OF KIDNEYS.

Last year Mr. La Forge's bean ground was chiseled only, and a disk planter covered about 40 pounds per acre with dry sand, finishing May 17. As the beans are rather hard shelled, they made a poor stand. This year a shoe planter put them into moist sand. This brought them up in about eight days—several times as long as it took blackeyes to get out of the ground. Two weeks of cold weather enabled cut worms to cut the stand to 80 per cent. This convinced the growers that planting should be delayed until June 1 to avoid the cold and should be a little thicker to compensate for loss by cutworms. Rows are 24 inches apart, as the bushes do not spread greatly and should be close enough to shade the ground after late irrigations when cultivation becomes impracticable.

The soil is kept moist. It was furrowed for irrigation when the beans were three inches tall. Five irrigations were applied last year and four had been applied before July 15 this year. Three cultivations were given with the ditcher before the bushes interfered too much. No attention is paid to irrigation with respect to blooming time, but one irrigation is aimed to help the pods form and another is intended to fill them out, in order to avoid having partially developed beans at both ends of the pods. A stream of 180 inches is constantly running through the rows. It takes about 14 days to irrigate the entire field. Then it is started across again.

"MADERA" IS NOT "MEDANO."

To the Editor: In your editorial "Back and Forth on Irrigation," in the issue of August 14, you state that among the irrigation districts killed by the recent supreme court decision are the "Madero" and Webster" districts. There was a "Medano" district formed under the so-called State Act, but due doubtless to the similarity of the names you confused it with the Madera district. The Webster district is a Wright Act district, formed nearly four years ago, and is located in Madera county.

The supreme court decision to which you refer was brought about directly by the action of the Madera district, which included in its boundaries some lands of Miller & Lux and a man named Mordecai, which they sought to form into districts under the State Act; the decision confirms the action of the board of supervisors in including the land and practically establishes the legality of our disdistrict.—David R. Hanhart, Secretary.

Delivering full Power from Your Fordson

The supreme duty of the tractor belt for your Fordson is to deliver in the greatest degree the *full* power of the tractor motor to the belt machine

A considerable wastage of power through slippage, often leads the Fordson owner to imagine his tractor is not developing its rated horse-power. But the Little Giant tractor belt, because it eliminates all this wastage, has been specially designed for the Fordson.

First, it is designed to maintain a clinging grip on the pulley, because the slip-proof belt not only prevents loss of power through slippage, but also the serious wear to the belt that slipping causes.

Second, it is built to withstand the effects of rain, snow, heat, cold and the abuse that every farm tractor belt must meet.

It is an endless canvas belt, made of four folds of a single piece of highest grade, heaviest weight canvas duck, stitched as a belt has never been stitched before, and specially treated to give increased toughness and wearability. Double stitching at the edges, an exclusive feature of this belt, eliminates edge wear.

Your Fordson dealer has a stock of Little Giant belts in three lengths—50 ft., 75 ft. and 100 ft. If you are buying a Fordson, get a Little Giant belt at the same time—if you are now a Fordson owner, insure your tractor's maximum performance on the belt by using a Little Giant.

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Farm Land at $15 to $30 an Acre

located near thriving towns, good markets, railways—land of a kind which grows **20 to 45 bushels of wheat to the acre.** Good grazing lands at low prices convenient to your grain farm enable you to reap the **profits from stock raising and dairying.**

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For illustrated literature, maps, description of farm opportunities in Manitoba, Saskatchewan and Alberta, reduced railroad rates, etc., write Department of Immigration, Ottawa, Canada, or

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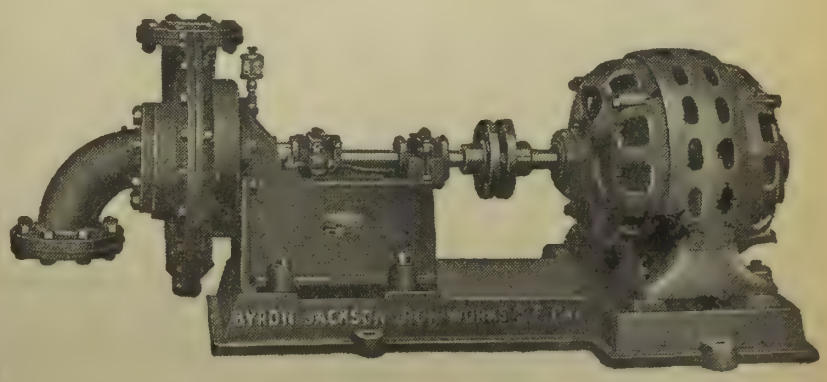
Is your soil producing the maximum?

"BYRON JACKSON" PUMPS are built to meet every condition of "supply and demand" on your ranch.



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New Catalog No. 60-A for the asking.

BYRON JACKSON IRON WORKS, Inc.

LOS ANGELES SAN FRANCISCO VISALIA

Federation of American Farmers.

A meeting of the State Board of Directors of the Federation of American Farmers was held in the F. & M. Bank Bldg., Stockton, August 23, State Chairman McDonald presiding.

Roll call showed a full board present. Wm. Thomas appeared for San Joaquin, L. B. Sammis for Calaveras, H. K. Smith for Stanislaus, and H. Hewitt for Sacramento. Delegations of members from San Joaquin, Calaveras and Stanislaus counties were present, as were many prominent farmers from Alameda and Contra Costa counties. These interested spectators, being called upon to express their sentiments on matters under discussion, responded with enlightening addresses which were closely listened to by the board and aided largely in arriving at conclusions

The hydro-electric power situation in California was discussed and resolutions were proposed and unanimously adopted pledging the membership of the organization to strict economy in the use of power and calling upon the officials of all cities and incorporated towns to do all in their power to carry out the orders of the State Power Administrator, by cutting off street and advertising signs and other non-essential uses of electric power.

The matter of gold dredging was brought up by Mr. Hewitt, of Sacramento, supported by Stanislaus and Calaveras, and he stated that the destruction of productive lands by the operation of dredgers was something enormous. He offered resolutions advocating a law which will compel dredgers to strip lands ahead of their operations and restore the soil to the devastated lands after the extraction of the gold. The resolutions were addressed to the Legislature of the State of California, and after some explanations and discussion were unanimously adopted on motion of Stanislaus, seconded by Calaveras.

The shortage of water in the Sacramento and San Joaquin rivers and the troubles of the irrigators of the upper river and the complaints of the farmers of the delta, furnished matter for discussion. Also the matter of the disastrous floods which devastate the Sacramento and San Joaquin valleys at certain seasons. The discussion of these matters resulted in the drafting of resolutions calling upon the legislature to empower and authorize the State Engineering Department to make an exhaustive investigation and survey of the water resources of the State and to make the necessary appropriations for this great work. Further it was recommended that the State, either by itself or with the aid of the Federal Government, build protective dams and locks, reservoirs for flood protection, irrigation canals, power houses and transmission lines —all for the best interests of the people of this commonwealth.

Chairman McDonald appointed a committee consisting of H. Hewitt, of Sacramento, and D. O. Castle, of San Joaquin, to make a further investigation of water matters and report to the State Board of Directors at the next regular meeting.

The ownership of sacks as containers of grain and other farm products came up for discussion and was threshed out in all its bearings. This has been a sore spot with grain farmers for a long time. The discussion ended when Chairman McDonald appointed a committee consisting of Chairman Thomas and Secretary Riddell, of the San Joaquin county unit, to thoroughly investigate the matter, with power to act, if action is considered necessary.

Communications were read from Congressmen Chas. F. Curry, William Kettner, H. E. Barbour, Julius Kahn, Clarence E. Lea, Henry Z. Osborne and John E. Raker, from the U. S. Secretary of State, Senator Hiram W. Johnson, Governor William D. Stephens and the California Oriental Exclusion League, acknowledging the receipt of copies of the Federation of American Farmers' resolutions on the Japanese question. Most of these letters endorsed the resolutions and promised support for the same.

Letters of inquiry regarding the federation were read and the secretary was instructed to forward to the inquirers literature bearing on the subject and instructions as to the methods of organizing units of the federation. These letters came from widely separate sources, including Glenn, Kings, Santa Cruz, San Luis Obispo and Merced counties.

The matter of increasing the number of signatures necessary to get an initiative measure on the ballot came up for discussion, in the course of which it was pointed out that certain mischievous measures appeared on the ballot at every succeeding election, though disastrously defeated by increasing majorities from year to year.

IRRIGATING PUMPS

Single Stage Motor Driven Pump

KROGH PUMPS absolutely hydraulically and automatically water balanced. No end thrust whatsoever.
Also DEEP WELL TURBINE PUMPS for bored wells 10-inch diameter and up.
Write for Bulletins
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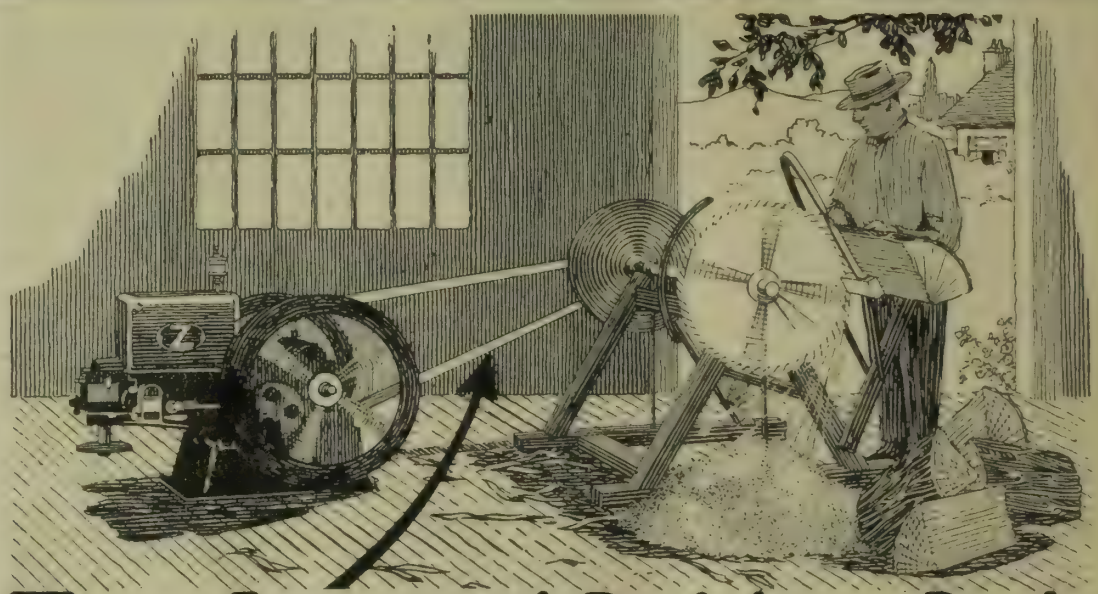

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There are dozens of odd jobs about the farm where the "Test Special" shows its real worth.

On the long, hard pull or on the fast, short drive it stands unexcelled.

It is a rubber belt of real merit and guaranteed to give longer and better service than any other if used under same conditions.

See your Dealer.

Any Dealer anywhere can buy "Test Special."

WRITE TODAY, giving the R.P.M. and diameter of the driving pulley—also driven pulley and distance between centers of same; also give the rated horsepower of your motor or engine, and name kind of machinery you are operating. We will reply immediately giving you our recommendation as to kind of belt to use.

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Big increase in my factory enables me to make lowest cash offer on a Drag Log Saw. Lever Control to Start or Stop Saw while engine runs. Arm Swing and Force Feed for fast cutting. Powerful 4-cycle engine with speed regulator, 5-ft. saw blade. Complete, ready to operate. $125 F. O. B. Kansas City. $6.80 extra from Pittsburgh, Pa.

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SMILO GRASS FOR DROUTH.

A row of smilo grass roots was planted late in the spring of 1919 by the Newton Bros. of Riverside county and made good growth during the summer. Last winter the stems went flat. The grass was never irrigated except a little at planting. Last July when we saw it the new growth was hip-high and seeded. Some of the prostrate old growth had sprouted numerous shoots from the joints. The leaves were dry from lack of water on the hard ground, which was sapped underneath by pepper-tree roots. A few smilo plants may be seen on the hard unwatered ground between curb and sidewalk at Eugene Spencer's place in Los Angeles, where delivery horses eat it off occasionally. This lives through the hard usage and makes some seed. Smilo surely lives through difficult drouth conditions.

GOVERNMENT INSPECTING HIGHWAYS.

Government Inspecting Hgihways.

California highways are getting such an inspection as they never had before. A corps of 50 men from the U. S. Good Roads Bureau at Washington are in the State taking a photo at every tenth mile, taking a sample of the surface every half mile, and stationing men at the worst worn points to count the traffic and estimate the tonnages passing over them. Their conclusions will be very interesting to the people, who are soon to vote on the question of making available over $35,000,000 for more highways of the same kind with extra strength supplied by steel reinforcement. The Government men are here at the invitation of the California Highway Commission.

BEETS BETTER THAN LAST YEAR.

About 400 acres of sugar beets in Arroyo Grande Valley of San Luis Obispo county are thrifty growing into a tonnage which surpasses much of that in the more southerly beet territory. I. A. Loomis states that the yield last year averaged 20 tons per acre, ranging up to 30 tons; and that it ought to be at least equally good this year, because the beets are not diseased as they were in 1919. They look better than a year ago in spite of shorter moisture.

MODESTO DISTRICT CROP ACREAGES.

Recently completed figures on crop acreages in the Modesto Irrigation District show 58,823 acres irrigated, 7,672 acres second-cropped, and 10,733 acres dry-farmed. Alfalfa occupies, 22,579 acres; trees, 5.470 acres; vines, 2,280 acres; main-crop beans, 3,566; second-crop beans, 6,172,; corn, first crop, 3,164, and second-crop, 1,500; irrigated grain, 19,178, and dry-farmed grain, 10,733. There are 1,543 acres of rice in the district this year.

LIME WORKS IF MIXED WITH SOIL.

Lime has no effect on soil unless mixed with it mechanically or by washing downward. It does not chemically penetrate clay, adobe, etc., farther than the particles next to it. This fact indicates that the way to get benefit from lime is to apply it evenly in finely ground or powdered form, and to work it up with the soil as deeply as possible. Then the percolation of moisture may carry some lime still farther downward.

One gallon of waterglass will make solution enough to preserve fifty to sixty dozen eggs, says the Nebraska College of Agriculture, which is urging people to store eggs for next winter. The solution is made up of one part waterglass to nine parts pure water. Boil the water and allow it to cool before adding the waterglass. The containers should be either earthenware or wooden pails and should have covers. Storage should be made in a cool and well-ventilated place.

Bulls over one year old without rings in their noses are excluded from the show-ring by most fair associations, and rightfully so.

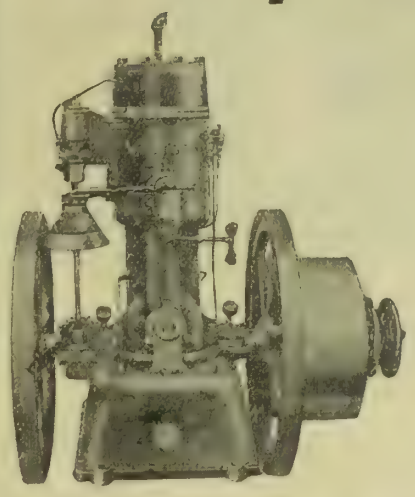
SEE THE

Victory Oil Motor

AT THE

FRESNO FAIR

September 28 October 2



This Engine runs on Low-Grade Fuel Oil with Less Care and with Greater Economy.

If you are figuring on a Pumping Plant or other power for your farm you owe it to yourself to investigate this Motor.

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GET A WADE BEAN THRESHER

Buy the Thresher built especially for the man who wants a machine for his own crops. You do not have to thresh with the Wade "by the day" to make it pay for itself and a good profit besides.

Built for Western Conditions

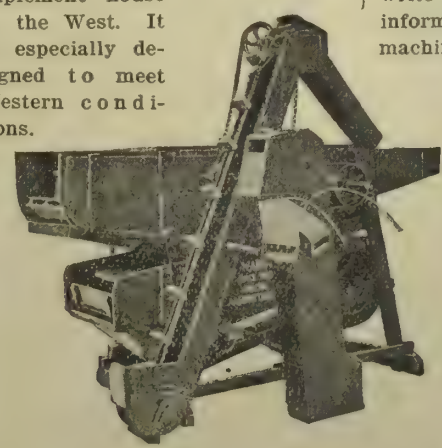
The Wade Thresher is manufactured by R. M. Wade & Company, Portland, the oldest agricultural implement house in the West. It is especially designed to meet Western conditions.

Plenty of Separation Surface

The Wade has plenty of separation surface and strong, well-controlled air current. Doesn't crack the kernels. Built of best materials throughout. Threshes beans, peas, China peas, lentils, Soy beans, vetch, or other legumes. Capacity 20 to 35 bushels per hour.

Write for Descriptive folder

If your dealer hasn't the Wade write us for literature and full information on this wonderful machine. Use the coupon.



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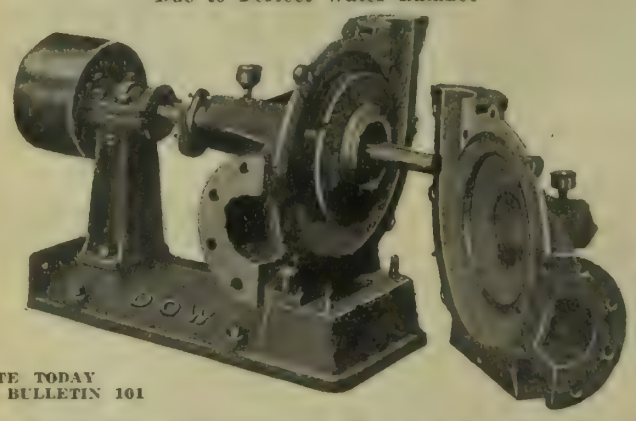
HANDLES LARGEST QUANTITY AT LOWEST COST
Due to Perfect Water Balance



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Significant Agricultural Pointers

Spanish Onions Becoming Popular.

"Spanish sweet onions" have created quite a stir in Southern California in the past two or three years. They are not sweet like sugar; their "sweetness" consists in the absence of the pungency which travels through your nose and moistens your eyes. They are claimed by one of the growers, D. E. Furrow of Riverside county, to be better keepers, better on the market, and better in every way than Bermuda onions; and better yielders than any other variety in Southern California. Mr. Furrow took first prize on these onions at the Riverside Fair last year.

While growing, they are "hot" like the common varieties, but in most of them the hotness disappears at maturity. They can be eaten raw almost like apples, but after cooking are not greatly superior to common onions. Their popularity with consumers is evidenced by the fact that last year they retailed at three pounds for 25 cents while other varieties were selling at four pounds for 25 cents. Mr. Furrow sold all he had to spare last year to local stores in August and September when other varieties were glutting the market.

An acre yielded six tons with a poor stand. A good stand this year on about two acres is yielding about ten tons per acre. They are about the largest sized onions commercially grown, averaging about 3½ inches in diameter when mature. Several of those raised last year weighed one and a half pounds each. The bulbs are the shape of slightly flattened globes, of a straw color, neither white nor yellow, but very attractive. Mr. Furrow kept them for table use all winter. Seed planted late last February had grown by mid-July into onions many of which were three inches in diameter with a third more yet to grow. The tops were green, tall, and stiff. At maturity they get limber just above the bulb and fall over. That is the time to pull them. Then, when all moisture has dried from their outsides, store them in shallow bins. If the soil is moist at maturity they must be protected from sunburn while drying off, by so windrowing them that tops shade the bulbs. Planting early in February would give bigger onions, thinks Mr. Furrow. He drilled the seed in field form in rows about 16 inches apart, aiming to have the onions finally stand about four inches apart in rows. This variety does not seed in the U. S. except in Southern California. Quantities of seed and bulbs have been imported annually from Spain for Eastern markets, but the variety did not attract notice in California until about three years ago. Mr. Furrow is raising seed this year from the prize onions he grew last year.

Sixteen Months' Bean Prices.

Average market prices for choice recleaned beans of seven varieties since May, 1919, have been charted by the California Bean Growers' Association for each month including August, 1920. During that period, large whites have averaged a zigzag course between six and seven cents. Small whites reached their high point of about $7.75 in October, 1919, but have stayed between $5.75 and $6.50 practically ever since then. Pinks went below 6 cents only once, and never above 7 cents on the monthly averages. Red Mexican prices are recorded only since last November, when their monthly average was 7 to 7¼ cents. They rapidly climbed to 9½ cents early in June. They quickly dropped one cent during the month, and half a cent since then. Blackeyes have made a spectacular ascent from $3.25 in May, 1919, to $7.75 at the end of August, 1920, having recently been 50 cents per hundred above that. Cranberries wobbled as if they had no purpose in life and are now 75 cents higher than a year ago. Their high point came late in November at $8.25. Red kidney records commenced the first of November at a little over $13 per hundred. They had a zigzag course until last May, since when they have risen consistently from $13 to $15. These are commercially scarce and relatively unknown in California, but becoming popular in the southern part of the State.

Late Pumpkins Profitable.

Two years ago, L. W. Brown of Orange county raised stock pumpkins on a patch of heavy ground and he "could walk all over it on pumpkins." Two pigs which grew up on this feed all of last summer refused to eat grain when Mr. Brown thought to finish them up for butchering. He killed them anyway and smoked part of the meat, salted part, and had part of it fresh. It was of fine quality. The pumpkins were worth $10 per ton last year; $4 per ton the year before. Last June, after harvesting a crop of barley on rather sandy soil, he planted pumpkins in the bottoms of furrows—"the only way to plant them so late in the season." He has irrigated them through the furrows which are never completely filled up with dirt. The

vines in six weeks made eighteen inches growth and some blossoms. They shade the furrows in about ten weeks so cultivation is impossible; though irrigation is necessary about four times in a season. Seed are planted about five feet apart in furrows eight feet apart.

"Freight Cars 30 Miles a Day."

More transportation is a crying need of the hour. We have before us a notice sent out by railroad officials stating that the average load per freight car hauled in 1919 was 27.8 tons. If this were raised to 30 tons, the total ton-mileage would be increased from 395,000,000,000 to 426,000,000,000 without any other change in handling the cars. About 32% of total freight car mileage is made with empty cars. If every car were loaded to 30 tons and were moved 30 miles per day, it would increase the carrying capacity of American railroads to 553,000,000,000 ton-miles. What this extra 158,000,000,000 ton-miles would mean to American farmers need not be demonstrated to those who have been unable to sell crops because buyers could not get cars to move them.

Late Onion Acreage.

Late-onion acreage of the U. S. as reported for August by the U. S. Bureau of Crop Estimates is about 1800 greater than last year and slightly greater than 1918, but about 4,000 less than in 1917. The total for 1920 is 44,030 acres, of which California has 7,720. This State's acreage is slightly greater than last year and about 500 less than in 1917. The 1914 acreage was 9,924, which was 1424 greater than any year since then. U. S. acreage that year was over 6,000 greater than any year since. Prices this year should not be greatly different for late onions than those of last year if consuming demand shall be the same.

Clean Potatoes on Eelworm Soil.

Clean potatoes were grown this spring by Alfred Brown of San Bernardino county on land which grew potatoes "lousy with eelworm" three years ago. The intervening years had produced grain and corn. Dry plowing in hot weather being practiced. This is supposed to have killed the worms.

Before Buying Imported Alfalfa Seed.

There is an immense carry-over of imported alfalfa seed from last year; but a great deal of the latter should be planted only after an adequate test has shown it to be as free from noxious weed seed as desirable, of as high germination as the farmer wants, and of a nature to produce as much hay per season as American alfalfa. A farmer might save ten or fifteen cents a pound on seed and lose a ton per acre per season in production of hay. Or he might lose a good many days' labor fighting weeds. Or he might lose a season or two of production because of plowing up inferior alfalfa sooner than would be desirable with better strains. Inquire regarding these questions before buying imported seed; and reputable dealers will give you truthful answers so far as they know.

50% of Your Crop

LIES UNDER THE PLOW PAN

Killefer Deep Tillage

TRACTOR IMPLEMENTS

KILLEFER QUALITY K TRADE MARK
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Will Break Through That Plow Pan and Increase Your Yield

Killefer Farmers

DON'T HAVE DRY YEARS

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Our full line of Deep Tillage Implements—including
Automatic Double Discs and Cultivators
MORNING-GLORY AND JOHNSON GRASS DESTROYER.
Something New on the market.

Tractor Chisels

We will be pleased to have you make our Exhibit your headquarters while on the grounds. We will have competent men in charge, who will give you any information you may wish to know regarding our implements.

The Killefer Manufacturing Co.

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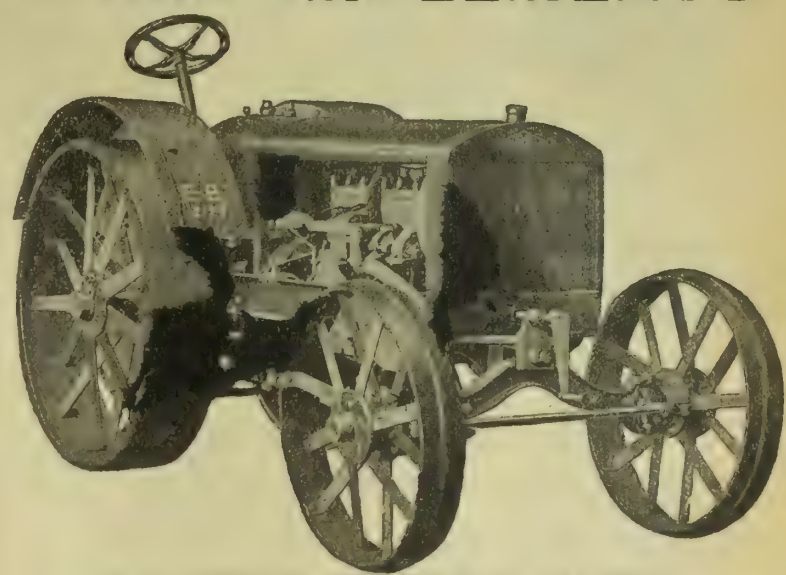
TRACTOR AND HORSE-DRAWN
FARM IMPLEMENTS



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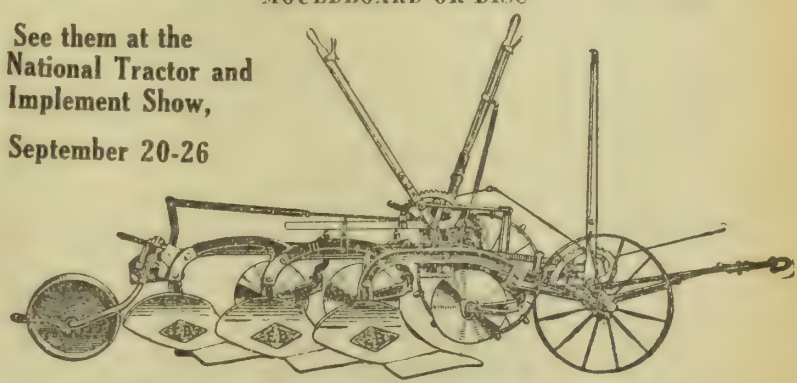
See them at the National Tractor and Implement Show, September 20-26



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RODERICK LEAN DISC HARROWS
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B. HAYMAN CO., Inc.

SINCE 1876
118-120 NORTH LOS ANGELES STREET LOS ANGELES, CALIF.

SEED WHEATS AND BARLEYS

From Farmer to Farmer

BUNYIP, BAYAH, and DART IMPERIAL SEED WHEATS

Hard White Australians; California acclimated; best milling; higher price for products.

MARIOUT and BELDI SEED BARLEYS

Large yields; quick growth; early maturity; more drouth resistant than other varieties known to us.

There is in California a very limited quantity of choice wheat and barley seed of these varieties. All our seed grown on new soils, one irrigation only. All water from deep wells; no Bermuda, Johnson or Morning Glory. Orders booked as received, shipments following consecutively.

We also have limited quantities Early Baart, Sonora, Diener's Hybrid-Baart and Diener's Hybrid Sonora Seed Wheats. This is our first year with last two varieties and data not yet sufficient to permit our making definite conclusions or recommendations. Both tiller well, permitting light planting, and neither shatters so badly as Sonora.

In our judgment Bunyip, Bayah and Dart Imperial wheats and Mariout and Beldi barleys yield more or less soil moisture and shatter less in wind than any grains we have grown.

We are also now booking cotton seed orders for late fall and winter delivery. Pure strains, Durango and Mebane, grown by us in selected, hand-rogued fields. We do our own ginning, carefully avoiding seed mixing. We invite trial of our seeds for results with less moisture.

Write for prices, stating quantity desired.

BOSTON LAND COMPANY

Post-office, Telegraph, Express and Freight Address:
WESTHAVEN, FRESNO COUNTY, CALIFORNIA.

DELTA LAND WITH BEACH CLIMATE

75 ACRES for sale at $300.00 per acre. $12,500 cash, balance 4½ years at 6 per cent. Perfectly level, rich sedimentary soil. About half now in celery. 10 or 15 acres just cleared and being prepared for 300-sack potato crop. Balance in light willows and tules. Drainage provided. 3 miles from Watsonville, and adjoins railroad siding. Inquire McLean Place.

FARM AND FOREST REALTY CO., WATSONVILLE, CALIF.

The FRUIT GROWER says=

"for tree planting genuine GIANT is most satisfactory"

The Giant Farm Powders—Eureka Stumping and Giant Stumping—loosen and pulverize the soil instead of packing it and throwing it high in the air.

Western fruit growers have used hundreds of tons of these Giant Powders for blasting beds for trees. They have proved that blasting with genuine Giant Powders provides free drainage, increases moisture-storage capacity and insures vigorous growth and early bearing.

"My trees planted three years ago in beds blasted with Giant Powder are 75 to 100 per cent bigger and better than the trees that I planted in dug holes," writes H. H. Smith, Oregon City.

You will enjoy reading "Better Farming with Giant Farm Powders." It describes all the new and money-saving methods of blasting beds for trees, subsoiling established groves and orchards, clearing land, ditching, etc. Write for it now.

THE GIANT POWDER CO., CON.
"Everything for Blasting"
216 First National Bank Bldg., San Francisco. Branch Offices: Butte, Denver, Los Angeles, Portland, Salt Lake City, Seattle, Spokane.

STUMPING GIANT FARM POWDERS EUREKA

BROEDEL AUTO TRAILERS ORCHARD TRUCKS

I am now building into auto trailers the same wear-resisting qualities that have made the Broedel Orchard Truck the Standard for over 25 years.

MOTOR TRUCK BODIES BUILT TO ORDER

Write or Call

M. BROEDEL, - 552-558 SO. FIRST STREET SAN JOSE, CALIF.

FRUIT TREES and ORNAMENTALS for 1921 PLANTING

WRITE FOR OUR NEW PRICE LIST

There will be a decided shortage of Fruit Trees again this year. We therefore advise our customers to place their orders as soon as possible in order that the stock may be reserved for them before the supply is exhausted.

We wish to call particular attention to our Improved French Prune and the New Double X Prune.

CALIFORNIA NURSERY COMPANY
NILES, CALIFORNIA

Deficiency of Car Accommodation.

(Written for Pacific Rural Press by W. S. Killingsworth.)

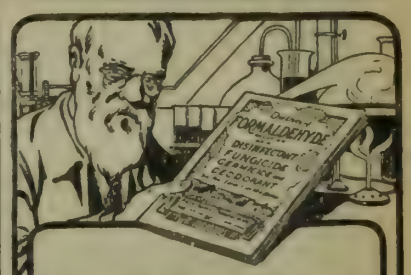
A crisis too serious to contemplate would it be, should just at this time there occur a refrigerator-car shortage of any real proportion. With the splendid prospect of a grand and glorious wind-up of th 1920 fruit season two calamities, not improbable, are to be watched with fear and trembling — refrigerator-car shortage and rain. We are not forecasting either or both of such; however, it is well to be prepared, as it is invariably the unexpected that always happens. We have heard rumors of an expected car shortage, but with the additional number of cars that have been pressed into service, the property of other railroads, we are not allowing ourself to grow pessimistic over the thought that the worst is yet to come. It does seem, however, that the transportation companies with the cards before them, face up, could regulate traffic in such a manner that there would be a supply of cars on hand throughout the entire season. There is no cry of car shortage, as a rule, until the grape-shipping season begins. During the entire shipment of tree fruits there was no shortage of a serious consequence. There was a temporary shortage on one or two occasions, but they were soon relieved. Unless the cars are being held in other fruit-producing sections of the United States, for the relief of those sections, action should be taken by the proper authorities to force the transportation companies to place a sufficient number of cars at the disposal of the California fruit growers.

There is not the tonnage of the actual perishable commodities going forward, outside of California, now that there was two or three months ago. At that time more than half of the states were shipping perishable fruits, such as strawberries, cherries and peaches. Practically all of those fruits have been marketed. The remaining fruits, such as pears, apples, and possibly a few late peaches yet to go from the South, East and middle West, could be transported in ventilator fruit cars, and the territory in California that is in great need of the very best refrigerator service that can be had would be supplied, and the vast amount of perishable tonnage now awaiting shipment would be saved, and return to the growers of California a sum that is really incalculable.

We have nothing but the best of feeling for the refrigerator-car lines; we number among our best friends some of the powers that be, connected with those lines. However, there are a few of us left who know that at one time such a thing as refrigerator-car shortage was unknown in California, and we will not hesitate to say why there was no shortage. It was because those car lines were owned and their routing was controlled by private individuals. The writer speaks in positive terms for one of them. For years, while he was in the employ of Edwin T. Earl, was there ever a refrigerator-car shortage? No; and we will tell why there was not. There was no time during the 24 hours of the day and night that Mr. Earl did not know within a few miles of a division point where every car he had rolling was, and it mattered not whether the car was loaded with his own fruits or the car was being used by some other shipping concern, he knew its location just the same. Immediately upon arrival at destination he was informed of such, and when that car was unloaded it came back to California direct. It wasn't sent to the four corners of the earth, loaded with tar, pitch and turpentine, hooppoles, pig iron, lumber, fertilizer, etc., and returned to California after the fruit-shipping season was over. If a car didn't return in a reasonable length of time, there was hell-a-poppin; and that's no dream, for on more occasions than one the writer happened to be in hailing distance of a conversation Mr. Earl was carrying on with higher-ups of the railroads over the phone. If such could be done then, why not now? Some will be so uncharitable as to jump all over the writer by saying, "Yes; Earl could do that, and why? Because there was not the fruit shipped that there is now by several thousand cars." Absolutely true; we admit every word of it. But there were several thousand less cars then than there are now. However, that had nothing to do with the case. It was the service Mr. Earl was getting. How did he get it? He got it by attending strictly to business, keeping his cars rolling, and not going in all directions from the point where they were needed, or standing on sidetracks loaded with some of the commodities we have heretofore mentioned.

We will go a little further into detail while we are at it. Not only did Mr. Earl know where each car was while in transit, but on his arrival at the office each morning he was informed on what sidetrack in California his cars were and the number of each car, how long it had been there, and approximately how soon it would be loaded out. The writer knows this to be true, because it was his business to secure the number of the cars, or have it done, at the station at which the packing shed he was superintending was located. Not only did we get the number of Mr. Earl's cars, but the number of the cars belonging to his car line competitors. This same story can be obtained from any of the old timers, probably a little better than we have related it. However, with all due respect to those who have the car lines in charge, we are strongly of the opinion that if Edwin T. Earl were alive today and in the fruit game and handling the transportation of it, as we knew how he did it twenty-five to thirty years ago, there would be no car shortage.

S. S. Williamson of Orange County says he has profited in buying manure at 11 cents per cubic foot to apply five or six cubic feet around each of his Valencia orange trees.



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Every farmer and his wife should read our big illustrated hand-book and learn how to scientifically treat seeds with the best and most economical disinfectant—

FORMALDEHYDE
The Farmer's Friend

Positively rids seed grain of smuts, potatoes of scab and black-leg; destroys disease germs in drains, stables, kennels, chicken houses, etc., kills flies. Endorsed by the U. S. Dep't of Agriculture for treating all seed grain. One pint bottle of *Formaldehyde* from our laboratory will treat 40 bushels of seed. Write for Book—just issued—free.

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PLANT BERRIES

Produce big crops the first year. Small Fruit prices are high and sure to continue. Order your plants from us now for Fall and Spring delivery, because plants will be scarce later.

M. J. MONIZ, Berry Specialist
Sebastopol, California

Importation of Plants Barred.

A ban has been placed upon the importation of foreign plants of whatsoever description. This ruling has been made by the Federal Horticultural Board, and on account of the ruling California will no longer be enriched through the work of the plant hunter, E. H. Wilson, of the Arnold Arborteum at Boston. Mr. Wilson is just about to embark on a long tour of the Antipodes, but instead of returning with rare plants he will confine his hunt this trip to pamphlets and horticultural writings hidden away in the botanical museums of Calcutta, Melbourne, Bombay and other cities of the Southern Hemisphere. Professor Wilson, although primarily collecting plants for New England, has made it a practice to gather flowers, fruits and vegetables and trees that inhabit warmer climes than the North Atlantic Coast. These he gives to the South and California for propagation purposes. The rule of the horticultural board, designed to keep plant insects and diseases from the United States, makes it almost impossible for anyone to bring a new plant into the United States. Gardeners, nurserymen and lovers of plants have been up in arms against the order ever since it was issued by the Government, but they have refused to rescind the order on the assumption that it is better to keep new varieties of plants out than to take a chance of filling this country with pests.

GASOLINE PIPE CHOKED.

A tractor on the Call ranch in Riverside county would start all right, but it would cough and die right away. J. H. Patten of the Corona Lemon Co. was called to fix it. He found the gasoline trap below the tank, from which the pipe led to the carbureter, pretty well filled with lint which choked off the gasoline flow. When he returned to the Corona orchard, two tractors were laid up there from the same cause. The lint came in the distillate.

Publicity Director Robson reports ⅓ more entries in the livestock department of the State Fair than ever before.

FAGEOL

WALKING TRACTOR

This tractor delivers its power direct to both wheels for pulling, and all the power to one wheel for turning. The use of a separate clutch on each wheel with a live axle, permits it to make short turns.

It works equally well in loose sand and light or muddy soils, its wedge-shaped grousers getting positive traction and quitting the soil without lifting it or allowing the tractor weight to pack it.

Exclusive Fageol Features
Increase their operating range
Reduce their operating cost

See your local dealer immediately. He has a new plan that will make delivery when you want it certain

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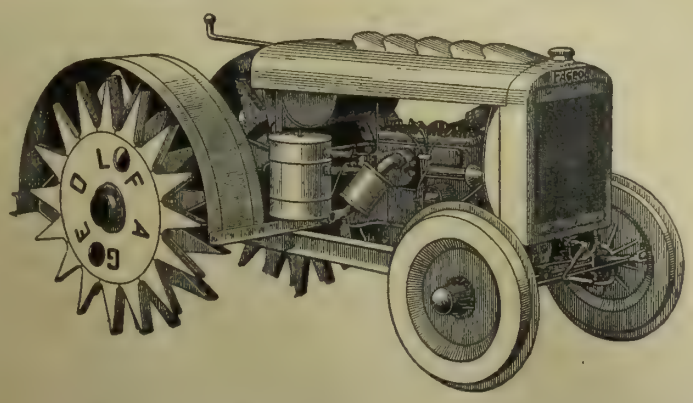
INCORPORATED
Sales Organization—Fageol Products

24th and Harrison Streets, Oakland — 1230 Market Street, San Francisco



Citrus Orchard Foreman Wanted

A competent foreman for 800 acres citrus orchard, lemons, oranges; also capable packing house manager for orange packing house. Apply with references to

JAMES MILLS ORCHARD CORPORATION
Hamilton City, California

SAVAGE

The .250-3000 Savage Bolt-Action Model 1920

HERE IT IS!

THE rifle you have always wanted—A Savage Bolt Action. It is the handiest, daintiest, most perfectly modelled little shooting-iron that a gun-crank ever got his hands on.

And it is the strongest, simplest, most dependable weapon that an explorer ever took onto an Arctic ice-floe or into a tropical jungle. And it only weighs six pounds. There's nothing patched-up about it—nothing renovated, or adapted or compromised. It isn't a cut-down musket, or a war-baby reborn.

IT IS A BRAND NEW HUNTING-RIFLE—newly designed from muzzle to butt-plate—built symmetrically around the wonderfully effective cartridge it shoots, and combining every desirable feature of the best military rifles with special refinements which the hunter needs.

Its action is the simple military bolt—but re-dimensioned and improved. It has bigger, stronger locking-lugs than the Service rifle. It has a shotgun type safety located on top of the tang—the natural, convenient place. The patented magazine design makes it possible to use soft nose, Spitzer point bullets without danger of deforming the points.

The great popularity and success of the .250-3000 Savage determined the cartridge for which this rifle should be designed. This cartridge is loaded with an 87 grain Spitzer point, soft nose bullet 3,000 feet a second, accurately enough to make possibles on the 800-yard target and hard enough to penetrate ⅝ inch boiler plate.

SPECIFICATIONS

22 inch tapered high pressure steel barrel with integral front sight base, checked pistol grip stock and fore-stock, pistol grip capped, oil finished one-piece stock, corrugated trigger, corrugated steel shotgun butt-plate, white metal front and flat-top sporting rear sights, magazine capacity five cartridges, weight 6 pounds.

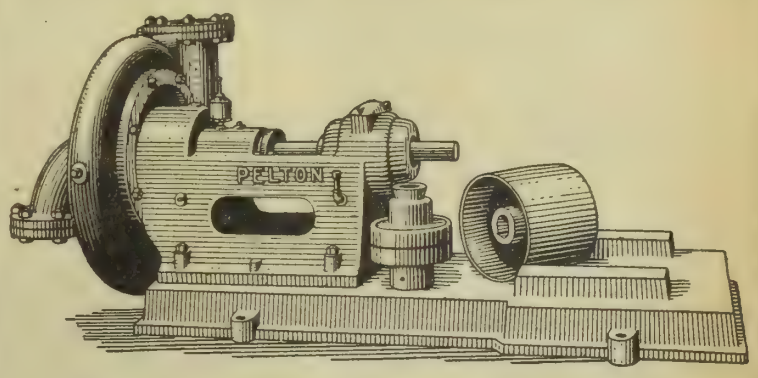
SAVAGE ARMS CORPORATION

SHARON, PA. UTICA, N. Y. CHICOPEE FALLS, MASS.

Executive and Export Offices, 50 Church Street, New York City

Owners and Operators of

J. STEVENS ARMS COMPANY
CHICOPEE FALLS, MASS.



PELTON PUMPS INSURE IRRIGATION

Five features make PELTON irrigation pumps the best pumps for farm service.

They are built for gasoline engine or motor drive.
The big bearings will stand heavy loads and hard use.
The one-piece base makes them strong and steady.
They pump more water per horsepower.
Only the best materials are used throughout in their construction.

See the PELTON pumps on display at PELTON dealers' stores, or mail in the coupon for a descriptive bulletin.

THE PELTON WATER WHEEL COMPANY
1990 Harrison Street San Francisco

THE PELTON WATER WHEEL COMPANY,
1990 Harrison St., San Francisco.

Send me a copy of your irrigation pump bulletin. No charge nor obligation.

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.....

Here and There in the Fruit Business

Record Plum Production and Sale.

It is always gratifying to note and a pleasure to report the prolific production of any variety of fruit. One of the recent unusual productions to be brought to our attention comes from the Reedley district of Fresno county. L. P. Biszant has six Kelsey plum trees on his place that averaged 640 pounds of fruit to the tree. From one of these trees he took 723 pounds, for which he received $36.15. During our day and time we have come in contact with record-breaking productions, but this puts them all in the discard. To better realize the volume of fruit, let us pack it in crates for Eastern shipment, say 24 pounds to the crate net, would pack out just 30 crates. Now let's go a little further, and find out what the fruit from that tree would have returned to Mr. Biszant had it been sold in any one of the leading Eastern fruit auction markets. Kelsey plums that have packed 4x4 and 4x5 have been selling readily at $2.75 to $4.50 per crate. Strike an average and we have $3.62 per crate, or $108.60 gross for the 30 crates. Now, of course, there are such expenses as freight, refrigeration, commission and packing charges to be deducted, we would say offhand $1.00 per crate, which would be $30.00 deducted from the gross sale, leaving $78.60 net to the grower for Kelsey plums from one tree. Some production, some price.

"Some Service."

When it comes to service, it's hats off to the California Pear Growers' Association. We learn from Frank T. Swett, the president, that 12,000 tons of pears have been delivered to the various canneries, beginning July 18. On August 31 the association had mailed checks to the growers amounting to $756,881.26, approximately 75 per cent of the total value of pears delivered. Mr. Swett stated that within a short while each grower will have received his full amount due him with a carefully prepared statement of the season's transactions.

Decrease in Almond Imports.

It is gratifying to note the falling off of shelled almond imports from Spain. Consul Smith of Malaga, Spain, reports to the United States Department of Agriculture that for the first six months of 1920 the shelled almonds exported to the United States amounted to 918,050 pounds, while for the first six months for 1919 there was 2,067,749 pounds exported. There was also a decrease in the export of figs from Spain amounting to 260,000 pounds, but when Smith's report came to raisins the shoe was on the other foot. The first six months of 1919 Spain exported to the United States raisins to the amount of 71,791 pounds, for the first six months of 1920 they exported 7,838,867 pounds; and California raised a few raisins herself. How about it?

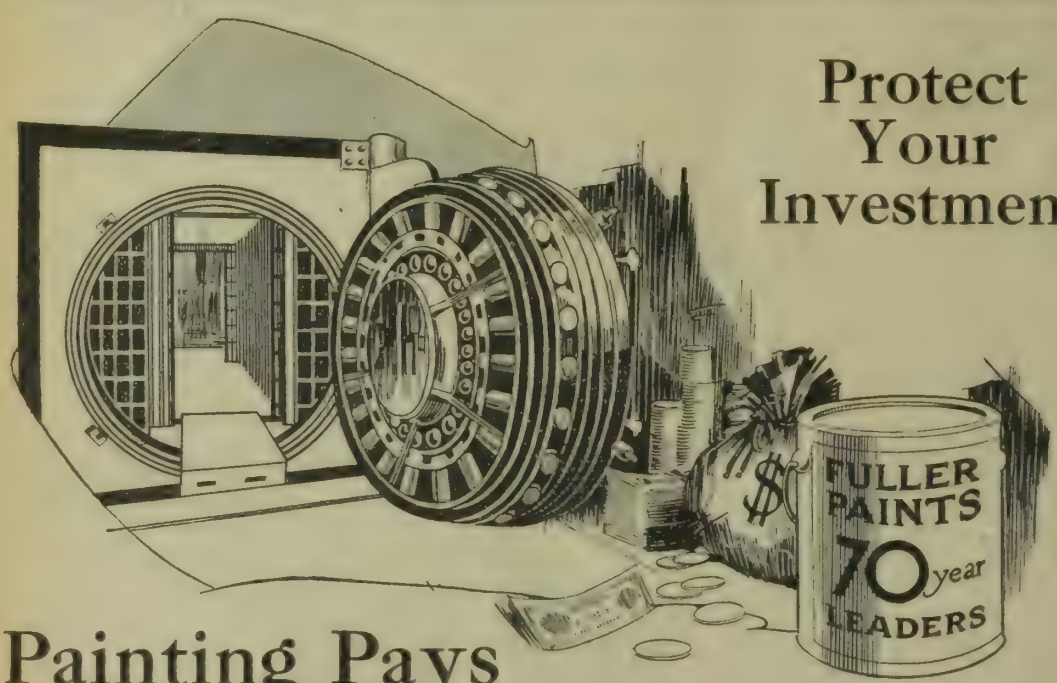
Old Wineries to Reopen.

Many wineries throughout the wine grape growing districts of the San Joaquin Valley, that have been closed for many years, are now being renovated to resume operation as in former seasons. The high prices and apparently no limit on demand for grape juice and syrups have caused the owners of these properties to smoke out the night owls and bats, brush down the cobwebs and tighten the puncheons, preparatory to the crushing process. Many of the wineries are preparing to begin crushing grapes at once.

Citrus Growers Lose Out.

A complaint of the California Citrus Growers, pending since March, 1919, before the Interstate Commerce Commission, has been denied by that tribunal. The growers protested against an increase of 25 per cent in freight rates that followed Federal control of railroads. Rates on citrus fruits have been increased two-thirds since 1916. The 1916 rate was $1.00. The current rate is $1.66 per 100 pounds or $1.25 on a box of oranges to points east of Chicago. With these figures it is estimated that the increas in the annual freight bill of the California citrus industry will be approximately $8,600,000.

President Geo. C. Roeding, of the State Agricultural Society, has announced the following committee to act as judges who will pass upon the horticultural and county exhibits at the California State Fair. The list includes the following: J. C. Whitten, head of the Division of Pomology, University of Cal., L. B. Scott, General Manager of the California Nurserymen's Bud Selection Association; H. J. Eustace, Manager of the Curtis Publishing Company; J. J. Fox, of The Rural World, and W. S. Killingsworth, of the Pacific Rural Press. It is planned to have all fruit judging completed by Thursday night, September 9, so that the awards will be known by Friday, Fruit Growers' Day.



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Painting Pays

It is an investment, not an expense

To resist the ravages of the weather, exposed surfaces of wood must be preserved with a coating of durable paint. Refinish the worn places with W. P. Fuller & Co's Paint and prevent decay. A coat of quality paint is an efficient barrier between wood and weather.

Paint costs less than lumber

Your property is insured against loss by fire. Why not insure against loss by weather wear?

Good paint is — good policy

It will protect your buildings and protect you from the care and cost of repeated paintings.

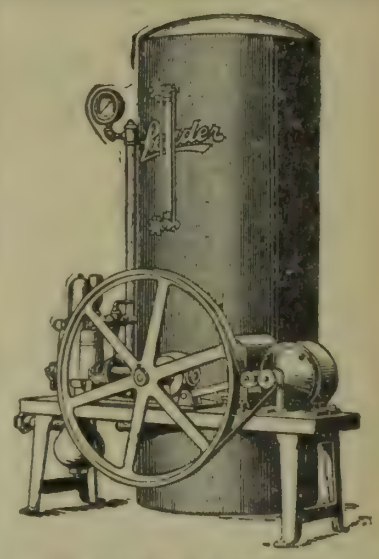
SAVE THE SURFACE AND YOU SAVE ALL

70 Years

W. P. Fuller & Co.

San Francisco, Sacramento, Oakland, Stockton, Los Angeles, San Diego, Pasadena, Long Beach, Santa Monica, Cal. Portland, Oregon. Seattle, Tacoma, Spokane, Washington. Boise, Idaho

Manufacturers { Enamels, Stains, Varnishes, Pioneer White Lead / Paint for every purpose. Quality in every drop } Ask your dealer



RUNNING WATER FOR YOUR HOME

Under pressure all the time, just like city water systems. No elevated tank, no tower. The "Leader" outfit consists of steel tank with automatic, self-starting, self-stopping, self-oiling electric pump. It keeps the water in the tank at constant pressure. Can be placed in basement, barn or outhouse.

TRADE Leader MARK

PNEUMATIC WATER SYSTEM

Is made in various sizes and capacities for country and suburban homes, schools, hotels, and public buildings. Pumps water at any distance from well, spring, lake or river, and delivers it under pressure wherever needed. Operates at low cost. Provides dependable fire protection. Very little attention required. Also comes equipped with gas engine, if desired—automatic stop only.

Write for Catalogue 3.

Pacific Pump & Supply Co.,

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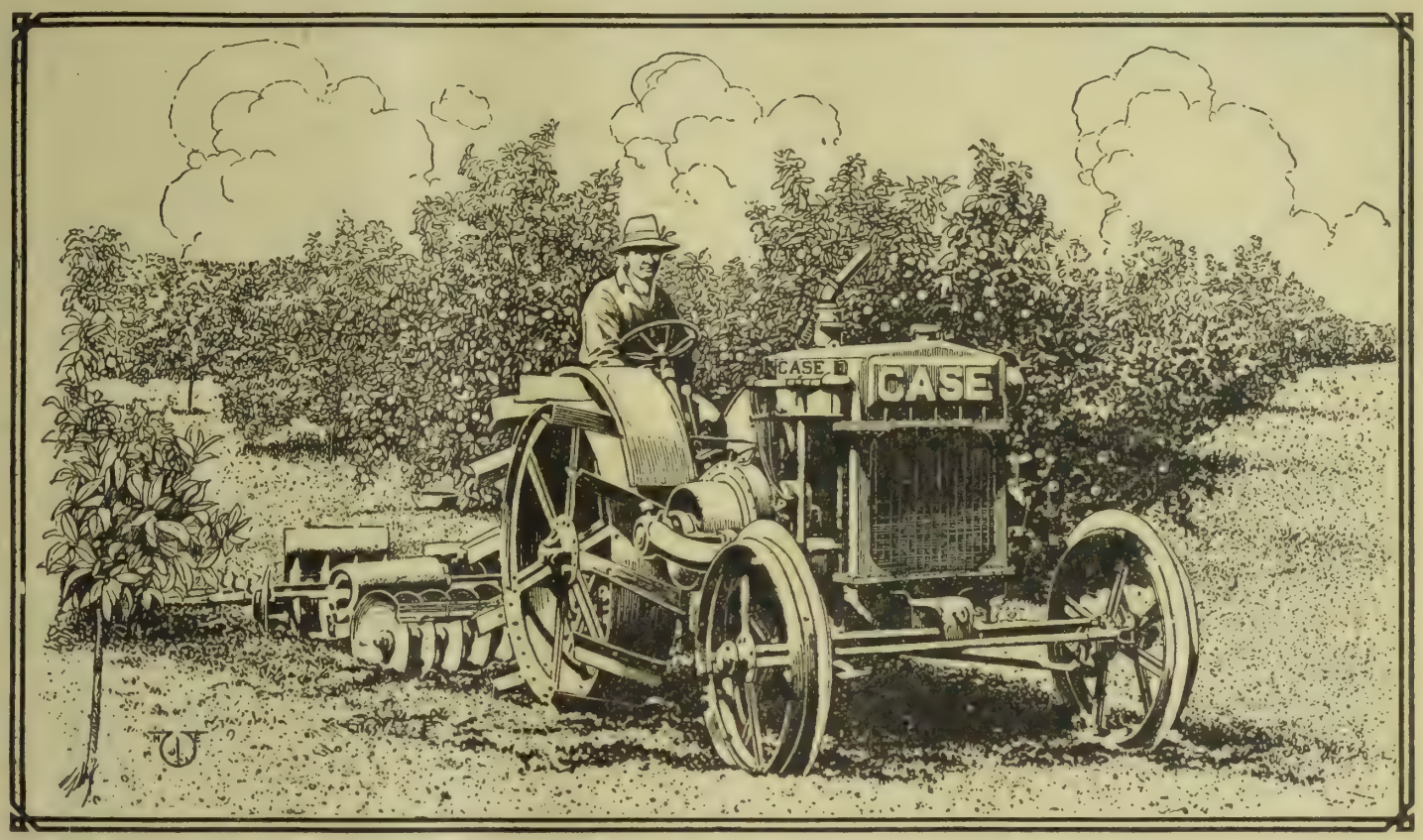
The Nation's Bumper Apple Crop

(Written for Pacific Rural Press.)

It may be said that the apple is one of the horticultural tree fruit family that will come to the front this season with a full production throughout the United States. The present estimate of the apple crop is placed at 30,100,000 barrels as compared with 27,170,000 barrels in 1919. While the approximate yield is not so heavy in the West, production has increased enormously throughout the Eastern apple territory. This is particularly noticeable in New York State, where it is estimated that the gain over 1919 will be 3,760,000 barrels, while the 1920 crop is placed at 6,730,000 barrels. Figuring on a percentage basis the increased production throughout the Eastern apple States will go from 125 to 225 per cent above the yield for 1919, against a probable decrease of 30 per cent in the Northwest, as compared with the 1919 crop. We learn from local apple dealers that prices for the Pacific Northwest apples are being held higher than the trade care to take a speculative hand in. As a matter of fact the same feeling has reached the apple producers of California. The Oregon apple growers seem to have lost sight of the enormous estimated production throughout the country, and are holding their apples at a price the San Francisco dealers think too high. It is the belief "on the street" that the Hood River Newtown Pippins will open up at $2.50 for extra fancy and $2.25 for fancy grades .

The Watsonville apple packers are well aware of conditions, and they realize as the season approaches that they need not expect unusually high prices for Bellflowers this season, due largely to the heavy crop in sight. We learn that Bellflowers are being offered at $1.25 per box, an easier feeling than a short time ago, as the early quotation was $1.60 per box. At this price the buyers seemed to show very little interest, and as this disinterested feeling lingered, a reduction of 20 cents per box was finally made that seemed to have little effect upon those of a speculative turn of mind, and there was a further decline. A continued lack of activity may eventually cause the packers to consign their stock, to be sold on an open market on a commission basis.

If there is a stiff subsoil in your proposed orchard, it will pay to dynamite the holes. This does the digging to some extent, loosens the earth and gives the trees a chance to develop roots. Another plan is to spade the bottom of the hole and enrich with compost or bone.



Come See How Fruit is Grown

with Case Kerosene Tractors, Grand Detour Orchard Plows and Harrows

Look for the EAGLE Our Trade Mark

NOTE: We want the public to know that our plows and harrows are NOT the Case plows and harrows made by the J. I. Case Plow Works Co.

To avoid confusion, the J. I. CASE THRESHING MACHINE COMPANY desires to have it known that it is not now and never has been interested in, or in any way connected or affiliated with the J. I. Case Plow Works, or the Wallis Tractor Company, or the J. I. Case Plow Works Co.

THESE will be important features of the one big tractor and implement show held in the West this year. Come out to beautiful Verdugo Woodlands of Glendale, 9½ miles from Los Angeles. There you will find fruit growers and farmers from all parts of California and adjacent states. There you will have the opportunity to inspect Case Kerosene Tractors and see how perfectly they are suited for furnishing power for rapid, reliable and profitable soil preparation and cultivation.

Case Kerosene Tractors will be there in three sizes of standardized design; 10-18, 15-27 and 22-40 H. P. These sizes include tractors small enough for close orchard and vineyard work, with ample power for thorough cultivation, and tractors powerful enough to handle the heaviest work on farm or ranch.

There will be also on exhibition Grand Detour Orchard Plows, and Tractor drawn Tandem Disc Harrows, especially suited for orchard and vineyard cultivation.

Another important exhibit represents the line of six sizes of Case Galvanized, Steel-built Threshers, that will thresh, separate, clean and save all grains and seeds.

All fruit growers and farmers are cordially invited to use this opportunity to determine for themselves the superiority of the machinery built by the J. I. Case Threshing Machine Company; to compare Case Kerosene Tractors, Grand Detour Plows and Harrows, and Case Galvanized, Steel-built Threshers with machinery of similar purpose but of other make, which will also be on exhibition.

CASE
POWER FARMING MACHINERY

National Tractor and Implement Show

Verdugo Woodlands of Glendale *Los Angeles, Sept. 20-26, 1920*

J. I. CASE THRESHING MACHINE CO.
(INCORPORATED)
Dept. V-9, Racine, Wis., U. S. A.
Los Angeles, 162-168 North Los Angeles St. San Francisco, 235 15th St.

Timely Work in the Orchard.

Cultivate the Camp Ground.

There are few orchards, especially the large ones, that do not employ labor that live in tents located among the fruit trees, near the packing and cutting sheds. The constant walking and tramping over this ground packs it into a solid mass to the extent of several inches deep. When such is the case the proper course to pursue is, when the job of packing and cutting is finished and the campers migrate, this thoroughly packed ground should be well disked both ways. A second going over would not be out of place as it thoroughly breaks the soil so that when the fall and winter rain comes it will have a chance to soak in, otherwise the major portion will find its way into a nearby creek, and as a natural consequence the ground will not only be deprived of the beneficial results of this much needed moisture but will receive additional packing down from the continued rains and by the time spring plowing begins the ground will be so hard that it will be difficult to get it into proper condition. Another point to be looked into: at every abandoned camp there is more or less rubbish lying around, consisting of broken crockery and glassware, tin cans, scrap iron, etc., all of which should be carefully picked up and carted off. There are also stakes driven into the ground to hold the tents stationary. They should be removed. This general clean-up should by all means take place before the cover crop begins to grow, else much of the rubbish will be so hidden that it will never be discovered until the plow-point strikes some one of the articles and uproots itself. So clean up, and disk the premises well.

Order Nursery Stock Now.

Those who contemplated planting any variety of fruit tree or vine next spring will do well to place their orders at the earliest possible moment. We learn from nurserymen in all sections of the State that stock will be short. As a matter of fact, many nurseries have disposed of their entire stock of apricots, prunes and cherries. In addition to the scarcity of stock the price will be high, which may, of course, curtail planting. However, that is poor policy. There is nothing gained by delay. If it is the intention to plant and care for an orchard properly, the sooner the work begins the sooner results will be forthcoming. There are so many reliable nurseries in California that one can make no mistake in placing orders with them.

Dry Prunes Well Before Storing.

In the great rush to harvest the prune crop to avoid rain damage, care must be used not to store the fruit in bins or in unusually large piles before it is thoroughly dried, which is liable to cause mold and souring of the prunes. In times past when prune prices were low we know of cases that came under our observation where prunes were badly damaged on account of premature storage, done purposely to increase the weight, but in many instances the damage sustained greatly reduced the price. However, where there is floor space even though the fruit may not be entirely cured it may be turned periodically by the use of a scoop shovel. This not only dries out the fruit but gives it that black, glossy appearance that adds materially to the selling quality.

House the Tools and Implements.

One of the destructive agencies on the farm and orchard is improper care of tools and implements when not in actual use, and especially so when the season is over and they are left at the end of the row, in the fence jams, under a tree or out in the open to take the winter rains. We have witnessed the deplorable sight of a tractor, partially covered with grain sacks, standing in the orchard taking the weather as it came, also harrows, disks, plows and cultivators enjoying the same privilege at the expense of the owner and carelessness of the foreman in not properly housing them. We have even witnessed expensive spray tanks with nothing but the defoliated branches of a shade tree to protect it against inclement weather.

ALMOND SPECULATORS

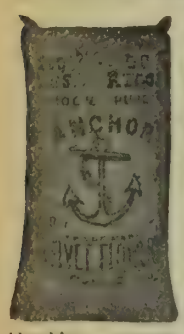
Last week the almond speculators of California started a campaign in Eastern markets guaranteeing to sell almonds to the dealers at a fraction of a cent per pound less than any price the Cal. Almond Growers' Exchange may name. They have been in the California orchards offering growers half a cent a pound more than the Exchange will return, whatever that may be. They expect to accomplish these promises (perhaps) by dividing between grower and Eastern buyer the one cent per pound which the Exchange is spending to increase the consuming demand for American almonds.

POPULARITY OF THE APPLE.

(Written for Pacific Rural Press.)

The high esteem in which the apple produced in the United States is held in foreign countries is evidenced by the enormous tonnage annually exported. With a crop of 27,170,000 barrels in 1919 there were exported 1,712,367 barrels. What may we expect in the way of exports for the season of 1920, with an estimated crop of 30,100,000 barrels, with no embargo, and a return of peace and good times in the apple-consuming countries?

The apple exports of 1919 are without a parallel, so far as values are concerned. Official reports of exports of dried apples amounted to 24,704,359 pounds, valued at $4,109,828. The exportation of apples in their fresh state totaled 1,712,367 barrels, with a valuation of $14,471,282, or an aggregate of $18,581,110. These figures show an increase of about 45 per cent in the total value of apple exports compared with the pre-war year of 1913; but as far as quantity was concerned was a decrease of 36 per cent in dried apples, and 11 per cent in barreled apples. During 1913 there were exported 38,734,465 pounds of dried apples, and 1,920,221 barrels of fresh apples, valued at $2,719,203 and $10,136,603, respectively. In pre-war years Australia, China and Japan annually imported immense quantities of Pacific Coast apples; but on account of a lack of shipping space exports to those countries have been greatly reduced. But as coast apples have become very popular in both the Antipodes and the Orient, we may expect an increased demand when shipping accommodations are restored.



Sulphur

It has been proven and so recommended by the University of California that if you sulphur your grape vines and orchards 6 times they will not be affected by MILDEW or RED SPIDERS.

ANCHOR Brand Velvet Flowers of Sulphur, also EAGLE Brand, and Fleur de Soufre, packed in double sacks, are the fluffiest and PUREST sulphurs that money can buy; the best for vineyards; the best for bleaching purposes, LEAVING NO ASH.

VENTILATED Sublimed Sulphur — Impalpable Powder, 100% pure, in double sacks, for Dry Dusting and making Paste Sulphurs.

For LIME-SULPHUR SOLUTION, use our DIAMOND "S" BRAND REFINED FLOUR SULPHUR. We can furnish you this sulphur at such a low price that it would pay you to mix your own solution and net you a profit equal to the amount paid out for labor in spraying your orchard, even if you pay your men $5 per day for making the solution and applying same.

To create additional available plant food, and prevent smut in grain, drill into the soil 110 pounds per acre of TORO BRAND SPECIALLY PREPARED AGRICULTURAL SULPHUR or our DIAMOND "S" BRAND REFINED POWDERED SULPHUR. This soil treatment has increased various crops up to 500 per cent. Send for Circulars Nos. 6, 7 and 8.

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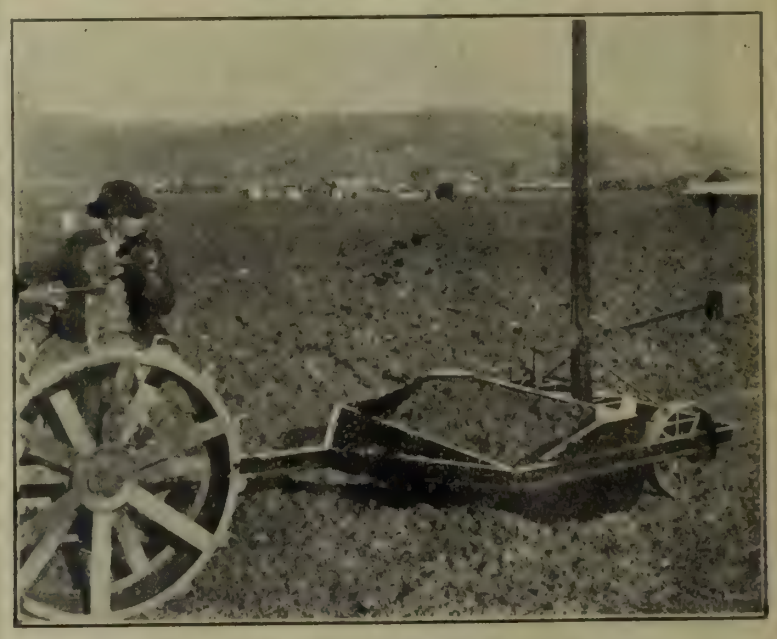

Last Call! Going! Going!! Gone!!!

(Written for Pacific Rural Press by Thos. F. McConnell.)

Livestock men and others interested in the business generally think of the words used in the title of this article in connection with purebred animals only—where each cow, bull, boar or goat passing under the hammer of the head hot-air artist is supposed to be worth anywhere from a mill to a million of cold hard cash. Generally speaking, the purebreds sold in this way are worth all that is paid for them and this method of disposing of them is a legitimate one, a stimulus to the business. Glaring examples of fraud are few and serve as a curb on a repetition of such happenings, if we are charitable enough to so call them.

We must stop writing about the purebred auction, however, and get on the subject that is the real object of this article—the auction method of disposing of fat or market hogs. The writer knows from his own experience how difficult it is for the man who is raising but one or a dozen hogs a year to sell them in some localities for what they are worth. More hogs would be raised in all sections if a reliable market was established for them. A cent a pound more in many cases would mean living profit where the usual price would leave nothing for the labor expended. Men who are acquainted with the situation know that where a few hogs have to be marketed through a local butcher or buyer, with no competitors in the field, that the price is not what it ought to be by a wide margin. Therefore thousands of hogs in California in the past have been purchased from the farmer at a very profitable figure—not only have been, but are still being bought at prices remunerative to the farmer.

Market hog types at Union Stock Yards, Chicago. From top down: Heavy butchers, light butchers, heavy packing, and good light.—From the "California Hog Book."

Seeking a Way Out.

These conditions are not new, and progressive men in the State have been trying to solve the problem of selling what the farmer raises at a price that will give him more money and still keep the price of the finished product within reach of the consumer. In some cases the growers of fruits have taken things into their own hands, organized, and are marketing their own product in a wholesale way with results that are truly astonishing when viewed from the standpoint of former prices. The plan that was possible in some lines like that of the raisin and orange grower did not seem to be so feasible in the case of the swine raiser.

Farm Bureau Takes a Hand.

Somewhere along in the fall of 1918, in that wonderfully fertile and productive region of the upper San Joaquin valley, the Farm Bureau workers commenced to agitate the idea of a market hog auction sale at some point central to a hog-raising community. The plan was to induce farmers to bring hogs to this sales point on a stated date and have buyers from various meat-packing firms of the Pacific Coast attend and bid on the consignments. The success of this scheme, to begin with, made it necessary to get a sufficient number of fat hogs promised for the date selected and not only to secure the pledges for the animals but see that too many of the farmers did not renege on their promises.

A promising field was found in Kern county. Wasco was selected as the town for the initial attempt in California of selling fat hogs consigned by farmers at auction. Geo. C. Kreutzer of the State Land Settlement at Durham, who has a very convincing way with him, traveled the territory and "rounded up" enough farmers who promised to bring hogs to Wasco on the first of November, 1918, and let the Farm Bureau sell them to the highest bidder. He didn't promise them a stated price, but just what the buyer who thought the hogs were worth the most would pay. They came, brought their hogs, and they were sold to the highest bidder.

The results were so encouraging that the market hog auction has continued, grown, and developed from that one sale at Wasco to include all the counties of the San Joaquin Valley, from Kern to Stanislaus inclusive.

Education Necessary.

If co-operative marketing is to be a success we will all find that the business must be done with the cards face up on the table, and that means in this case that ranchers consigning hogs to these auctions must "savvey" all the ins and outs.

Hogs from Dick's ranch may be better than Tom's, and Harry probably would have a carload containing some "rough stuff." These could not all go in together and be lumped off as one lot. They have to be graded according to the market classification in the marts of the world. Such grading makes necessary, as the business increases, specialists to assist the manager who knows at a glance just where a hog belongs. Not only that, but they must be able to tell why he belongs there.

What Are the Grades?

The larger the market, the greater classification. More grades will be established. Reports from Chicago, the largest hog market in the world, mention eight grades including "light butchers" and "choice light bacons" as the highest grades, with heavy butchers next, then "good to choice mixed" and "good to choice pigs." These include all the best of the hogs and are followed by "heavy mixed" and "heavy rough packing" "boars" and "stags."

Some will ask, perhaps, why are these grades necessary? Simply to prevent the poor stuff from penalizing the good stock.

At our own Pacific Coast markets of San Francisco and Los Angeles the grades run about the same with one or two less. Some markets will call for a lighter hog in the top grades than others or more emphasis be placed on "hard grain fed" hogs as we do here in California.

Quality First.

In a conversation with Lloyd C. Trewhitt, Asst. Manager of the Farm Bureau Marketing Ass'n, he laid especial emphasis on "quality," meaning this to include animals that will "dress out" the largest percentage possible of marketable meat. Another way of expressing it is by calling them hogs that will "kill well."

Right here is a good place to say something about "dockage." Many think that when a hog is docked a certain number of pounds or percentage that it makes this hog the equal of "top" hogs. This is not so, but simply is an inducement to buyers to take an inferior animal at some price. Originally it was supposed to make allowance for an evident overweight of waste material in certain animals.

"Differential" is another term that has to do with the quality of market hogs and refers to some set reduction in price owing to certain specified conditions. We will illustrate this by mentioning a price "differential" existing on hogs of 300 pounds weight in northern Idaho some years ago. If the price was $10 per hundred on 200-pound hogs those that weighed 300 pounds would only bring $9, or carry a "differential" of one dollar per hundred. The quality might be just as good but it was an arbitrary "weight differential."

Top Grades.

The very best grade of hogs for the California market is a hog from 6 to 8 months old, weighing from 150 to 220 pounds, that has been fed for the last 6 to 8 weeks of its existence on barley, Egyptian or Indian corn. Not necessarily an exclusive grain ration but nearly so. Grain and alfalfa pasture is all right but enough grain must be fed to harden up the flesh and eliminate all the abdominal distension or pot belly. This 150 to 225 pounds of hog must have at least 75 per cent of marketable flesh.

The grading is a matter of judgment, the work of a man with a mind trained to discriminate automatically, we may say, between the grades. He must be absolutely impartial not only between the growers but the packers as well. In the top lot nothing but the very best hogs must go; he must not under any circumstances try to work off a few poor hogs among the tops. He also must be able to explain the sometimes slight differences between hogs that his educated eye can readily see but others cannot.

Who Buys the Hogs?

We can make the broad statement—and it will be true—anyone that wants them. To see that buyers are present is one of the important duties of the manager and is one of the chief reasons for the success of these Farm Bureau auctions in the San Joaquin valley. Manager Bitner has paid especial attention to this phase, and when it seemed as though buyers would be lacking he has seen to it that competitive bids were in existence and the farmer protected.

It has also been the policy of the management to protect the packer. If for any reason a carlot was not up to grade, adjustments have always been made.

In the beginning local buyers were opposed to the scheme and fought it, but now they either have passed out of existence or are among the bidders at the sales. They are encouraged to attend and have developed into an important factor in the business.

How Does It Help the Farmer?

It makes no difference whether a man has one hog or a carload, he can take his consignment to the sales center, have it graded and receive a better net price than as though he had been in a position to sell at San Francisco or Los Angeles. It is true co-operative marketing, as it is possible for the growers who raise only a few hogs each to combine and receive the San Francisco prices.

Carcasses of cattle to the number of 59,547 were condemned last year for disease at slaughter-houses. Of this number 37,600 were tuberculous.

Duroc-Jersey Hogs for Sale

BOARS AND GILTS
BRED SOWS
SOWS WITH LITTERS

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Danville, Cal.
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They are the large type and the best blood strains to be had anywhere.

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Lucy Orion's Model
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HERD SIRE
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Write for yours from the most select herd in California.
Littermate (gilt) topped Ed Kern's Last Sale at $5600

V. F. DOLCINI, JUNE ACRES STOCK FARM, DAVIS, CALIF.

Livestock Queries and Replies

Calf Not Thrifty.—A calf born June 10th was not weaned until 7 weeks old. Then it would not drink milk, and has eaten nothing but oat and alfalfa hay, with a little Suremilk and rolled oats; drinks plenty of water. It was fat when weaned, but does not look so well now. What can be done for it?—H. A. V., Los Altos.

It is much more difficult to teach a calf to drink milk at seven weeks of age than while young. Next time do not let the calf suck at all. This calf is merely existing on its present ration. It needs milk, but it will be no easy task to teach it to drink now. Try, by withholding water for a time, and then try it with some dilute whole milk. Gradually increase the milk until nothing but the lacteal fluid is given. Some of the calf meals so widely advertised may be used with excellent results, but they are not equal to good, whole milk. Keep on with a reasonable amount of hay, even if the calf should learn to take the milk.—Livestock Editor.

Cottonseed.—Last year the cottongins in the Imperial valley paid over $50 per ton for cottonseed; but this year $16 is the maximum offer. Is this price likely to continue for the season? What would be its value to one who has his own dairy and is equipped for grinding? Is cottonseed meal a good feed for hogs?—C. J. W., La Mesa.

Thirty-five dollars per ton is truly a wide "spread" between last season's price and this. At present there is nothing to indicate a rise in price of any of the feedtuffs. So much stock has been "sloughed" that where a shortage was expected a surplus has developed, and with a depression in the prices of other feeds not much advance can be expected. Years ago much cottonseed was fed in the South to cattle, but of late years practically all seed is pressed for the oil, and the cake or meal only is fed. The cottonseed is not worth as much for feed as the cottonseed meal. The seed is apt to have a laxative effect if fed in quantities. It ought to be worth as much as barley, but owing to laxation and poisonous properties it is not. Fed constantly in quantity it is liable to cause death. Fed in connection with rolled barley, half and half, good results may be expected, especially if cattle are on pasture, or have good ensilage and hay. A straight diet of cottonseed or cottonseed meal will be diastrous with cattle, and especially so with pigs.—Ed.

Soft Butter.—Our purebred Jersey cow produces very soft butter. We have never known one to do so before. She is 4 years old, has been fresh 2 weeks, and for feed is getting green alfalfa, alfalfa hay, middlings and salt. She is a heavy milker, 7 gals. per day, yielding 3 pounds of butter. When purchased last spring she had been on dry feed for some time and the butter was white and soft. She is healthy. Why should the butter be soft?—C. B. C., Dinuba.

Jersey butter is harder and firmer than that of other breeds not excepting that of the Guernsey, the other Channel Island breed. The yellow color is not so dominant a quality, and some noted Jersey cows have produced butter that was very light in color. Eurotas was one. You state your cow is purebred. If she is not registered we would suspect there was a strain of other blood in the animal that was responsible for the lack of firmness in the butterfat and perhaps for the large milk yield. If she is registered then the softness is an individual characteristic which can probably be helped by feeding 1½ to 2½ pounds cottonseed meal daily.

The Pacific Coast has enlisted another Eastern authority assistant in the march of progress. Prof. G. S. Bulkley is now with the Carnation Milk Products Co. in an educational and extension work division. He was formerly with the Pennsylvania Agricultural College.

Horses are not plentiful in the East judging from the exhibit of draft horses at the Missouri State Fair. The only breed shown was the Percheron, with 6 exhibitors in line, but none of them filled all classes.

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The B-K Way

HERE ARE THE REASONS WHY IT PAYS:

1. B-K is **always ready**. Just add water and use—no time lost no fussing.
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3. B-K is **dependable** — insures protection of your stock and product.
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6. B-K **makes no sediment**—no accumulation on equipment—nothing to throw away—no waste. Saves rinsing and washing tubes and cups before use. Just shake them when taking from dilution, and use.
7. B-K is a **powerful deodorant** and leaves no odor of its own.
8. B-K **costs very little to use.** It is highly concentrated—the dilution for two single milked units costs only about 2c per day. The labor saved alone is many times that amount.
9. B-K **prolongs life of rubber**—keeps it free of grease—does not injure metal parts.
10. B-K **contains no poison, acid or oil**—is harmless to use anywhere without danger to people or animals—is fool proof.
11. B-K is a **powerful weapon to protect your herd and men** from infections and your **milk and utensils** from contamination, it's all in one **bottle—always ready.** Keeps udders and teats smooth, soft and free of warts and sores—helps prevent garget, cow-pox, abortion, calf diseases—purifies and heals workmen's hands.
12. B-K **saves labor, time and wages**—increases net earnings.

B. K. is sold in one gallon and five gallon jugs by hardware and implement dealers, milking machine agents and druggists everywhere.

Order through us if no dealer in your town. We will supply you through the nearest distributor, or from San Francisco stock.

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Other Separators *lose* butterfat when turned "under speed," and tests prove that 95% of all hand separators are turned under speed much of the time.

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Pure bred Ayrshires for sale at reasonable prices. Our herd is founded on imported Canadian stock.

We are nine miles from Auburn. Visitors welcome.

The Penobscot Farm
Cool, Eldorado Co. Calif.

Stock at State Fair Viewed by a Veteran.

(Written for Pacific Rural Press by Thos. F. McConnell.)

The fairs of the years gone by are memories only. According to the calendar sixty-five pleasant memories to the very few who can hark back over the Golden State's record in the exposition line for so long a time. The tendency for those who are beyond taking the most active part in the fair of today is to bring back the glories of the past, the younger generation to picture in their minds the glories where they will be in the forefront of the contest with their own animals, bred and fitted a little better than any of his or her competitors. In these days it will not do to leave the gentler sex out of our calculations, for they are coming more and more to find their rightful place in all our activities.

The real fair, not of the past or future, the only one we can really know, is that of today, the one that has not passed out of existence when the most of you read these words. It is the fair of now that we really know. And it is here, bigger, better, finer, more glorious, more instructive, and really and truly more amusing than any that have gone before. But what of next year? Let it rest, cross no distant bridges, taste no future sweets, but enjoy and profit by what we know of this one.

The Opening.

The first day was everything that could be desired from the weather viewpoint and everything else as well. We are trying to have you see this now from the livestock side of the show—what there was in the beginning, how it was gotten into shape and made the greatest livestock exhibition ever seen in California. Entry after entry kept pouring in early in the week, many coming from that up-to-date county fair held at Santa Rosa the week before and many to be seen in the ring for the first time this year.

It was early seen that room would be lacking in all the departments of cattle, sheep and swine. Beef cattle were numerous, dairy cattle plentiful, a surplus of swine and sheep. Temporary stalls had to be erected for the cattle overflow, swine pens built and the old ones crowded. No stock was turned loose or back, but it was crowded so that much inconvenience was caused both in caring for and exhibiting it.

Need for Better Housing.

We will not write about anything but the needs of the livestock department here, as the other lines are well able to take care of themselves. But the need was so evident that "those who ran might read," those who merely glanced at the exhibits could not help but see the necessity for new buildings greater in size and arranged for convenience.

A great start has been made in the main building, but it really is only a beginning. Needs are numerous and it behooves those who have the problems in charge to study the situation closely and keep the efficiency of the plant ever to the fore. We do not mean that harmony of the whole shall be sacrificed for mere efficiency, but in the finality of things they should and will be found hand in hand.

One little thing that stands out very plainly is the necessity for some arrangement for disposing of the manure constantly accumulating in the livestock department. We don't know what it will be, but some system will be devised for such disposal quickly and quietly.

Herdsmen and caretakers should not be forgotten, and convenient bath and toilet facilities must be incorporated in these necessary improvements.

Diffused light and ventilation combined with insulation are necessities in the barns. It is sometimes hot in Sacramento and direct sunlight in the buildings would be fatal to comfort as would lack of fresh air. We said the new main building was only a beginning and these suggestions are only just a few straws thrown in the direction in which the wind should blow. Therefore all the politicians that desire permanence in the affections of the livestock men take heed of their needs and get busy next winter.

Years ago back in the Middle West, in Wisconsin if you must know, when agricultural education was in its infancy, Prof. Henry in his struggles for money for buildings and equipment of the agricultural college endeavored to show the legislators classrooms and laboratories filled to overflowing, crowded in fact with students, eager, earnest for greater knowledge in their chosen walk of life. This week the breeders of purebred livestock have made just such a demonstration in having the ramshackle old barns filled and running over with the choicest specimens of farm animals.

First Day Impressions.

It is astonishing how much can be done in a little while to change a lot of lonesome, forlorn sheds and barns into buildings filled with the finest of farm animals—a silence that becomes in a magic day and night filled with all the sounds of the barnyard—bleating, bawling, grunting, squealing life. Not that they are unruly, but where there are so many the natural sounds and sights will be in evidence.

The animals have been coming along watched, fed and fitted gradually getting them into shape for the contest supreme. The journey however to the fair grounds has ruffled and dirtied the coats and as soon as the housing in the proper stalls and pens has been accomplished the final touching up occurs. Cattle are washed, brushed, curled and horns polished, hogs washed and toilets made, sheep have the final trimming and brushing, those animals that through excitement and disturbance of shipping have gone off feed are cajoled, doctored and petted into normal condition.

Among owners and herdsmen old acquaintances are renewed and new ones made, inspection and comparison of rival herds and animals, with discussion of the judges and their likes and dislikes all have their part in the first day. It is always interesting, sometimes amusing and usually instructive to all.

What is Accomplished.

The comparison in the showing of the individuals and herds or flocks of the different breeds results in the increased knowledge of the breeders and interested public, a wider publicity for purebred livestock and we may say amusement of those unacquainted with the domestic animals.

Who receives the greatest benefit from the viewpoint of instruction? We might first say the young people from the farms who expect to make stockraising their business, but we doubt it. Again we might say the city people totally unacquainted with farm animals, but again we doubt it. It would appear to the writer that the constructive breeder would and does receive the greatest benefit. His or her mind is trained to absorb and understand improvement, while the city man or woman receives no more instruction than a child who first opens a book and looks upon the printed page without knowing what the letters and words are for.

Quality and Extent of Exhibits.

Horses were there, from the miniature Shetlands beloved of the children, the beautiful saddle horse desired by many, the race horse enjoyed by a majority, to the massive drafter needed by many more than realize it now.

While the draft horse exhibit has been larger it never was better. Percherons, Shires and Belgians were shown.

Exhibits in the dairy classes included an unusually large and excellent aggregation of Holsteins, Jerseys, Guernseys and Ayrshires. Two excellent herds of Guernseys from south of the Tehachapi brought the exhibit up above the usual.

The dual-purpose cow was represented by a great showing of Milking Shorthorns both in numbers and quality. Among those noted were the Santa Rosa Stock Farm, Innisfail Herd and Chas. L. Weaver.

The Shorthorn show in the younger classes was never equalled in California, and that means California bred stuff predominated — a wonderful lot of the "reds, whites and roans."

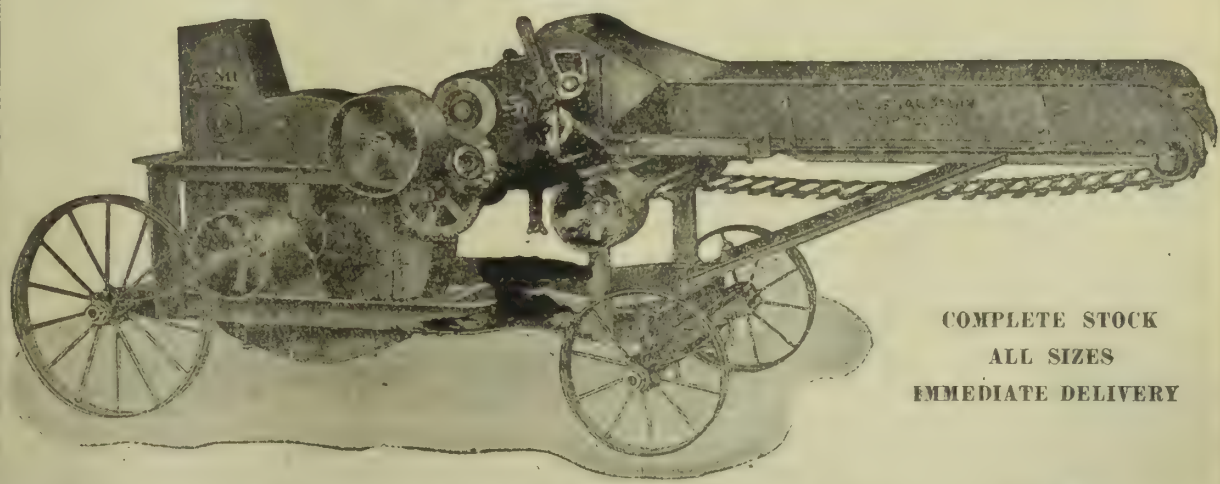
Herefords, rows upon rows of massive red and white beauties from the Sagebrush State and California. The quality of the exhibit was very high and one of which the breeders of "Whitefaces" might well be proud, the greatest Hereford exhibit California has ever seen.

Hogs. Yes, we traveled up and down alleys, cut 'cross lots and thought we never would come to the end; and we did not, either, until away out either at the beginning or ending, we found Tamworths and the carlots of fat hogs. The numbers are greater and the quality better than ever before — Duroc-Jerseys, Poland-Chinas, Berkshires, Tamworths, Chester Whites, Yorkshires and Hampshires. We did not see any Mulefoots.

Competition will not be lacking in several of the sheep classes. The registered sheep is coming into his own in California and we are of the

(Continued on page 362)

The ACME Cutter



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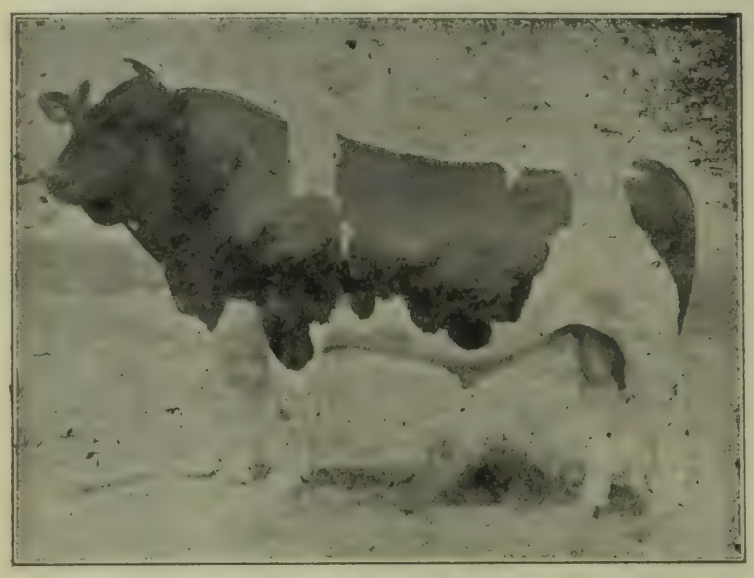
AN ORMSBY SALE

45 Registered Holsteins

ALLANA FARM, DIXON, CALIF.
THURSDAY, SEPTEMBER 23, 1920



SIR PIETERTJE KORNDYKE ORMSBY

To adjust the partnership existing between J. P. and W. W. Phillips, all of the HIGH CLASS REGISTERED HOLSTEINS AT ALLANA FARM, DIXON, will be sold at Public Auction excepting only one heifer and a few heifer calves.

SIR PIETERTJE KORNDYKE ORMSBY

The first son of the breed's greatest sire of long-time producers and show-ring winners, SIR PIETERTJE ORMSBY MERCEDES, ever offered at public sale in the West, will be a feature of this offering and one of the outstanding features of the sale season in California. He is four years old, a high class individual, a sure breeder, right in every way.

FEATURES OF TYPE AND BREEDING.

The sale list includes a select list of young females, a number with both short- and long-time records, and others now making large yearly records, all of the bred ones in calf to Sir Pietertje Korndyke Ormsby.

A CHOICE LOT OF YOUNG BULLS.

Bulls that will go at dairymen's prices, and a number good enough to head good registered herds will be a strong feature of the offering. Most of these are also of Ormsby breeding, combining a high degree of type and production.

EVERY ANIMAL POSITIVELY GUARANTEED TO BE A BREEDER; EVERY ANIMAL OVER SIX MONTHS OLD TUBERCULIN TESTED, AND SOLD SUBJECT TO RETEST BY THE BUYER.

CATALOGUE FREE ON REQUEST.

CALIFORNIA BREEDERS' SALES AND PEDIGREE COMPANY

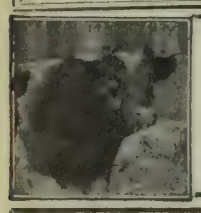
C. L. HUGHES, Sales Manager, Sacramento, Calif.

Auctioneer: COL. BEN A. RHOADES, of Los Angeles

SELECT FALL and YEARLING BRED GILTS

In service to ORION'S KING GANO, the boar with a coastwide reputation, and ROYAL I AM, one of the very best grandsons of GREAT WONDER I AM. The kind that feed right, grow fast, and show best. Satisfaction sure.

GRAHAM & HENSHAW (Successors to Donald H. Graham) Lancaster, California



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Address this Association which through its field force will render [illegible] to grow Shorthorns, because they fit into the conditions on the farm [illegible] enough go.

AMERICAN SHORTHORN BREEDERS' ASSOCIATION,
13 Dexter Park Ave. Chicago, Ill.

STOCK RANCH WITH FARM LAND

FOR RENT: Splendid opportunity for cattle or sheep—3,800 acres rolling range—480 acres good grain land, nearly level. Deep well at headquarters; 180 gals. per minute. Water being provided at central point. Good road five miles to railway station, and three-fourths mile to State highway. Located between Dunnigan, Yolo County, and Rumsey. Twenty minutes from Arbuckle. Owners wish to lease till May 15th.

Wire or Write for Particulars.

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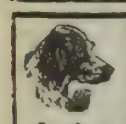
DIGESTER TANKAGE

Send for Sensible Folder on Feeding Hogs

WESTERN MEAT COMPANY

Animal Food Dept. 704 Townsend St., San Francisco



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SHIRE HORSES
For Size, Bone and Quality

More is required of Horses than ever before hence the need of more size, weight and power. Large geldings never were higher. Shire Geldings usually top the market. Use Shires to raise larger and better horses.

For information on Shires, write W. G. Lynch, Secretary, The American Shire Horse Association, Tonica, Illinois.

Livestock and Dairy Notes

The Dairy.

A large party of Californians is being formed to attend the National Dairy Show at Chicago, Oct. 8 to 16. The details of the trip are in the hands of Sam H. Greene of the Francisco.

The California Dairy Council is backing the dairy bull sale to be held at Petaluma on Friday, Sept. 24, at which time 25 registered bulls of the various breeds will be auctioned off. The Farm Bureau members have charge of the sale.

Swine and Swinemen.

The carlots of fat swine at the State Fair are represented by two entries of Poland-Chinas by Bassett Bros. of Hanford, and Napa State Hospital has one entry of Berkshires.

Bruce S. Bennett, Field Secretary for the Western Berkshire Congress, has resigned to take up work outside of California, it is said. The work he has been doing will be carried on by Charles Talmadge of Oregon.

One hundred and sixteen carloads of hogs brought $262,064 and netted the farmers a saving of $26,206, according to a report of County Agent Jungerman on the Stanislaus County hog auctions. This is the amount saved since March, 1919, when the sales were started.

The swine exhibit at the State Fair is very extensive both in numbers and variety of breeds. The Tamworths, the great English bacon breed, is represented by several herds, among them being two herds from the Eastern States. Bacon type hogs are certainly coming to the front.

D. G. Cummins & Son of Visalia bought the top sow, Golden Sensation, at the Winsor Ranch sale last winter. She afterwards farrowed 15 pigs and raised 14 of them. Then another sow, Golden Uneeda, bred to Big Model Orion Cherry King, farrowed ten pigs, all sows and no runts. Such hogs as this are the kind that are profitable under adverse conditions.

Beef Cattle.

Butte City Ranch recently sold a carload of bulls to go to San Luis Obispo.

Shorthorn breeders are discussing candidates for a field man for the southwest territory, including California, Nevada and Arizona.

C. N. Hawkins of the Pacheco Cattle Company at Hollister reports the feed on their range as excellent this fall. Cows turned out after weaning calves are fat enough for beef.

H. M. Barngrover's Hereford bull, Don Woodford 4th, weighs 2200 pounds at 31 months. He is a low set blocky fellow with lots of bone and quality, an excellent beef type.

J. A. Bunting, owner of the Mission Herd of Herefords, is not showing this year. He reports sale of two bulls to E. O. Wool of Milpitas. This cleans him out of everything except calves.

Three hundred head of cattle were sold at Lime Kiln Ranch south of Grass Valley last week. The auction method was used to sell the cattle. Many people were in attendance.

The prime beef stock sales scheduled to be held at Big Meadows, on Sept. 10th, has been called off, and the Cottonwood beef sale has been postponed from the 11th to a later date, not yet set.

D. H. Ogden, Hereford breeder of Alpine, San Diego County, is showing at the State Fair this year. He is out with 8 head and was 5 days on the road from Alpine to Sacramento. Some trip.

Horses.

The exhibit of Shetland ponies at the State Fair was large this year and commensurate with other classes of livestock. Among those showing were Butte City Ranch, H. C. Muddox, Tagus Ranch and others.

N. W. Thompson of Patterson has an exhibit of Percherons that is hard to beat anywhere. He is showing nothing but this popular breed this year and has one 4-year-old, two 3-year-olds, eleven 2-year-olds and four yearlings.

E. H. Grubb, the well-known agriculturist of Colorado and California, says that Easton & Ward, owners of Blackhawk Ranch, has the best Shire mare he has ever seen anywhere. She weighs 2200, of ideal conformation and highest quality.

Sheep and Goats.

A flock of sheep in Utah has been purchased by the Japanese Commissioner of Agriculture, for shipment to the Island Empire.

In the Pacific Coast country heavy sales of sheep by growers will result in a shortage of breeding ewes, it is feared, with consequent decrease in the lamb crop for next season.

Sheepmen on their return from the Salt Lake Ram Sale say prices were not as good as in the past two years and that some breeds were not sold at all. Rambouillets led in prices obtained and number sold.

Milk Goats are on the increase if we use the size of the exhibit this year in comparison with that of last as a criterion by which to judge their numbers. Last year one small flock was the sole representative of them, but this year three flocks all of them larger were shown.

LIVESTOCK DIRECTORY.

Rate, 4c. per word. Cash must accompany all orders.

SWINE.

Duroc-Jerseys.

FIFTY DUROC-JERSEYS — Mostly bred sows and gilts. Some small pigs. Three service boars and five March boar pigs, grandsons of Mary Jane Pathfinder, the five pigs sired by Lord's Orion Cherry King. One son of Orion Cherry Pathfinder, out of Lamb's Model Lady. Elmer Lamb, Ceres, Calif.

LENA PERFECTION 2nd, by Redeemer, a fine type sow, farrowed September 2nd; eight very strong, active, heavy pigs by California's Great Sensation, our Junior Herd Boar. Litter of eight weighed, one hour after farrowing, 24½ pounds. Five sows and three boars. Sierra Vista Ranch, Perris, Calif.

DUROCS—BIG-TYPE—HIGHEST QUALITY—popular blood lines. Herd headed by Johnson's Defender, Jr., and Western Pathfinder. Bred sows and gilts and young boars for sale at moderate prices. Greenwood Farm, Witherow & Stafford, Live Oak, Cal.

BOYANNA BIG-TYPE DUROCS—Buy Durocs now. We offer bred and open sows, gilts, service boars and weanlings—all of excellent conformation and breeding. Write us and get get good ones. J. Boyd Harrold, Dixon, Cal.

BIG-TYPE DUROCS—Herd headed by California Orion King. Am offering excellent young boars at right prices. Inquiries invited. Harvey M. Berglund, Dixon, Calif.

JACK LONDON RANCH, Glen Ellen.—Exceptionally good weanlings. Bred sows and gilts. One good yearling boar and one fall boar. Prices reasonable.

ROOSTEIN RANCH DUROCS headed by Lord's Orion Cherry King. Breeding stock for sale at all times. W. M. Way & Son, Rt. 1, Box 320, Modesto.

BARGAINS in bred sows and gilts. Pathfinder and Great Wonder I Am blood. Derryfield Farm, Capital National Bank Building, Sacramento, Cal.

DUROC-JERSEYS — Fine big-type gilts, tried sows and boars. Eastern and California bred. H. P. Slocum & Son, Willows, Calif.

WINSOR RANCH DUROCS—Young boars and some top gilts bred to WINSOR'S GIANT ORION—Morris C. Allen, Mgr., Bonita, Cal.

REGISTERED DUROCS — Choice gilts and weanlings, either sex. Breeding and satisfaction guaranteed. H. E. Boudier, Napa.

BIG-TYPE DUROCS — Gilts and boars of Winsor's Giant Orion breeding. Falfadale Farms, Perris, Calif.

DECEMBER AND MARCH DUROC BOARS—Pathfinder breeding. Sterling Smith, Route 1, San Diego.

FOR THE BEST in Durocs, write June Acres Stock Farm, Davis, Cal.

Poland-Chinas.

TOHOQUA POLAND-CHINAS — Big type. A good big tried sow to sell. Has farrowed two litters of ten pigs each. Bred for August farrow. Also a dandy young boar pig from the Grand Champion sow of Glenn Co. Fair. This stuff is good, fully guaranteed and priced to sell. Ferguson and McKaig, Orland, Cal.

BRED GILTS for sale. A few choice ones bred for fall farrow, to a good son of F'Big Jones, the Iowa 1920 Grand Champion. N. Hauck, Alton, Humboldt Co., Cal.

ELDERSLEY AND SHADY BROOK Farms big-type Poland-Chinas that make money for the Feeder, the Farmer and the Breeder. Prices reasonable. J. H. Ware, Brown's Valley, Calif.

J. F. McSWAIN, Breeder of Poland-China hogs. Herd headed by Big Model Fellow. Reserve grand champion 1919 State Fair. Young stock for sale. R. 3, Merced, Cal.

WAUKEEN HERD POLAND-CHINAS — Home of King's Big Bone Leader. A few service boars for sale. Les McCracken, Ripon.

LAKESIDE STOCK FARM—Large, smooth and big-boned Poland-Chinas. Geo. V. Beckman & Sons, Lodi, California.

REGISTERED POLAND-CHINA SWINE — Prize-winners. Finest stock in the State. Bassett Bros., Hanford, California.

BIG-TYPE POLAND-CHINAS—Good as the best. Always glad to show you. Houck & Lewis, Winton.

REG. BIG-TYPE POLAND-CHINAS—Service boars; weanling pigs. J. H. Cook, R. 4, Chico.

POLAND-CHINAS—Strictly large type. J. F. Lehman, Lodi, Cal.

Berkshires.

BRED GILTS.

Sired by Mayfield Rookwood 2d, a Grand Champion Boar, out of 600-700 lb. sows, and actually bred to "ACHIEVER," our English Blood Boar, the Sire that puts more bone and pork-making qualities into his pigs.

Priced reasonably and absolutely guaranteed.

Castleview Ranch, Santa Rosa, Calif.

ANCHORAGE FARM BERKSHIRES
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HERD BOARS—STAR LEADER, Junior and Reserve Grand Champion of the World. The Grand Champion carload of barrows, over all breeds, at the San Francisco Live Stock Show, was sired by a son of Star Leader, NATOMAS BARON DUKE, grand champion of California. For sale, bred gilts, open gilts, young boars and weanling pigs. Write for booklet, prices and list of sows.

BEST BERKSHIRE BOARS—Buy one and grow pigs that will mature quickly and make hogs that produce the largest percentage of salable meat. They carry the blood of the most noted individuals of the country. A few top females for sale also. Geo. A. Stingle, Lark Meadow Ranch, El Monte.

The only herd of English Berkshires in the West. Bigger, better, stronger litters. More pounds of meat for less feed. Weanling pig, $35. Satisfaction guaranteed or money refunded at once. Sandercock Land Co., 703 Market St., S. F. In charge Natomas Land Sales.

GRAPE WILD FARMS—Berkshires—Guernseys. Big-type Berkshire Boars of serviceable age, sired by Big Leader—greatest son of Grand Leader 2nd. Panama-Pacific Grand Champion. A. B. Humphrey, Prop., Escalon.

BERKSHIRE BOARS—Real herd sires. We are offering these at sacrifice prices to move them quickly. Write for description and price. R. J. Merrill & Son, Morgan Hill, Cal.

QUALITY BERKSHIRES — Young stock, both sexes. Geo. P. Upham, Martinez .

REAL GOOD BERKSHIRES — Cholera immune. Frank B. Anderson, Sacramento, Cal.

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CHESTER WHITES. Several 4 and 5 mos. Both sex. Two extra good open gilts. "Zantara" No. 77685; 16-months boar worth double our price. You can afford our prices. All stock registered free. Satisfaction guaranteed. Cedarhurst Ranches, Route 2, Sacramento.

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Holsteins.

EIGHT EXCELLENTLY BRED Registered Holstein cows for sale. Tuberculin tested. Just what you want. Terms liberal. Fine bull out of 24-lb. dam and sired by Segis Pontiac De Kol Burke is bred to these females. This bull also for sale. S. J. Strauss, P. O. Box 62. Phone 217, or call at 1016 Eye St., Modesto, Cal.

YOUNG BULL by grandson of Tilly Alcartra, out of dam with good record. His half sister milking 68 lbs. per day as senior yearling. Also bull calves. H. M. Cross, Merced.

OAKDALE HOLSTEIN FARM, Pacheco, Contra Costa Co., J. M. Christen, Prop., Breeder of registered and high-grade Holstein cattle and purebred Hampshire swine.

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REGISTERED HOLSTEINS—Young bulls for sale. Long distance A. R. O. backing. Lester A. Driver, Nicolaus, Calif

FOR SALE—My herd of registered Holsteins—three milking females and bull. A. R. O. records. Glen Harter, Escalon.

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REGISTERED MILK AND BEEF SHORThorns, bulls and heifers for sale; catalogue free. Thomas Harrison, Santa Rosa Stock Farm, Santa Rosa, California.

INNISFAIL HERD MILKING SHORThorns—Young stock for sale; both sexes. Owned by Alexander & Kellogg Leased by J. D. Rowe & Son, Davis, Cal.

BREEDERS OF REGISTERED SHORThorns—Milk strain; choice young stock for sale. John Lynch Ranch, Box 321, Petaluma.

Jerseys.

SERVICE JERSEY BULL, bull calves Financial King blood. Chester White boars, prize winners. Best blood, type, production. N. H. Locke Co., Lockeford, Cal

JACK LONDON RANCH, Glen Ellen—Two fine Jersey bulls, one ready for service.

SUNSHINE FARM JERSEYS—"Production counts." E. E. Greenough, Merced, Cal.

Ayrshires.

STEYBRAE AYRSHIRES — Registered; all ages. E. B. McFarland, 414 Claus Spreckels Building, San Francisco.

NORABEL FARM AYRSHIRES—Le Baron Estate Co., Valley Ford, Cal.

BEEF CATTLE.

SHORTHORNS—The foremost beef breed—Have a limited number of stock for sale, both sexes. If you wish to start a small herd I can probably supply your needs. T. T. Miller, Hollister, Cal.

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ABERDEEN-ANGUS cattle of quality and breeding. Lilac Ranch, Escondido, Cal.

SIMON NEWMAN CO., breeders of Registered Herefords, Newman, California.

HEREFORDS — Mission Hereford Farm, J. A. Bunting, Prop., Mission, San Jose, Cal.

REGISTERED HEREFORDS—H. H. Gable, Diamond G Ranch, Esparto, California.

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OAKDENE GOAT FARM, Walnut Creek, Contra Costa Co., Cal. Breeders of milk goats. Nubian, Saanen and Toggenburg registered grades. Bred and fed for milk production.

FOR SALE—Purebred unregistered Shropshire rams, 3 years old. Big growthy fellows. As we cannot use them will sell at the right price. Spreckels Sugar Co., Greenfield, Cal.

BUY YOUR FOUNDATION STOCK from the world's record flock of non-shedding Angora goats. Prices reasonable. F. A. Pierce, Trinidad, Calif.

WRITE ME for early Rambouillet ram lambs ready for light use by Sept. 1. Also a few yearlings. Carl Lindheimer, Woodland.

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J. R. BLOOM, Dixon, Calif.—Twenty-five years breeder of purebred Shropshire sheep. Rams for sale. Single or carload lots.

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HARVEY S. VAN VLEAR, Lodi, Breeder and importer of registered Hampshire sheep.

CALLA GROVE FARM, MANTECA, CAL.—Breeders and importers of Hampshire sheep.

50 ANGORA GOATS (Bailey stock), 10 mares and horses. T. C. Still, La Panza, Cal.

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CHAS. KIMBLE—Breeder and importer of Rambouillets, Hanford, Calif.

BULLARD BROS., Woodland, Calif.—Breeders and importers of Rambouillet sheep.

MISCELLANEOUS.

BUTTE CITY RANCH
SHORTHORN CATTLE, SHROPSHIRE Sheep , Berkshire Hogs, Shetland Ponies, Bronze Turkeys, White Plymouth Rocks. Stock for sale at all times. W. B. Dwyer and W. S. Guilford, Box P, Butte City, Glenn county, California.

WANTED — Fresh cows. Meadowlark Dairy, Pleasanton, Cal.

KEEP DATE IN MIND

Ed. Stine & Son's First Annual Sale

MARVEL'S PRIDE COWS AND HEIFERS

WEDNESDAY, OCTOBER 20, 1920

Stronghurst, Illinois, Sales Pavilion

At this first Annual Sale we give you the choicest selection from our great herd of D. S. Polled Herefords. First in quality, size, bone and breeding—all from the home of

MARVEL'S PRIDE

The $14,500 Polled Hereford Bull

The progeny of the World's Greatest Polled Hereford Bull—65 great sale lots, comprising sons and daughters of **Marvel's Pride** and **Improver.**

Every animal in the herd is insured in the Capital Livestock Insurance Company, and a policy for this fall selling price of the animal will be transferred to the new owner without cost.

Get ready for this Sale. Get some of the **Marvel Pride** blood in your herd.

Col. FRED REPPERT, "the Great"

and Assistants will cry the Sale.

McCarty-Shinn-Elliot

SALE OF

Big-Type POLAND-CHINAS

50 Head Bred Sows Gilts and Boars

The greatest offering ever made on the Pacific Coast. Every animal an attraction as to breeding and individuality, sired by **The Pilot, The Californian, Hercules, Kansas King, King Jones Over,** and others.

Sows bred to **The Westerner, The Californian, The Argonaut, Hercules Junior** and **Orange Giant.**

See them at the State Fair and Tulare Livestock Show.

Sale at Tulare, Monday, September 27th

For Catalogues write H. C. SHINN, Tulare

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FATTENING HOGS

In fattening hogs for market, LACTEIN is the most economical and effective agent you can use. LACTEIN produces the weight of perfect health in the hog—keeps the digestive organs in the "pink" of condition—frees the system from worms and eliminates all disease of the intestines. No danger from bowel trouble or running down by disease. LACTEIN keeps the hog so healthy that his system gets every ounce of nourishment from the food. The result of this is easily seen. It means that the hog adds on solid, firm flesh, and this means added weight, and in turn means more dollars for you.

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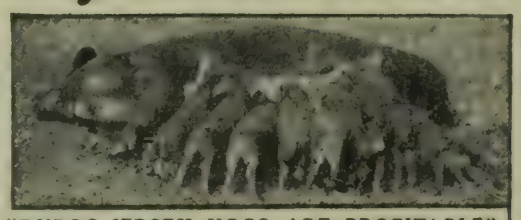
Duroc-Jerseys Are Prolific and Profitable

They raise *big* families. Hardy, easy-feeding, quick maturing. That is why Duroc-Jerseys today outnumber any other breed in the United States. Out of *all* the hogs marketed in 1918, 51 per cent were Duroc-Jerseys.



WRITE FOR BOOKLET—"DUROC-JERSEY HOGS ARE PROFITABLE"
published and mailed free by the largest swine record association in the world (over 10,000 members) for the benefit of hog raisers everywhere.

THE NATIONAL DUROC-JERSEY RECORD ASSOCIATION
Dept. 120—PEORIA, ILLINOIS

HILLCREST STOCK FARM

Shorthorn Cattle

Shropshire and Merino Sheep

RAMS AND BULLS FOR SALE

Single or in Carload Lots

See Hillcrest Shorthorns at the State Fair

T. S. GLIDE, Prop. DAVIS, CALIFORNIA

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BREEDERS OF

RAMBOUILLET SHEEP

Have for immediate sale

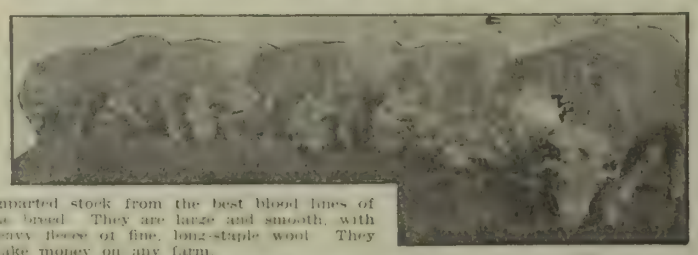
50 Registered Yearling Ewes

50 Non-Registered Yearling Ewes

350 OTHER EWES

WRITE FOR PRICES AND PARTICULARS

KIMBLE RAMBOUILLETS



Imported stock from the best blood lines of the breed. They are large and smooth, with heavy fleece of fine, long-staple wool. They make money on any farm.

Rams, Yearlings, and older Breeding Ewes. Call or write for further particulars.
CHAS. A. KIMBLE, Hanford, Calif. IMPORTER AND BREEDER

Milking Machines Not Trouble Makers

(Written for Pacific Rural Press by Ralph Newman.)

This writer has been surprised, not to say appalled, by the number of milking machines that have been used for a time and then discarded. In the aggregate they represent a lot of capital that is absolutely unproductive. A number of reasons are given for this condition but most of them fall under two heads. First, it is said that the machines injure the cow, and secondly they reduce the quality of the milk.

Are Machines Hard on Cows?

When trouble arises is the machine or the man to blame? Garget is the usual cry. But hand-milked cows get gargety at times. I am inclined to believe after eight years' experience with three makes of machines that the trouble here is with the man and not in the machine. When a fellow begins using a machine he is timid and suspicious. If anything goes wrong with a cow's teat or udder, the machine is the cause; he has visions of all the cows going the same way, and out goes the machine. Probably that case of garget would have come just the same with hand-milking. Probably the machine had nothing whatever to do with it. It ought to be remembered though that if a case of garget does show it may be the infectious kind, and such a cow should never be milked with the string. The teat cups taken from such a cow and used on others is just a dandy way to spread the infection. I know where several machines have been thrown out under just such conditions. I once bought twelve of a man's best cows because he couldn't milk his whole herd by hand and the new milking machine was ruining the cows. Several cases of garget had already developed. He put the machine in the discard, sold some of his cows and went back to hand-milking. We took those twelve cows that were likely to be ruined, and from the first milking used the same make of machine on them—never milked them any other way, and never had a bit of trouble.

Sometimes mechanical injury may be done a cow's udder because the man using it does not thoroughly understand it. Here perhaps neither the man, nor the machine, is to blame. The milking machine company is to blame for not giving better instruction when the machine is installed. A milking machine discarded because "it hurts the cows" is a mighty poor advertisement. Too many salesmen forget the whole thing when the sale is made. It is mighty short-sighted business policy that is bound to react—is beginning to react. Every company that expects to stay in the business could well afford to send an expert to the dairy where the machine is being installed and keep him there till the dairyman knows the machine from A to Z. And they could also afford to keep in touch with all their machines in a given territory, and be Johnnie-on-the-spot at the least intimation of trouble. If this were done it is certain that we would not see so many discarded machines and so much burned-over territory.

Can High Grade Milk be Machine-Produced?

Most emphatically and absolutely (and any other way), yes! The writer produced certified milk with a machine and had no more trouble keeping down the germ count than he had with hand-milking. But it takes quite a conscience to do it. When an agent tells you that a machine will produce cleaner milk than hand-milking it doesn't mean a thing. A machine may draw certified milk and it may empty out the vilest stuff that ever disgraced a healthy cow. Everything depends on the care the machine receives—that is, everything depends on the man behind the machine. If I were an inspector and had the power I would absolutely prohibit the use of a milking machine unless the dairy was properly (not expensively) equipped to keep it clean and unless the owner could furnish a moral bond for faithful continuous performance in keeping it clean. An unclean milking machine is altogether an abomination. A clean milking machine, with the parts the milk touches properly sterilized, can and does transfer milk from a cow's udder to the cooler as nearly sterile as it can be done by any other known process.

No lengthy treatise is needed on how to care for a milking machine; the instructions that come with it are enough; but volumes might advantageously be written on how to care for the man who cares for the machine. We hate to put it in cold type, but it ought to be said: A milking machine condemned because of low quality milk is unjustly accused every time. Such a condition ten times in every ten is nothing but proof positive that the man behind the machine is careless or dirty or both.

LIVE OAK STOCK FARM

SHROPSHIRES

RAMBOUILLETS

and

AMERICAN MERINO

SHEEP

We have for sale this season 400 head rams, yearlings and 2-year-olds. All purebred. Will sell singly or in carload lots.

Also 15 Head Purebred Red Polled Yearling Bulls

For further particulars apply

F. A. MECHAM ESTATE

PETALUMA, CAL.

HOLSTEIN BREEDERS' ASS'N STANISLAUS COUNTY
A. M. BIBENS, President
E. M. MORROW, Secretary
Modesto, Calif.

"ORMSBY"
Means Quality and Production.
Get a young bull sired by King Korndyke Hengerveld Ormsby 7th
KOUNIAS REG. STOCK FARM
Waterford Road
P. O. Box 296, Modesto

HOLMES STOCK FARM
Modesto
REGISTERED HOLSTEIN-FRESIANS
Prize-winners at all Shows.
Inspection invited and satisfaction guaranteed. Write for prices.
R. L. HOLMES, Prop.

BRIDGFORD HOLSTEIN CO.
Patterson
THE CHAMPION SHOW HERD
The herd of high records.
STOCK FOR SALE.
Visitors Welcome.
See Us at the State Fair.

WALTER K. ADAMS,
Rte. 1, Box 245, Modesto
BREEDER OF REGISTERED HOLSTEINS AND POLAND-CHINAS

A. M. BIBENS,
Modesto
BREEDER OF REGISTERED HOLSTEINS
Some fine young bulls for sale.

BULLS AND BULL CALVES
Sired by SEGIS DUTCH ORMSBY
My 32-lb. Herd Sire
Out of A. R. O. dams.
JOHN SAXER, - Modesto, Cal.

H. E. CORNWELL
MODESTO - - CALIFORNIA
Prescott Road, 1 mile from Highway
If you want to see some of the best Holsteins in the State, visit my herd.
YOUNG STOCK FOR SALE

R. H. DAVIS
REGISTERED HOLSTEINS
Route C. Box 196, Modesto, Cal.
Animals of both sexes for sale.
Herd tuberculin tested.

BULLS FOR SALE
From 1000-lb. sire and high-producing dams that carry same blood as Belle Faskie DeKol Witkop, the highest prize winner in the Holstein-Friesian Association of America last year.
FREEMAN (E. E.) & EDWARDS
Modesto, Calif.

NEARKOP
Genuine South American
Cotton Seed Cake Meal
Richest and most satisfactory cattle feed on the market.
Before you buy any cotton seed meal or other cattle feeds, apply to us.
We can surely satisfy you.
GEO. W. McNEAR, Inc.
433 California St., San Francisco

When anything went wrong an old French proverb said, "Look for the woman!" When a milking machine goes wrong, look for the man.

HORSES IN DEMAND.

The demand for mules to work in the Texas oil fields has nearly denuded Kansas of these useful animals which are selling at phenomenally high prices. Montana and Nebraska have been drawn upon heavily and now Kern County is shipping horses to compete with the mules in the new oil fields.

With the rapidly mounting costs of fuel, oil, rubber and machinery, the economic factor of the horse cannot be ignored and the more trucks and tractors are put in use the greater demand there will be for the horse. Each have their uses, and each is supplemental to the other. With every section of new land brought under cultivation, with every new oil field opened up, with every new enterprise established by trucks and tractors, there is an increased demand for the horse that can do the work.

The lines are sharply drawn between drafters and inefficients, the weaklings being inexorably scrapped, the demand being for bigger and weightier horses with more quality, spread and bottom.

A COMBINATION POLAND-CHINA SALE.

Three of the leading breeders of the Big Type Poland-Chinas have joined forces and stock for the purpose of holding a public sale. They will all exhibit at the leading fairs before their sale, showing some of the stock consigned. Thirty bred sows and gilts, a few open gilts and 5 boars will comprise the total offering.

The boars offered are like all the rest of the offering, purely big type in breeding and individuality, the kind many breeders in California think is necessary to be sent out from Eastern herds.

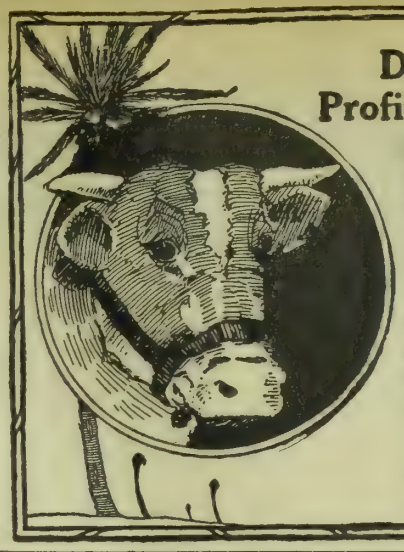
The boars in service are The Westerner, The Californian, Hercules Jr., The Argonaut and Orange Giant, an aggregation of sires unequalled on the Pacific Coast.

ALWAYS IN DEMAND.

There is an insistent demand for the liberal milking Shorthorn cow that combines the usual breed tendency to beef production also. The call goes unsatisfied because the demand exceeds the present supply. It is an inviting field. Shorthorn breeders will do well to pay close attention to the milking qualities of their cows. This is an inherent breed characteristic and one that the farmers desire most to obtain—this beef and milk combination. No other breed has such a record of performance in this dual field. The farmers do well to incline to the Shorthorn because of the adaptability to the farm conditions. The quiet temperament, the ability to thrive on the ordinary farm roughage, the favor in which they are held at the markets and the performance at the pail, if given attention in that line, makes the Shorthorn the ideal bovine investment for the farm in all parts of the country.

BROOD SOW NEEDS.

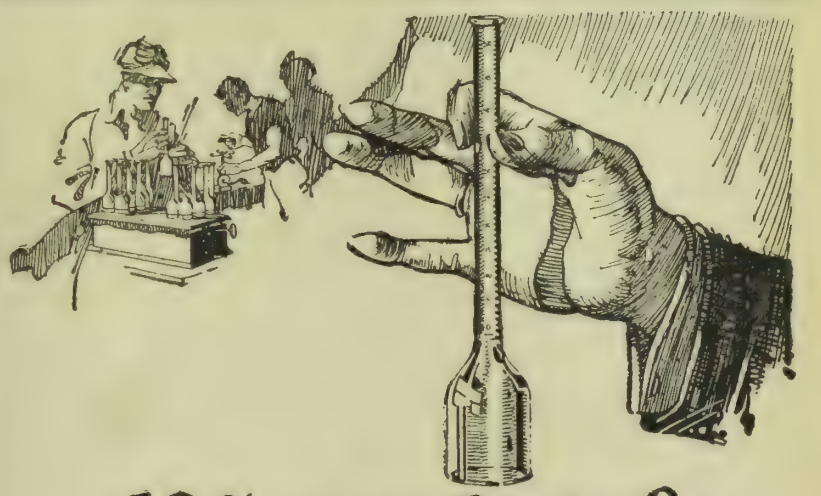
The brood sow needs a variety in her food and exercise. In experiments conducted at the North Dakota Agricultural College, under the direction of Prof. Shepperd, it was found that sows will readily eat alfalfa hay, and that when this is fed with a mixture of about half barley and half shorts at the rate of 2½ pounds daily for a 200-pound sow, splendid results have been secured. Equal parts of barley, oats and bran or shorts also makes a very good feed. Exercise is also very important. It was found that the best way to give the grain feed was to sweep the floor clean and scatter the grain feed on it. This results in the sows spending hours on their feet getting their feed. Observations indicate that sows fed a variety of foods and given plenty of exercise are not likely to produce hairless pigs.



Do You Want Profit Producing Cattle?
Then feed them profit producing food. Because of the easily digestible protein in COPRO its nourishing value is exceptionally high and the percentage of waste in assimilation is exceedingly low.
Copro
is a nourishing, economical, profit producing form of food for cattle and poultry.
Mix it with your rations and watch the results. FREE SAMPLE and a copy of our booklet containing valuable information on the subject of "SUCCESSFUL FEEDING" gladly sent on request. Write today. If your DEALER can't quote prices write us direct.
PACIFIC OIL & LEAD WORKS
Manufacturers
155 Townsend St., San Francisco, Cal.

ASK YOUR DEALER FOR
El Dorado Cocoanut Oil Cake
for Milk Cows and Chickens and Young Pigs and Hogs. Cheapest food in the market today. If your dealer doesn't carry it, address
EL DORADO OIL WORKS
433 California Street, San Francisco

GUASTI BERKSHIRES
Weaned pigs, both sexes, from sows that farrow large litters and raise them. Priced reasonable — they are money-makers.
ITALIAN VINEYARD COMPANY
ALEX. M. WILSON, Supt. Guasti, Calif.



10% more butterfat

Ten per cent more butterfat! That's what the University of California's string of twenty-six cows tested after eating silage rations.

Official Statement. U.C. Agr. Bulletin 282
"Through addition of Indian corn silage or milo silage, to rations of alfalfa hay, or alfalfa with grain feeds, an increase in production amounting to from ten to twenty-five per cent was secured—butterfat was increased by about ten per cent."

An Indiana Silo will help you add this ten per cent to your cream check. Twenty thousand Pacific Coast farmers earn greater profits with Indiana Silos. Standard for twenty-two years. Money-back guarantee. Three men can erect an Indiana in three days. Investigate now. Write for free silo book.

CHAS. K. SPAULDING LOGGING CO.
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MAIL COUPON TODAY FOR FREE SILO BOOK
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SALEM, OREGON
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Facts in BLACK & WHITE

Babies Thrive on Holstein Cows' Milk

Holstein cows' milk is more nearly like human milk in chemical composition than that of any other breed of cows. Owing to its small fat globules and low percentage of volatile glycerides, baby can easily assimilate it, obtaining from it the great vitality of the vigorous Holstein cow. A leading doctor says that "80 per cent of all the infant troubles is due to inability to assimilate food," and that "infant mortality could be reduced 50 per cent if all infants were fed intelligently on purebred Holstein cows' milk.

Our wonderfully interesting booklets are sent free on request.

THE HOLSTEIN-FRIESIAN ASSOCIATION
230 Hudson Street
Brattleboro, Vermont

AUCTION SALE
—OF—
Registered Holstein Herd
HENRY VAN TIGER, Auctioneer,
Will Sell at Public Auction, on
Thursday, September 16, 1920
at 10:30 a. m. sharp on the premises 12 miles southwest of Marysville, 1 mile southeast of Tudor, on the River Road, Sutter Co., Cal., the property of
MRS. CORA HAGUE
DESCRIPTION OF PROPERTY
120 head of registered Holstein dairy cows, among which are 65 head of high grade young registered Holstein cows, all registered Korndyke; a number now springing; 46 head of 1 and 2-year-olds; 15 head of choice selected large heifer calves; 2 registered Holstein bulls, 2 and 3 years old; 13 head of beef steers; cream separator, cans, pump and everything that goes with a high-class dairy; 1 10-25 new Samson tractor; 1 new set of plows, 12-inch bottoms; new set of 8-ft. double discs; 1 5-ft. mowing machine; 1 self dump hay rake and many other articles.
The above is a choice herd and the registry papers will be given the buyer on day of sale.
SALE POSITIVE. GOOD LUNCH.
TERMS—CASH
MRS. CORA HAGUE, Owner
HENRY VAN TIGER, Auctioneer
Office: Western Hotel, Marysville, Cal.

DE LAVAL
CREAM
SEPARATORS
MAKE FALL AND WINTER DAIRYING MORE PROFITABLE
There is surely no reason to delay the purchase of a separator or to continue the use of an inferior one. A De Laval Machine will save its cost by spring, and may be bought on such liberal terms, if desired, as to actually pay for itself meanwhile.
De Laval Dairy Supply Co.
61 Beale Street, San Francisco, Cal.

REGISTERED HOLSTEINS
Creamcup Herd offers service bulls and bull calves of 34-lb. breeding. Females offered for foundation stock.
Tuberculin tested.
M. M. Holdridge, San Jose, Cal.
R. D. "A," Box 437,
Two miles out North First Street.

LEONARD FARM
JERSEYS
Bulls for sale from Register of Merit Cows.
Write for information.
W. J. HACKETT,
CERES, CALIFORNIA

Cull the flock so as to eliminate the early molters and other unprofitable producers.

LIVE STOCK AT STATE FAIR.

(Continued from page 357)

opinion that in very short time we will see an exhibit here that will equal that of any Eastern fair.

Pig and Calf Clubs.

The activities of the opening day centered around getting the belated exhibits into place and the boys' pig and calf club judging contests with Senator Phelan's address.

These stock judging contests are of immense importance to the boy or girl intending to follow the business of growing purebred animals of any kind. It has a tendency to introduce them to the right line of thinking in regard to livestock to show them what pedigreed animals will produce.

Boys from the livestock clubs of the high schools to the number of 125 took part in placing classes of the various breeds of dairy cattle, beef cattle, swine, poultry and rabbits. Similar to all such contests the participants were allowed a stated time to inspect the animals in each class and give their reasons for their placings. The team from the Lodi High School was first in more classes than any other. This contest was the first of its kind in California and was so successful that it is expected to be an annual event hereafter. The awards follow:

Berkshire Placings State Fair 1920.

Berkshire Boars, two years old or over.—(1) Royal Longfellow 5th. By J. Bastanchury. (2) Champion Masterpiece 8th. By Italian Vineyard Co. (3) Supreior Champion 3d. By Superior Calif. Farm Lands Co. (4) Laurel's Emblem II. By Grace Trumbull Reed

Berkshire Boars, Senior Yearling.—(1) Enhancer. By Castleveiw Ranch. (2) Model Leader 3d. By Italian Vineyard Co. (3) Escalon Type. By A. B. Humphrey.

Berkshire Boars, Junior Yearling.—(1) Escalon Big Joe. By A. B. Humphrey. (2) Grape Wild Challenger. By A. B. Humphrey. (3) Pegg's Leader. By Sandercock Land Co. (4) Real Type's Leader. By Anchorage Farm Co. (5) Escalon Artful Leader 3d. By A. B. Humphrey.

Berkshire Boars, Senior Pig.—(1) May's Superba. By A. B. Humphrey. (2) Escalon Model Leader. By A. B. Humphrey. (3) Duke's Mixture. By Anchorage Farm Co. (4) Anchorage Leader 75th. By Anchorage Farm Co.

Berkshire Boar, Junior Pig.—(1) Matchless Type. By Italian Vineyard Co. (2) Grape Wild Champion 3d. By A. B. Humphrey. (3) Castleview Achiever. By Castleview Ranch. (4) Grape Wild Champion 2d. By A. B. Humphrey. (5) Baron Duke's Last. By Sandercock Land Co.

Berkshire Sow, two years old or over.—(1) Grape Wild Rose. By A. B. Humphrey. (2) Duke's Natomas Princess. By Italian Vineyard Co. (3) Grape Wild Rose 2d. By A. B. Humphrey. (4) Wilsonia Princess Laurel. By Italian Vineyard Co. (5) Symbolcer's Star Lady. By Sandercock Land Co.

Berkshire Sow, Senior Yearling.—(1) Grape Wild Rose 6th. By A. B. Humphrey. (2) Grand Lady Escalon 2d. By Anchorage Farm Co. (3) Rival's Moachless Lady 6th. By Italian Vineyard Co. (4) Emblem's Queen 12th. By Italian Vineyard Co. (5) Emblem's Queen 13th. By Italian Vineyard Co.

Berkshire Sow, Junior Yearling.—(1) Grape Wild Rose 8th. By A. B. Humphrey. (2) Real Type's Lycindy 5th. By Italian Vineyard Co. (3) Meadowview Duchess 6th. By Italian Vineyard Co. (4) Grape Wild Rose 9th. By A. B. Humphrey. (5) Grape Wild Rose 13th. By A. B. Humphrey.

Berkshire Sow, Senior Pig.—(1) Castleview Royal Duchess. By Italian Vineyard Co. (2) Superior Champion Lady 16. By Superior Calif. Farm Lands Co. (3) Real Type Belle 4th. By Italian Vineyard Co. (4) Real Type Belle 5th. By Italian Vinyeard Co.

Berkshire Sow, Junior Pig.—(1) Achiever's Laurel. By Castleview Ranch. (2) Real Matchless Lady. By Italian Vineyard Co. (3) Burton's Oregon Lady. By Italian Vineyard Co. (4) Burton's Oregon Lady 2d. By Italian Vineyard Co. (5) Grape Wild Rose 21st. By A. B. Humphrey.

Beef Shorthorn Winners State Fair

Exhibitors.—Wm. Bond, Newark; W. M. Carruthers, Live Oak; Estate of Thos. B. Dibblee, Lompoc; Geo. Diersen, Hood; Easton & Ward, Diablo; Edinger-Johnston Co., Hood; T. S. Glide, Davis; H. L. & E. H. Murphy, Perkins; Ormondale Ranch, Redwood City; Pacheco Cattle Co., Hollister.

Senior and Grand Champion Bull.—Imp. Scottish Lord, T. S. Glide

Junior Champion Bull.—Pacheco Lad 215th, Pacheco Cattle Co.

Bulls, 2 yrs. old and over.—Imp. Scottish Lord, Glide, 1st. Dalmeny Count, Pacheco Cattle Co., 2d. Blackhawk Villager, Easton & Ward, 3d. Cumberland Gloster, Bond, 4th.

Bulls, Senior Yearlings. — Cheerful Count, Glide, 1st. Baron Lancaster, Dibblee, 2d.

Bulls, Junior Yearlings.—Ormondale Radium, Ormondale Ranch, 1st. Spicy Count, Glide, 2d. Amanda's Dale, Pacheco Cattle Co., 3d. Ormondale King, Ormondale Ranch, 4th. Count's Baron, Carruthers, 5th.

Senior Bull Calves.—Pacheco Lad 215th, Pacheco Cattle Co., 1st. King's Count, Glide, 2d. Baronson, Dibblee, 3d. Silver Cup, Dibblee, 4th. Glenbrook Champion, Diersen, 5th.

Junior Bull Calves. — Cumberland Goods, Bond, 1st. Royal Clansman, Dibblee, 2d. Brighton Type, Murphy, 3d. Brighton Type 2d, Murphy, 4th.

Cows 3 years old and over.—Little Sweetheart, Glide, 1st. Pacheco Lass 80th, Pacheco Cattle Co., 2d. Mayfield Victoria, Bond, 3d.

Cows 2 years old and under three.—Ormondale Maid 2d, Bond, 1st. Village Lassie, Glide, 2d. Blackhawk Roan Lady, Easton & Ward, 3d. King's Countess, Glide, 4th. Little Sweetheart 2d, Ormondale Ranch, 5th

Senior Yearling Heifers. — Village Rose, Glide, 1st. White Pacheco, Pacheco Cattle Co., 2d. King's Countess 2d, Glide, 3d. Violet Opal 2d, Carruthers, 4th.

Junior Yearling Heifers.—Village Girl, Glide, 1st. Pacheco Doris, Pacheco Cattle Co., 2d. Blackhawk Roan Lady 2d, Easton & Ward, 3d. Cumberland Maid, Bond, 4th. Riverside Grace 3d, Carruthers, 5th.

Senior Heifer Calf.—Sultan's Dale, Pacheco Cattle Co., 1st. Village Ruby, Dibblee, 2d. Hillcrest Flower 3d, Glide, 3d. Cheerful Countess, Glide, 4th. Blackhawk Victoria 2d, Easton & Ward, 5th.

Junior Heifer Calf.—Maid of Honor, Glide, 1st. Lavender Queen 5th, Dibblee, 2d. Pacheco Lass 213th, Pacheco Cattle Co., 3d. Pacheco Doris 2d, Pacheco Cattle Co., 4th. Blackhawk Victoria 3rd, Easton & Ward, 5th.

Aged Herd—Glide, 1st; Pacheco, 2d; Bond, 3d.

Breeders' Young Herd—Pacheco, 1st; Glide, 2d; Dibblee, 3rd; Carruthers, 4th.

Calf Herd—Pacheco, 1st; Dibblee, 2d and 4th; Glide, 3rd.

Get of Sire—Easton & Ward, 1st; Pacheco, 2d; Glide, 3rd; Dibblee, 4th; Carruthers, 5th.

Produce of Dam—Easton & Ward, 1st and 4th; Glide, 2d; Ormondale, 3rd.

Poultry for Profit

THANKSGIVING TURKEY PRICES.

Quite recently the press of the State printed some sensational statements relative to prices that may be expected for the "piece de resistance" of the next Thanksgiving dinner. It is predicted that prices will soar to 75 cents or $1.00 a pound when the fete day ushered in by our New England forefathers rolls around.

Profiteering Propaganda.

If the publication of these statements is intended to create an unusual demand for turkeys, and thereby establish a condition favorable for profiteering, the authors have missed the mark. This "boost" propaganda has attracted the attention of thousands of buyers of turkeys. Without doubt many of the "ultimate consumers" have already digested the information regarding the future price, and have decided that the family table will be decorated during the coming holidays with "some substitute" for the national bird.

As a means of feeling the pulse of the consumers we submitted this "news item" to a number (18 up to this time) of possible buyers in various walks of life and financial standing. One stated that turkey would grace the bill of fare, regardless of the price; three decided that it was probable that 75 cents per pound would not discourage them; and fourteen were positive that any price above 50 cents would spell "substitute."

No Curtailment of Supply.

It is quite possible that the supply of turkeys in the upper Sacramento valley may be short this season, but this should have no effect upon the supply of the whole State.

Other sections have become centers of production; most of them small or moderate in comparison, but several now rival the upper valley in the number and quality of turkeys produced. Those breeders who make it a business to supply hatching eggs have this season experienced the greatest trade in the history of the industry in this State, and conditions generally have been favorable for raising the young. Here and there the very dry season has been detrimental.

An excellent price will doubtless be obtained by turkey raisers this fall; but there is a limit beyond which the prospective consumer will not go, and that limit is considerably under $1.00.

EGGS STERILIZED FOR SHIPMENT

(Written for Pacific Rural Press.)

To practically eliminate the losses found in storage eggs the Poultry Producers of Central California have adopted the rather recently devised system of sterilizing them in hot mineral oil of the petroleum class. Shipments have been made to various parts of America, and the trade has expressed great satisfaction with the new system, according to man-

"Pride of Petaluma" and Her Happy Family

THE PRIDE OF PETALUMA TRIPLE CONE VENTILATING BROODER STOVE HAS A DIRECT OIL BURNER—NO WICK. Burns COAL OIL or DISTILLATE with PERFECT SATISFACTION. AUTOMATIC REGULATOR Controls the flow of OIL. This Stove is so constructed that the heat is EVENLY DISTRIBUTED over the floor, where the Baby Chicks MUST have it.

THESE STOVES are built in Three sizes—2-B, 4-B and 12-A.

THE KRESKY STOVES are built up to a STANDARD, and NOT DOWN to a price.

Capacity 500 to 1,500.

WRITE for CATALOGUE No. 70—It is FREE.

Kresky Brooder Stove Co.
PETALUMA, CALIF.

ager J. H. Barber of the Poultry Association. The oil at a temperature of about 220 degrees sterilizes the shell and toughens the skin of the egg inside the shell. It stops evaporation, so that until five or six months later the eggs have all the qualities of fresh eggs. This will enable our association to further broaden the markets for California fresh eggs, because it will keep them fresh in transit on longer journeys. The cost is about 5 cents a dozen, allowing a slight profit for the operation. This extra cost is more than counterbalanced by the absence of the spoiled eggs found on ispection when stored eggs are put onto the market. Sterilization may also have a bearing on the hopes of the Poultry Association shipping eggs via the Panama Canal to Europe. Heretofore commercial shipments have been prevented by the limitations of cold storage space on shipboard, though experimental shipments have gone through in good shape. It is also coming to be an important factor in shipments of California eggs to the Atlantic seaboard of which 200 to 300 carloads are being sent annually.

A BEGINNER IN SQUABS.

To the Editor: I am a beginner in raising squabs, and would like to know how to prepare the squabs for market.—O. A. P., Patterson, Calif.

Nearly all squabs marketed in California are shipped alive to the receivers, and are then killed and dressed by experts. In case the market demands dead squabs it is necessary to enquire whether it is desirable to receive them plucked or simply killed. Squabs are fed by their parents until they are marketed, which is usually at from three and a half to four and a half weeks of age. They are in proper marketing condition when fully feathered under the wings, and this is about the time they begin to leave the nest. If not marketed then they soon lose their baby fat, and the flesh hardens. Catch the squabs in the morning before the parents have an opportunity to feed them, so that their crops are empty. When they are to be marketed and plucked it is customary to kill by cutting the arteries in the back part of the mouth and piercing the brain at the same time. When sent to the market without plucking they are usually killed by wringing the neck, or breaking it by pressing the thumb where the bones of the neck join the head, until the head is dislocated. When they are to be plucked, the squabs are hung by the legs on nails or hooks, with the wings double locked over the back. After they are stuck the feathers are immediately plucked clean, with the exception of the head, and the birds are cooled in cold water, or hanging in a cool place. The crops should be cut open and thoroughly cleaned if they contain any feed. It is customary to ship them packed in a good supply of cracked ice, breasts up, with paraffine paper between each layer of ice and squabs.

RECIPE FOR POULTRY LICE.

To the Editor: Please send me a recipe for killing lice and how to use it.—Mrs. W. R. W., Olema.

Does our correspondent wish to learn how to readily free poultry of the ordinary body lice, or is the trouble caused by mites—the small red insects that at night suck the blood of the fowls and hide away during the day? If fowls are provided with a proper earth bath it is seldom that they do not keep themselves reasonably free from body vermin. This earth bath should be fully ten inches in depth and be composed of very light loam, which should be kept moist but not sloppy wet. The loose, loamy soil, such as is considered ideal for garden crops, is just the thing. To rid badly infested premises of the blood-sucking night mites, spray the houses and yards each day for a week or more with a solution of sheep dip. Use at the rate of one pint of dip in twenty-five gallons of water. It is not the strength of the solution, but the frequency of application that brings results. If a suitable spraying outfit is not available this weak solution may be dashed about with a broom or a small dipper with a long handle. These mites hide under the roosts, in cracks, in the roof, and even in the ground about the houses, therefore the solution must be applied everywhere in the houses, yards and nests. Take out the nest material before spraying and replace it when nests are about dry. If the solution comes in contact with the eggs it causes the eggs to taste flat or stale.

The chicken industry is growing toward Petaluma proportions in the San Gabriel district. Headed by two flocks of ten thousand birds each, there are now about one hundred thousand fowls in the comparatively small area included. Practically all of the eggs find a ready market in Los Angeles and other nearby cities. They are collected from the producers by auto truck every other day.

Unless the chicks are kept warm at night they will crowd and pile up. Good-bye to the under ones.

Market white-shelled and brown-shelled eggs in separate packages.

Poultry Breeder' Directory

Rate, 4c. per word. Cash must accompany all orders.

BARRED PLYMOUTH ROCKS — "Nothing Better in Poultry." Wonderful layers. Choice hens and pullets for sale; also fine cockerels that will improve your flock. Now booking orders for hatching eggs. I have made a specialty of Barred Rocks for over twenty-two years. That's why our birds win at all the leading shows. Catalog free. Chas. H. Vodden, Box 3, Los Gatos, Calif.

SANTA CRUZ CHICKS are in demand. Our hatchery will run full blast this fall, supplying Leghorns, Anconas, Minorcas, Rocks, Reds, and Orpingtons. We also offer W. L. Hyde's cockerels from Pen 1, with trapnest record 236-284 at $5.00. Write for folder with chick price list. B. W. Archibald, Soquel, Santa Cruz Co., Calif.

GET MORE EGGS—Increase your egg production 100 per cent by using A. J. E. Egg Builder; positively guaranteed to double your egg yield; the results of 25 years experiences; formula sent postpaid upon the receipt of $1.00. A. J. E. Laboratory, 514 Church St., San Francisco, Calif.

PETALUMA HATCHERY — Established 1902. If you want good fall layers, get chicks in the fall. We guarantee satisfaction. There will be but few chicks hatched this fall. The wise ones are buying. Send for prices. L. W. Clark, 615 Main St., Petaluma, Cal.

WHITE LEGHORN BABY CHIX from heavy-laying Hoganized Stock. Safe arrival of full count, live, strong chix guaranteed Price list and interesting literature on application. The Pioneer Hatchery, 408 Sixth St., Petaluma, Cal.

BABY CHICKS from selected S. C. White Leghorn hens. Write for prices. Tupman Poultry Farm, Box 7A, Ceres, Calif.

ATKINSON'S PEERLESS ANCONAS lay more and eat less than other breeds. 50 big husky cockerels, $5 and up; 200 pullets, trios and pens for sale. Hatching eggs. Catalogue free. J. W. Atkinson, Box B, 130 Willard St., San Jose, Calif.

RAISE FALL CHICKS—We will have them every week. R. I. Reds, Barred Rocks, White Leghorns. Write for special circular. See why they pay. Stubbe Poultry Ranch and Hatchery, P. O. Box 67, Palo Alto.

RHODE ISLAND REDS — Improve your color and egg capacity. Breeding stock now ready for shipment. Hatching eggs, chicks. Wm. Larm, 3915 39th Ave., Fruitvale, Cal.

BABY CHIX—Order now for September delivery, from our selected, bred-to-lay Hoganized White Leghorns, Barred Rocks, R. I. Reds. Maxwell Hatchery, Madera, Cal.

BARRED ROCK, White Orpington hatching eggs, now $1.75 and $3.50. Breeding Cocks, Cockerels, Hens, Pens. R. P. Lutzi, 1217 20th Ave., S. F. Yards at Los Altos.

GOLDCROFT BUFF ORPINGTONS. Columbian Wyandottes and White Leghorns. Heavy laying strains. Breeders and young stock. Samuel Abrams, Box 13, Los Altos.

PULLETS, $2.00 Cockerels, $5.00 each and upward; White Leghorn, Brown Leghorn, White Rocks. Mahajo Farm, P. O. box 597, Sacramento, Calif.

CHICKENS, DUCKS, GEESE, GUINEAS, Pea Fowl, Pigeons. Wm. A. French, 545 W. Park St., Stockton, California. Stamps.

EASTMAN'S "BRED-TO-LAY." Hoganized and trapnested. Barred Rocks. Fall Chicks. Fairmead Poultry Farm, Fairmead, Cal.

WANTED TO PURCHASE—Young turkeys in any quantity up to 2,000. California Hotel Farm Company, Riverside, Calif.

BOURBON RED TURKEYS—Buff Orpingtons. The Ferris Ranch, R. 2-144D, Pomona Calif.

Home Circle Department

FORGET YOURSELF.

Forget yourself and be a man,
And do for country all ye can
In time of need and deep distress;
Stand up and work and ne'er confess
You are a laggard in the van.
Throw out your line the world to span,
The good of all to be your plan;
With heart and mind of nobleness,
Forget yourself.

Now come and join the caravan,
With arms of brawn and face of tan,
And all together onward press,
And leave to God to judge and bless
Alike each true American,
Forget yourself.

—Henry Polk Lowenstein.

THE SCHOOL BELL IS RINGING

(Written for Pacific Rural Press.)

Watch the youngsters along the country highways and you will know that school is "taking up" again. Clean gingham dresses (I guess they are gingham), clean overalls, clean faces (can't see the hands), and a rather subdued manner, to say nothing of the lunch boxes and pails, proclaim that another year of what we call educational training has begun.

And the questions came crowding in: How many schoolhouse doors will not swing open this fall because no one has yet been found to teach? Not many perhaps in your section, but in places sparsely settled, and where probably the school is needed most, there will be an appalling number of them, for the teacher shortage is still acute. How many rickety old district school buildings will be abandoned this fall while the happy students assemble in the new consolidated school? More than ever before in the history of the movement; and a lot more will go the same way, thank goodness, as soon as new consolidated quarters not quite completed are ready for business. An abandoned schoolhouse—what a depressing sight it is! We can stand it if we know that the beautiful spirits who made it a living thing are expanding elsewhere amid far better surroundings, but it is a dismal sight. If it can't be touched up and put to some community use, would it be wicked to pray that the site may be purged by fire? Too bad lightning doesn't "strike" in California.

How many more schools have caught the spirit of progress and will begin the year right by kicking the dinner pails into the discard and inaugurating the modern school lunch? Has your school done it? A while ago we heard an expert in the Home Economics division of the Department of Agriculture say that a determined effort would be made to find out just why malnutrition is more prevalent now among country children than it is among city children. It is a cinch that one thing they will land on will be Willie's dinner pail. Let's "beat them to it." Go ahead now, you progressive mothers! Talk it over right away with your home demonstration agent. It's a lot of work? Yes, but it is a lot of work to rear children and it is energy partly wasted if the work is not well done.

Will the school this year do at least a little in the way of agricultural teaching and will that little be along some lines? There are hopeful signs. Talks with several rural educators this summer would indicate that the idea is growing that the real, effective teaching of agriculture in the school will not be done in the school at all, but under the inspiration and guidance of the school co-operating with other agencies, and on the farms. Clubs—calf clubs, corn clubs, clubs of all kinds, where the theory of the schools is put to the test and into practice on the farm, linking school and farm together—it is coming as sure as you live, glory be!

Will teachers be paid this year what "she" is worth. The feminine pronoun is used advisedly. It is mostly "she" in our schools now. In 1870 there were about 200,500 teachers in the United States and 28.7% of them were men. In 1919 there were 650,700 teachers and only 16.1% were men. Undoubtedly the percentage of men is smaller now, for there was a veritable exodus of men from the profession this past year. It is too bad. The ladies, God bless them, are all right, but—well, anyway, teacher is "she."

How about her salary? Look at this schedule of "union wages" averaged for five States, which make it a pretty fair average for the whole country.

Bricklayers	$1900.00
Electric Wire Men	1850.00
Structural Iron	1875.00
Plumbers	1775.00
Blacksmiths	1700.00
Carpenters	1300.00
Hodcarriers	1250.00
Bakers	1200.00

We are not saying the above wages are too high. Indeed it is a wonder that the bakers, anyway, can get by unless they live on the bread they make and get it before it reaches the store. But compare that schedule with the following table:

High school teachers	$1000.00
Intermediate teachers	890.00
Elementary teachers	800.00

Now most of these teachers presumably may not be heads of families. We are not going to argue that they are worth any more to the community than the baker or bricklayer. But you must possess a peculiar thinking machine if you think that they are worth any less or really earn any less. Yet the average teacher is not getting a bare living wage! You have raised teacher's salary a little, have you? Well, you haven't raised it enough and you have got to raise it some more or the first thing you know "there ain't going to be no" teacher. The hopeful thing about it is that this fact is being seen and some provision is being made to meet the condition. The danger is that having gone a little way we will get self-righteous and think we have gone far enough. We have not by a long way. As the school bells ring in a new school year far and away the most important problem facing us is this problem of securing adequate financial support for our teachers, upon whom in this period of reconstruction we are laying a heavier burden than they have ever been asked to bear before.

AN ARCHITECTURAL SORE THUMB.

(Written for Pacific Rural Press.)

We rise to ask why the average "tank house"? It sticks up and stands out on the landscape like a sore thumb.

A water system is among the absolutely essential things for a farm home. And a mere pump is not a water system. A water system involves some equipment that will permit the carrying of water under pressure through pipes to the home kitchen at least. If the boss wants to get along without it at the barn let him! But we insist that it is absolutely essential for the house.

Little by little pressure tanks are coming into use among us, but they are comparatively expensive and probably for some time to come we will have with us the tank house. It usually is an architectural atrocity but it need not be. Straight, sheer, bleak, unpainted or screechingly painted, it dominates the yard and dwarfs the house—a veritable shape of ugliness.

We have recently seen two that actually added to the appearance of the place. They really belonged. One cost very little, the other was quite expensive. Most anybody with a little thought given to it could duplicate either one according to his purse or perhaps could improve on both.

The trouble is the tank house is an after thought or no thought at all. If you are going to build, give a thought to the tank house. If you have built, take a look and see if, at slight cost, you can't remedy that sore thumb effect. It isn't fetching at all.

RENDERING LARD.

The lard to be rendered should be cut up into pieces about three-fourths of an inch square. The kettle to be used should contain a small amount of water so that the fat does not burn, and the heat should be increased gradually, so it is not brought up to a boiling point too quickly. The fat should be cooked until the cracklings are about chestnut in color and rise and float to the surface. The mass should be stirred quite often during the period of boiling. The fat should then be strained through double thickness sheets of fine cheese cloth and stirred for some time in order to break up the fat cells which materially assist in whitening the lard. The lard, after being run into suitable vessels, should be placed in a cool place and should keep very well.

There is very little trouble about lard becoming rancid, unless it is kept in a very warm place or unless the water has not been driven off from the fat during the process of boiling. In the latter case, the lard will not keep, even if stored in a desirable place.

Rancid lard may be made into soap, but it should first be boiled.

A contributed recipe is as follows: Pour 3 gallons of water into kettle; empty 3 cans of lye into it. Add 14 pounds of meat scraps, rinds or fat. Let soak up well. Add 3 gallons more water, a little at a time to keep it from boiling over, but not enough to stop the boiling. Cook until it runs like syrup or honey. Pour into boxes or tub until cool. Cut into bars. Let dry about 3 weeks before packing away or using.

PRODUCERS AND CONSUMERS TOGETHER!

The straightest route from producer to consumer for farm products was outlined by Aaron Sapiro, August 27, to a meeting in San Francisco of representatives of housewives' leagues and producers' organizations from all over California. Basing his remarks on the experience of European countries and eastern America, Mr. Sapiro proposed that consumers' leagues and producers' organizations join forces in a big wholesale organization to take farm products by the carload and distribute them to retail grocery stores to be established co-operatively on the zone system. The wholesale organization would handle all the common store goods and would be managed by highly skilled specialists. In San Francisco alone 200 grocery stores properly zoned would serve the same trade which now keeps 1,000 retailers on the ragged edge. It would avoid the waste of operating 800 stores. A committee of 20, representing producers' and women's organizations, was appointed to meet in San Francisco September 1 to work out and recommend some plan of producers' and consumers' co-operation to reduce H. C. L.

Market hens which you do not wish to carry longer as soon as they stop laying and begin to molt in the late summer or fall.

Choose a Piano for Qualities That will Endure

A piano is usually bought but once in a lifetime.

It will remain in your home from now henceforth,—a monument to your judgment, a witness to your taste.

As the years go on, associations will gather thick about this instrument. Little fingers will learn to play on it. Lovers will grow tender above it. Songs, old and new, will come from it mellow and familiar. During these years, your piano should come to be the very heart of your Home.

So choose this piano carefully. Choose it as you would choose an intimate member of your family circle. Choose it for the qualities that will endure.

A **good** piano need not be an **expensive** piano. But a "cheap" piano will yield nothing but a harvest of regrets.

For nearly half a century we have been selling **good** pianos. Maybe we, too, have absorbed from them some of the qualities that endure.

We have a piano for every home, and will gladly arrange convenient payment terms.

Dealers in Steinway and Other Pianos, Pianola and Duo Art Pianos, Aeolian Player Pianos, Player Rolls, Etc.

Sherman, Clay & Co.

Kearny and Sutter Streets, San Francisco.
Fourteenth and Clay Streets, Oakland.
Ninth and J Streets, Sacramento.
325 E. Main Street, Stockton
J and Merced Streets, Fresno.
190-192 S. First Street, San Jose.
Stores also at Vallejo, Portland, Seattle, Tacoma, Spokane.

THE THREE-CENT PIECE

Would you like to hear about little Sara Jane and her three-cent piece? It was years and years ago, when three-cent pieces were common. Sara Jane had earned the money. She had washed the supper dishes every night for three weeks, and had not spoken a word while she was doing her work. Her mother wished her to learn to be a quiet child. The mothers did not like to have their little daughters talking, talking, from morning to night, years and years ago.

The three-cent piece was in her pocket. It was hers to spend as she liked. She thought she would go to the store and buy candy with it.

The store was a mile away. It was not a large, fine building, such as you have seen. It was a small place. They kept the postoffice on one side of the room, and on the other potatoes, flour, sugar, cucumber pickles, brooms, washboards, tinware and nails, animal crackers, and sticks of candy in large jars. Sara Jane had always loved to look at those jars of candy. Now she was on her way to buy.

As she went skipping and singing along the road, she heard some one call her name.

It was a brown old man, and he stood on his brown old doorstep and waited for her to come up. Sara Jane knew him. It was good Mr. Gibbs. He was their neighbor. He said to Sara, "Are you going to town?"

"Yes, sir," she answered.

"Will you do an errand for me?"

"Oh, yes, sir!"

"I want ten cents' worth of three-penny nails," said Mr. Gibbs. "It's to fix a yard for my buff cochins. Here is the money."

She held her pocket open and he slipped it in. The dime went down and jingled on the three-cent piece. It made a pleasant sound as she went skipping on toward town—the jingle, jingle in her pocket. And the more merrily she skipped, the more merrily the money jingled.

But all at once the sound stopped. What do you suppose had happened? One piece of money was gone. The dime was gone! The three-cent piece that was left had no ten-cent piece to jingle against, so it could not jingle any more. That was the reason the sound stopped. It was not long, though, till there was another sound—it was little Sara Jane crying while she hunted for the money. But the crying did not make her eyes to see any better, and other little girls who cry while they hunt for things might think of that.

She did not know how she had lost it, and I do not know, either; but I think she was so like a rubber ball, bouncing and bouncing along toward town, that it made the dime bounce and bounce in her pocket, until it finally bounced out at the top. Anyhow it was gone, and she could not find it, though she hunted in the road and in the grass at the side of the road.

At last she was quite tired out, and she sat down on the ground and tried to think what she should do.

Her three cents was not so much as Mr. Gibbs' 10 cents, but she would give him her money because she had lost his. That made her cry again. You see, she wanted her candy so very much.

After a while she got up and went on to the store. She thought she would get three cents' worth of the nails and carry them to Mr. Gibbs.

Then all at once she seemed to have a very bright idea. She could not buy ten cents' worth of three-penny nails, as Mr. Gibbs had said, but she could buy three cents' worth of ten-penny nails and wouldn't that be just the same? She had a shining face when she walked into the store and asked for the ten-penny nails. Simple little Sara Jane.

Mr. Gibbs looked surprised when she handed him the small package of large nails.

"Why, what's this?" he said, and for a moment Sara Jane was afraid she had not done the right thing after all.

But he was a pleasant man. He saw she had been crying, guessed why, and kept asking questions until he found out just how it was.

Yes, he was a very pleasant man, and he kept looking pleasant as he put his hand in his pocket. "So you bought the nails with your candy money," he said. "Well, here's three cents. Get you some candy now, and never mind about the nails."

She thanked him, but did not go back to the store, for she knew mother must be looking for her by this time. She was very happy, though, all the way home, thinking about the candy she would buy the next day.

Mr. Gibbs took the ten-penny nails to town and changed them for some smaller ones. On the way home (you will be surprised when I tell you) he found the dime where it lay tipped against two grass blades and shining in the sun.

Who would expect an old man's eyes to be sharper than a little girl's? But I think little Sara Jane might have seen it herself if her eyes had not been full of tears.—Unknown Exchange.

TEACH CHILD TO LIKE WHOLESOME FOOD.

A meal in which all the important kinds of food are represented tends to keep the child in good condition and to give him good habits of eating, food specialists of the United States Department of Agriculture say. The liking for a large range of foods is desirable from the standpoint of diet and also of manners, for it helps to prevent a person from becoming a disagreeable table companion — one who is "fussy" about his food. Meals that are planned carefully help also to give the child some little idea of what those who know most about foods have in mind when they speak of a "balanced"—or, better, a "rightly chosen"—ration. With children it is far more important to suggest the value of such a ration by the character of the meals given to them than to try to tell them what it is or to what extent it has been worked out.

GREEN TOMATO MARMALADE.

Two pounds tomatoes, 1½ cups syrup, ½ lemon and 1 orange. Wash and trim tomatoes, cut into slices medium thick. Cut lemon and orange into very thin slices, removing all seeds. Add syrup and a small amount of salt (⅛ to ¼ teaspoon). This renders the sweet taste less cloying. Boiling orange peel for a few minutes in salted water prevents its hardening later, when cooked in syrup.

Heat slowly, stirring until well mixed, then simmer gently until the tomatoes are soft and the marmalade has the consistency of thick, heavy jam. This will require three to four hours. There should be 1 pint of the marmalade.

If a caramel flavor is liked the heat may be slightly increased at the very last, as the jam darkens at the bottom of the kettle, but great care must be taken not to scorch the jam.

CREOLE SHEET CAKE.

Half cup sugar, half cup butter substitute creamed together, half cup milk, half cup New Orleans molasses, two cups sifted flour, one teaspoon baking powder, one teaspoon cinnamon, ½ teaspoon cloves; two eggs well beaten. Add the beaten eggs to the butter and sugar, then the molasses; next the sifted flour alternately with the milk. Bake in sheet pan and ice as follows: two cups brown sugar, half cup milk, one tablespoon butter substitute. Cook slowly over fire until thick enough to form ball in water; remove from stove and beat until light and creamy. Spread thickly over cake.

FIRELESS COOKERS.

Fireless cookers have been so much improved since their first appearance in the market that it will pay a housewife to look around before she invests and find the kind that offers the most variety and comfort in cooking.

One of the new features in one of the makes is stove legs which brings the cooker up to a height that the average height woman can work comfortably with. These legs are not included in the equipment, but can be ordered extra when wanted and can be attached to any fireless stove of that make.

This stove also bakes and roasts brown as well as stews and steams.

LOFTY ASPARAGUS.

They were very young and very happy, and very foolish and very newly wed. And they had a garden.

"Angelina, darling," said the youthful husband, "as I was passing through the garden I saw some asparagus ready for cooking. Perhaps you'd like to go and gather the first fruit of the season yourself?"

She would love to, but she wasn't expert in horticulture, and didn't want to let on. If she went alone she might commit some egregious blunder.

"I tell you what, Edwin," exclaimed the girl wife enthusiastically, "we'll go out together. You shall pluck and I will hold the ladder."

BOOMING BUSINESS.

The general delivery window of the postoffice in a southern town. A typical negro "mammy" approaches the window, and the following conversation ensues between the clerk and the mammy:

"Mawnin', suh! Is you got any mail for 'Riah Smith?"

"No—no mail for you."

"Yassah. You see, I waren't 'specting much. I lives down at White Hill, and I'se vis'tin' mah daughter. Jes' thought I'd patronize de office whilst I was here."

IMMORTALITY.

There is only one way to get ready for immortality and that is to love this life and live it as bravely and faithfully and cheerfully as we can.—Henry Van Dyke.

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Sectional View of Mueller Pipeless

THE MARKET REPORTS

Compiled from Independent Sources.

SAN FRANCISCO

San Francisco, September 8, 1920.

WHEAT.

What little activity had prevailed during the previous week became entirely negligible for the past few days, no trading or inquiries of any description being reported in the wheat market.

Wheat ..... $3.90@4.00

OATS

No changes have been noted in the market. Buyers are still waiting for expected lower prices. Only two samples were shown on the exchange during a dull week.

Red Feed, ctl. ..... $2.85@3.15

BARLEY

In company with other grains, barley showed a tendency toward a decline which may break this week, because of the exceeding dullness of the market, however, no price changes were quoted.

Feed Barley, ctl. ..... $2.35@2.45

CORN

Corn receipts have fallen off to a negligible quantity. Portions of the new crop are expected to be placed on the market this week. Price fluctuations are expected.

Egyptian, white ..... Nominal
do, brown ..... $3.40@3.75
California ..... $3.80@3.85

FEEDSTUFFS.

There has been little or no demand for grains and feedstuffs, only small quantities arriving on the market, and a limited number of inconsequential sales being made.

Rolled Barley ..... $51.00@52.00
Rolled Oats ..... $60.00@61.00
Alfalfa Products ..... $45.00@52.00
Cracked Corn ..... $80.00@81.00

HAY

With light receipts of 2256 tons for the week, the hay market has continued dull and uninteresting. Receipts for the pevious week were 2235 tons. Little interest was displayed by buyers and prices remain unchanged. Indications point, however, to a drop within a short time, due to what is thought to be a large surplus of hay throughout the country, especially on the Pacific Coast. Buyers are still firm in their belief that a sharp decline in prices is inevitable. A few shipments of alfalfa baled and alfalfa meal have arrived from Nevada.

Wheat, hay new ..... $26@28.00
Tame, oat new ..... 23@25.00
Wild oat new ..... 17@19.00
Barley ..... 17@20.00
Alfalfa 2nd cutting ..... 21@25.00

RICE

The market continues quiet with a declining tendency.

FRESH FRUITS

(Wholesale Prices Paid by Commission House)

Bellflowers have arrived on the market, which is still firm for all grades of apples. Receipts of all deciduous fruit were lighter last week. Cantaloupes are not arriving heavily, but the demand has slackened considerably with a tinge of fall weather, and prices have declined. Plums and pears are selling well. The fig price has gone down owing to an oversupply. With continuing heavy receipts watermelons are dragging heavily on the market. Although the same prices are quoted indications are that no buyers will handle the fruit because of the difficulty in selling on an overstocked market. Unless a market becomes available. Berry receipts have been heavy and the berries are all moving well except raspberries which are inclined to drag.

Apples, Gravenstein, fancy ....2.25@2.75
do, choice $1.75
do, Red Astrakhan ..... Nominal
Bellflowers ..... 1.75@2.00
Plums ..... $1.25@2.00
Apricots, lb. ..... 5@7c
do, box ..... $1.25@1.50
Peaches, 4 baskets $1.25
Pears ..... $2.00@4.00
Figs, box, 1 layer ..... $1.00@1.25
Strawberries, 6 12-oz. boxes ..... 75@90c
do, 6 8-oz. boxes, drawer ..... 50@65c
Blackberries, drawer, 12 oz. draw. 30@35
Raspberries, drawer ..... 70c@85c
do, 8-oz boxes ..... 30c@40c
do, 8-oz. boxes ..... 40@50c
Cantaloupes, Standard ..... 85@1.15
do, Flats ..... 30@40
Watermelon, lb. ..... 1@1¼c

POULTRY

Broilers have advanced, with still further rises probable. The market is firm and receipts of all grades have been light. A tendency is evidenced to buy heavily for the holiday trade.

Broilers ..... 44@47
Hens, mixed color ..... 40@42c
do, Leghorns ..... 25@30c
Roosters, young ..... 42@45c
do, old ..... 17@20c
Fryers ..... 40@42c
Squabs ..... 55@60c
Geese ..... 25@30c
Ducks ..... 25@30c
do, old 23c
Belgian Hare, live ..... 18@20c
do, dressed ..... 22@25c
Jack Rabbits ..... Nominal

BUTTER

With active demands continuing from outside markets, the local market has ruled firm with a steadily increasing price for all grades throughout the week, closing higher than the previous week. Eastern butter is expected on the local market before long and a large amount of Australian butter is reported on the way sold for October, November and December deliveries at 51 to 52 cents. The San Fancisco market will not be able to take care of these consignments, dealers think.

	Thu.	Fri.	Sat.	Mon.	Tu.	Wed.
Extra	65	65½	..	..	66	67
Prime Firsts	62½	62½	..	..	62½	60

EGGS

Egg shipments were light and falling at the end of the week. Prices have steadily advanced from the beginning to the end of the week for all grades. Indications point to still higher prices.

	Thu.	Fri.	Sat.	Mon.	Tu.	Wed.
Extra	62½	63½	..	..	64	68
Ex. Pullets	56	57	..	..	58½	60
Dirties	50½	52	..	..	52	52
Undersized	38	39	..	..	41½	43

CHEESE

During the past week a temporary demand for cheese was felt on the local market. Indications are, however, that this slight demand was only temporary and prices are expected to drop. Oregons have been dragging.

California Flats, fancy 29
do, Firsts 23
Oregon, triplets 26½
Cal. Y. A. Thirds 12

HONEY

The market is duller than ever. So far no reductions in previous prices are quoted. No more Australian honey is being bought although it is offered in quantity.

POTATOES, ONIONS, ETC.

(Wholesale prices quoted by commission houses.)

There have been no price changes. Potatoes are not moving fast. The onion market is slow. Potato receipts last week were a trifle heavier. It looks as if the market will ease off. Vegetables are moving fast. Cucumbers have dropped heavily.

Turnips ..... $1.25@1.50
Peas, Halfmoon ..... 12@13c
Beans, wax, lb. ..... 5@6c
do, green, lb. ..... 4@5c
Carrots, per sack ..... $1.25@1.50
Green Corn, each ..... $1.50@2.50
Lettuce, local, doz. ..... 25@30c
Cucumbers, Alameda, lug box ..... 50@75
Tomato, River, large box ..... 50c@1.00
Rhubarb, Strawberry, box 40 lbs $1.50
Summer Squash, box, 35-40 lbs. ... 50@75c
Egg Plant, box ..... 50@75c
Potatoes, New River, cwt. ..... $2.50@2.75
Onions, yellow, sack ..... $1.00@1.25
do, Red ..... 75c@85c
Green Onions, box, 25 lbs ..... $1.25@1.50

BEANS

Blackeyes have dropped, due to a large new supply on the market. The market continues dull, with prospects for continued depression. Crop reports are not encouraging.

Bayos ..... $12.50@14.00
Blackeyes ..... 6.00@6.25
Cranberries ..... $6.50@6.75
Pinks ..... $6.00@6.25
Red Mexican ..... $7.50@7.75
Large Whites ..... $5.50@5.75
Small Whites ..... $5.50@5.75
Limas, Ass'n prices, South $11.42
do, Baby, Ass'n prices, South $11.42
Limas, S. F. prices ..... $10.50@10.75
do, Baby, S. F. prices .... $10.00@10.25

DRIED FRUIT

Nothing is being bought by the packers. The market is absolutely dead in both buying and selling ends.

Extra fancy Moorpark, lb. 22c
Fancy Moorpark, lb. 30c

Growers' Quality.

Growers' quality—Fancy, lb. 26½c
do, lb 24½c
do, Choice lb 22½c
do, Slabs, lb. 20c
do, Standards, lb. 18c

Raisins—The following prices have been established as the opening prices of the California Associated Raisin Company for the 1920 crop of raisins.

Muscat, Sun Maid, seeded, pkg, 36-16s.. 21c
do, Fancy..... 36-16s 21c; 48-12s 16¼c
Bulk, seeded, Baker's Sun Maid, 25-lb. bx. 20c
do, Fancy Sun Maid, 25-lb. boxes 20½c
Loose, 1-crown, recleaned, lb. 20c
do, 4-crown, recleaned, lb. 24c
Layers, 3-crown, flat pack, 5-lb. box..$1.30
do, 3-crown, flat pack, 5-lb. box..$1.30
Clusters, 4-crown, flat pack, 20-lb. box $4.70
do, 4-crown, flat pack, 5-lb. box..$1.40
Sun Maid, 100-lb. boxes $21.00
Thompson Seedless, Sun Maid, recleaned, lb. 20½c
do, Sun Maid, bakers, lb. 21½c
Sultanas, Sun Maid, recleaned, lb. 20½c
do, Sweat-box, layers, lb. 19c

..Figs—Following prices have been established as the opening prices for the 1920 crop of dried figs.

White Adriatic, 12-10 oz. $1.25; fancy, $1.30
do, 12-8 oz. ..... $2.00; fancy, $2.05
do, 50-6 oz. ..... $3.10; fancy, $3.20
do, 70-4 oz. ..... $3.30; fancy, $3.40
Adriatic, bulk Standard, 50-lb. boxes, lb. 9c
do, bulk, fancy, 50-lb. boxes, lb. 13c
Black Mission, Standard, 50-lb. boxes, lb. 7c
do, Fancy, 50-lb. boxes, lb. 12c

Prices f. o. b. Fresno.

Peaches.—Following prices have been established as the opening prices of the California Peach Growers for the crop of dried peaches.

Yellows, Standard, lb 15½c
do, Fancy, lb. 17½c
do, Extra fancy, lb 18½c
do, Slabs, lb. 15¼c
Muirs, Standard lb 15¾c
do, Fancy, lb. 18¼c
do, Extra fancy, lb. 19½c

The above prices are bulk basis.

Shipment: September, October, November. Seller's option. The above prices are guaranteed against Association decline until January 1, 1921.

Prunes—Following prices have been established as the opening prices of the California Prune and Apricot Growers, Inc., for the 1920 crop of Prunes.

Sunsweet Brand, 20-30s, flat, lb. 25c
do, 30-40s, bulk, lb. 17c
do, 40-50s, bulk, lb. 15½c
do, 50-60s,, bulk, lb. 13c
do, 60-70s, bulk, lb. 11½c
do, 70-80s, bulk, lb 10½c
do, 80-90s, bulk, lb. 9½c
do, 90-100s, bulk, lb. 9½c

First half September shipment, ½c premium; last half September shipment, ¼c premium. The above prices apply only to contracts already issued

CITRUS FRUIT

Valencias ..... 66.50@7.00
Grape fruit, seedless ..... 3.50@4.00
choice 3.00

SPECIAL DECIDUOUS REPORT.

Sacramento, Sept. 7, 1920

Deciduous fruits in good condition are still selling at very high prices in the East. A car of grapes sold at Chicago on the 7th for $3003. A car of Bartlett pears grossed $3240. A car of Salway peaches brought $2545. The same day a car of grapes mixed varieties at Boston sold for $4682.

At New York on the 7th, malagas were $3 to 3.25, muscats 2.10 to 2.30. Bartletts brought $7.50. Grand Dukes $3.50. Hardys $5. Tokays 4.25 to 5.58.

At Philadelphia on the 7th, alicantis sold for 2.85, Tokays 3.40 to 3.70, malagas 1.90 to 2.45. Bartletts 5.20 to 6.10.

Special Livestock Market Report

San Francisco, Sept. 7, 1920

CATTLE—The beef cattle receipts on this market are ample to meet the demands, though good corn-fed steers are scarce and not much in request. A slight recession in prices may be noted in steer grades.

Steers, No. 1 1000-1200 lbs....9½@10c
do, 1200-1400 ..... 8½@9c
do, 2nd quality ..... 7 @7½c
do, thin ..... 5½@6½c
Cows and Heifers, No. 1 ..... 7½@8c
do, 2nd quality ..... 6 @ 7c
do, thin ..... 2 @ 4c
Bulls and Stags, good ..... 4 @ 5c
do fair ..... 3 @ 3½c
Calves, lightweight ..... 10 @10½c
do, medium ..... 8 @ 9c
do, heavy ..... 7 @ 8c

SHEEP—The glut of lambs on this market eased up a bit this past week, which is reflected in a fractional advance in quotations in prime milk lambs. Otherwise there is no change in local quotations. In the East the mutton market is very vacillating.

Lambs, milk ..... 9 @ 10c
do, yearling ..... 7½@ 8c
Sheep, wethers ..... 7 @ 7½c
do, ewes ..... 5½@ 6c

HOGS—The hog market in San Francisco has been a little better supplied this past week and the tone of the market is not so strong. Prime, grain fed stuff of the lighter weights has declined ½c. In the East the situation is a little stronger.

Hard, fat grain-fed 100-150 lbs.....15c
do, 150-225 lbs. 16½c
do, 225-300 lbs. 16c
do, 300-400 lbs. 15c

Los Angeles, Sept. 7, 1920

CATTLE—No change in this market from a week ago. Steers are still plentiful and the demand for them only fair. Good cows in light supply, good demand and firm.

Per cwt. f. o. b., Los Angeles:

Beef steers 1000@1100 lbs. ..$8.50@10.00
Prime cows and heifers ..... $8.00@ 8.50
Good cows and heifers ..... $7.00@ 7.50
Canners ..... $4.50@ 5.00

HOGS—Tone of the market weak in sympathy with markets East. Demand fair for such as needed for the fresh meat trade, but there is no disposition to buy for curing at present high prices.

Per cwt. f. o. b. Los Angeles.

Heavy, averag'g 275@350 lbs. $12.00@12.50
do, 225@275 lbs ..... $14.00@14.50
Light ..... $15.50@16.50

Rough docked 20 lbs. piggy sows 40 lbs. and stags, 40 per cent.

SHEEP—Lambs continue in good demand, but the markets weak, as the offerings are liberal from Nevada and of good quality. The tone of the market is weak in sympathy with Eastern markets.

Prime wethers ..... $6.00@ 7.00
Yearlings ..... $6.00@ 7.00
Prime ewes ..... $5.00@ 6.00
Lambs ..... $8.00@10.00

Portland, Oregon, Sept. 7, 1920

CATTLE—Weak, and no receipts. choice grass steers, $9.50@$10.50; good to choice, $8.50@9.50; medium to good, $7.50@8.50; fair to good, $7@7.50; common to fair $6@7; choice cows and heifers, $7.25@8; good to choice, $6.25@7.25; medium to good, $5.25@6.25; fair to medium $4.25@5.25, canners, $2.75@4.25; bulls, $5@6, choice dairy calves $13@12.50; prime light, $11@13; medium $9@11; heavy, $7@9; best feeders, $6.50@7; fair to good, $5.50@6.50.

HOGS—Steady; no receipts. Prime mixed, $16.50@17.25; medium $16@16.50; smooth heavy, $13@15; rough heavy, $10@13; pigs, $12.50@$15.

SHEEP—Steady; receipts 1045. Prime lambs, $10@11; culls $6@7; ewes, $2.25@6.25; yearlings $6.50@7.75; wethers, $6.25@6.72.

LOS ANGELES

Los Angeles, Sept. 7, 1920

BUTTER

A dropping off in the receipts and a good demand from the consuming trade caused a further advance of 2c. in this market the early part of the week. A falling off in production and higher markets East encouraged buying, and the above improvement was maintained to the close. Receipts for the week, 296,300 pounds.

We quote the following:

California extra creamery 65
California prime first 63
California first 62

EGGS

The scramble for eggs noted in our last review continued throughout the past week, and case count and pullets were again advanced, the former 2c and the latter 1c. Receipts wee better by rail for the week 1034 cases, against 648 cases the week before. This increase in the supply, however, failed to influence the market.

Fresh ranch, extra 61c
do, case count 60c
do, pullets 53c

POULTRY

A fair demand and steady market was had the past week for most offerings. Broilers are coming in less freely and ae selling fairly well. Fryers are also moving fairly at quotations. Heavy hens scarce, firm, and in demand. Light and medium slow sale but unchanged. A good many coming in. Ducks weak. But few turkeys are coming in, and they are selling well.

Broilers, 1 to 1¼ lbs. 31c
do, 1½ to 1¾ lbs. 34c
Fryers, 2 to 3 lbs. 32c
Hens ..... 25@32c
Roosters (soft bone), 3 lbs. and up 38c
Ducks ..... 17@20c
Turkeys ..... 40@44c
Geese 25c

VEGETABLES

Market was well supplied the past week, and most fresh and choice offerings sold without trouble. String beans were a little lower, but in fair demand. Peas scarce and firm. Summer squash and cucumbers selling fairly at old prices. Tomatoes steady and demand fair. Green peppers in fair demand at old prices. Potatoes selling fairly. Receipts only fair. Sweets slow sale. Onions selling a little better. White Globe higher, but yellow lower. Celery selling a little better.

Potatoes, local cwt ..... 2.00@2.25
do, Northern, cwt ..... 2.75@3.00
Onions, Stockton, white cwt.... 1.90@2.00
do, yellow cwt ..... 1.90@2.00
do, local crate ..... 60@75c
Lettuc, crate ..... 1.25@1.50
Rhubarb, per 30-lb box ..... 20@1.00
Peas, lb. ..... 12@13
Carrots, do, bunches ..... 30@35
Summer Squash, local, lug ..... 1.00@1.10
String beans, green, lb ..... 10@12
do, wax, lb. ..... 10@12
do, Kentucky ..... 12@14
Cucumbers, lug. ..... 50@1.00
Tomatoes, home-grown No 1 lug 50@60
do, No. 2 ..... 25@35c
Bell peppers, lb. ..... 3@4c
do, Chile, lb. ..... 4@5c

FRUITS.

This market the past week ruled much the same as the week before. All choice offerings met with a fair demand and prices were generally steady, the only changes of note being a decline in figs which are coming in freely and were lower. Bellfleur apples are off again, but in good demand at the decline. Other apples steady. Peaches and pears steady and in fair demand. Grapes also selling very well at old prices in the face of good receipts.

Plums, Santa Rosa, lb. ..... 8@ 9c
do, Satsuma ..... 7@10c
do, Black Diamond, lb. ..... 8@10c
do, Burbank, lb. ..... 5@ 6c
Nectarines, lb. ..... 7@ 8c
Peaches, Freestones, lb. ..... 5@ 6c
do, Clings, lb. ..... 5@ 7c
Figs, lb. ..... 7@12c
Crabapples, lb. ..... 4@ 5c
Grapes, Malaga, lb. ..... 6@7
do, Muscat, lb. ..... 5@6
do, Hamburg, lb. ..... 6@7
Tokays lb. ..... 7@8
Apples:
do, Skinner's Seedlings, packed box ..... $2.00@2.50
do, Gravensteins, packed box $2.00@2.50
do, Bellfleurs, 4 tier ..... 1.60@1.75
Pears, Northern, lb ..... 4@9c

BERRIES

Market unchanged from a week ago. Not many coming in and not many wanted. Sales slow, prices being too high for general consumption and too much other and cheaper fruit on the market. We quote from gowers:

Strawberries pr. 30 bas. crate 6.00@5.75
do, poor to choice ..... 5.50@5.75
Blackberries per 30 bas. crate. 3.50@4.00

MELONS

Market very well supplied the past week, but demand good for all choice and prices generally ruled steady. Cantaloupes and watermelons in most request. Casabas, however, sold fairly well. Honey Dew melons dull under the influence of an oversupply.

Home-grown Tip-top, stand. 1.00@1.50
do, Rocky Ford, standard.... $1.15@1.50
do, Pineapple standard ..... $1.00@1.50
do, Paul Rose, standard .... $1.15@1.20
Honey Dew mel, stand crate .1.00@1.25
Casabas, lb. ..... ½@1c
Watermelons, lb. ..... ¾@1c

BEANS

There is no improvement to note in this market from a week ago. There was no buying of anything. New limas are being harvested, but it will be a week or ten days before there will be any on the market. We quote from growers:

Limas, per cwt $10.00

Large white, per cwt .....$5.25@5.50
Small white, per cwt .....$5.25@5.50

HAY

Recepits only fair the past week, and the market ruled steady and firm with demand fair for all choice offerings. Poor hard to sell. We quote f. o. b. Los Angeles.

Barley, hay ton .....$22.00@24.00
Oat hay ton .....25.00@28.00
Alfalfa, Northern ton .....28.00@30.00
Alfalfa, local ton .....28.00@32.00
Straw ton .....14.00@16.00

ALFALFA

The Alfalfa Growers of California, Inc., quote as follows:

Northern prices:
No. 1 Dairy Alfalfa $29.00
Standard Dairy 26.00
Stock Alfalfa 24.00

Southern prices:
Fancy Dairy $39.00
No. 1 Dairy Alfalfa 33.00
Standard Dairy 29.00
Stock Alfalfa 22.50

SPECIAL CITRUS REPORT.

Los Angeles, Sept. 16, 1920

While lemons remain in over supply in the East, caused by large shipments from Europe, the Valencia orange demand has been very good for the past several weeks. The recent advance in freight rates has caused a slacking in the trade, which will hold down prices for a couple of weeks, perhaps. Growers however, anticipate a good demand for the balance of the crop, estimated at nearly 2,000 cars on hand as of Sept. 1st.

Efforts made by the Exchange to induce larger consumption of lemons by having dealers offer special sales, has met with considerable success during the month, thus cleaning up part of the large accumulations, f. o. b. quotations are around $2.75 to 3.25 per box.

FAIR DATES.

California State Fair, Sacramento, September 4-12.
San Joaquin County Fair, Stockton, September 13-18.
Humboldt County Fair, Ferndale, September 14-18.
Tulare County Livestock Show, Tulare, September 14-18.
San Fernando Valley Fair and Market, Owensmouth, September 15-18.
Paso Robles District Fair & Almond Show, Paso Robles, September 15-19, inclusive.
Kings County Fair, Hanford, September 21-25.
Ventura County Fair, Ventura, September 22-25.
Fall River Fair, September 23-25.
Glenn County Fair, Orland, September 27-October 2.
Fresno District Fair, Fresno, September 28-October 2.
Shasta County Farm Bureau Fair, Anderson, October 1-2.
Los Angeles Livestock Show, Los Angeles, October 2-10.
Siskiyou County Fair, Yreka, October 5-9
Tulare County Fair, Visalia, October 9-16.
Southern California Fair, Riverside, October 13-19.
Western Royal Livestock Show, Spokane, Washington, November 1-5.
Pacific International Livestock Show, Portland, Oregon, November 15-19.
Ogden Livestock Show, Ogden, Utah, Jan. 6-8, 1921.

Sales Dates.

Sept. 27th—McCarty-Shinn-Elliott, Poland-Chinas, Tulare.
Sept. 30th—Wm. Pierce, Shorthorns, Suisun.
Oct. 15th—J. W. Benoit, Holsteins, Modesto.
Oct. 19-21—Rosamines Ranch, Holsteins, Durocs, Percherons, Riverside.
Nov. 4th—Pacific Coast Hereford Breeders' Association, Herefords, Sacramento.
Nov. 5th—John H. Cazier & Co., Herefords, Sacramento
Nov. 6th—H. M. Barngrover, Herefords, Sacramento.

Cattle to the number of 5,952 were tested for tuberculosis during the month of July by inspectors of the State Dep't of Agriculture, with 401 reacting. 87,582 sheep were inspected for scab and 22,840 dipped.

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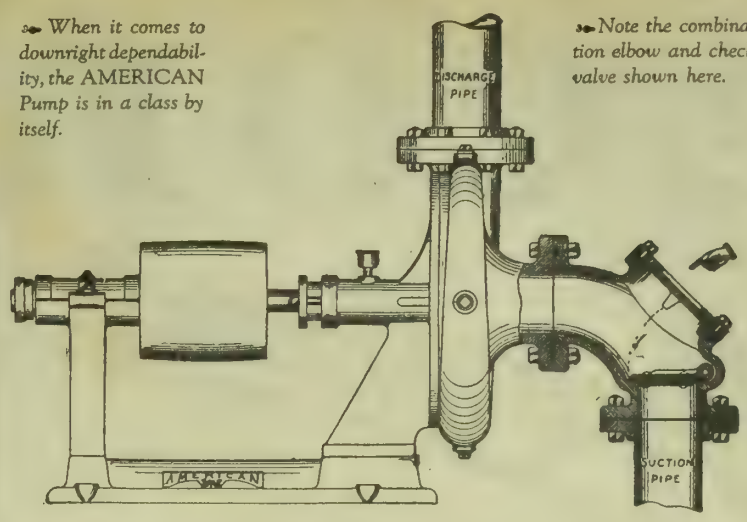

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7 acres bordering beautiful 5-mile lake; 300 orange and grape fruit trees in bearing; extensive bearing vineyards; cottage worth $2,800, beautifully situated overlooking lake; good water, telephone, oak shade; other buildings; quick action; price only $2,500. Full details page 64, Strout's New Catalog Orange Grove and Other Semi-tropical Farms, Copy free. Strout Farm Agency, 503 FA, Wright-Callender Bldg., Los Angeles, Cal.

TO LEASE ON SHARES—Ninety-acre orchard—Apples, Bartlett Pears—in Paradise Irrigation District. Address Dr. C. A. Oliver, Box 942, Chico, Calif.

WANTED—Small place of 3 to 5 acres, suitable for poultry; improved, or partly so. Charles H. Souder, Glenwood, Calif., Santa Cruz county.

MISCELLANEOUS.

CORN HARVESTER—One man, one horse, one row, self-gathering; equals corn binder. Sold direct to farmers for 23 years. Only $28, with fodder binder; shipped by express to every State. Free catalog showing pictures of harvester. Process Corn Harvester Co., Salina, Kansas.

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FOR SALE—Holt "65" Caterpillar Tractor, just overhauled at an expense of $1,700. For quick sale will make price attractive. H. V. Carter Motor Co., 52 Beale St., San Francisco.

WANTED—Position as manager of large ranch. Experienced in fruit, vineyards, sheep, grain and general farming. Lawrence Haven, 52 North Morrison Ave., San Jose, Cal.

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WANTED—Salesman capable of earning $250-$350 a month selling groceries wholesale to farmers (commission). Read "Lou's Best Girl, page 344.

WANTED—Small tractor outfit in exchange for equity of $2,000 in unimproved land close in to Sacramento. Box 2160, care Pacific Rural Press.

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Overland

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WHEN 97 Overland Sedans under all weather and road conditions, recently averaged 25.2 miles per gallon, they dramatically illustrated Overland economy.

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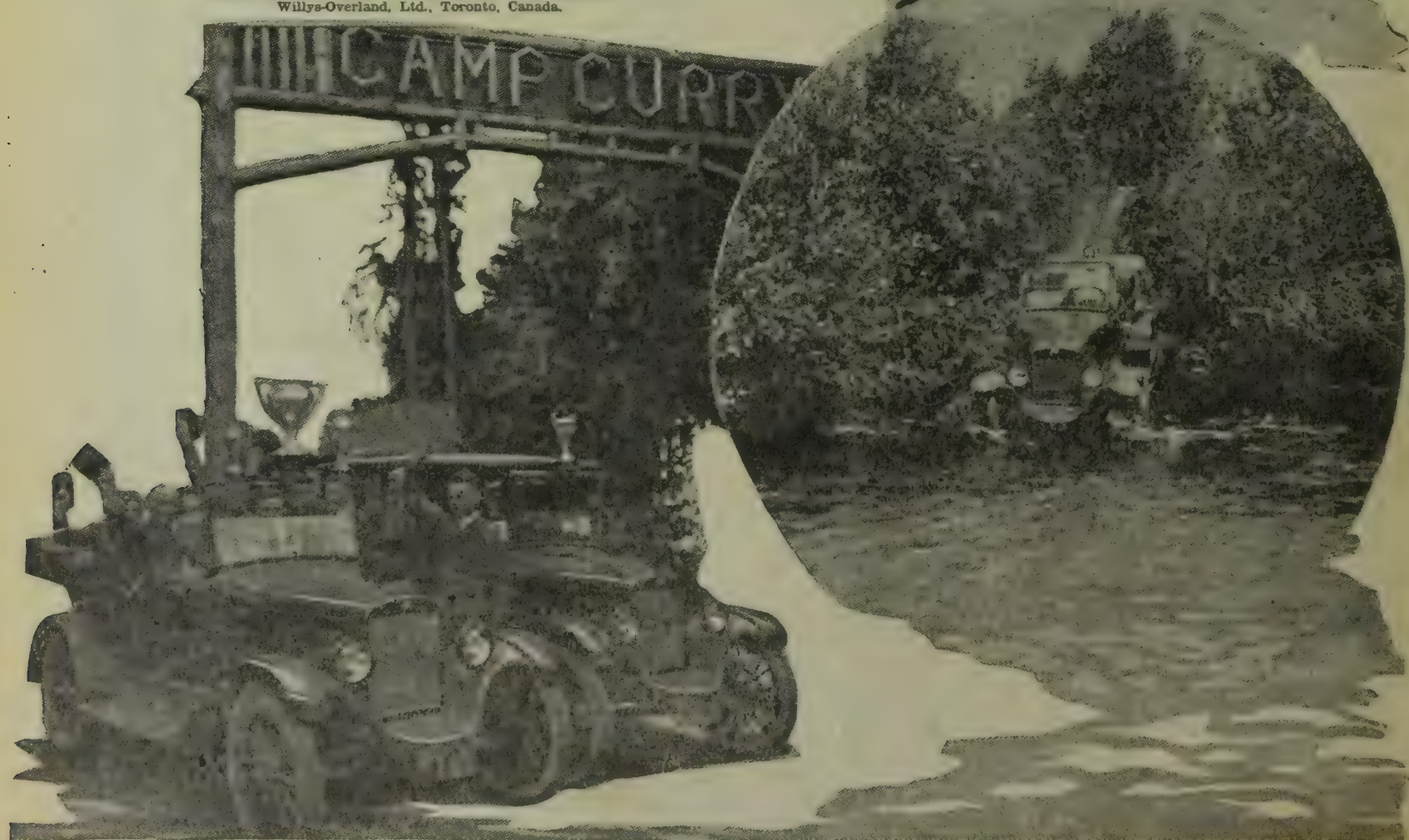
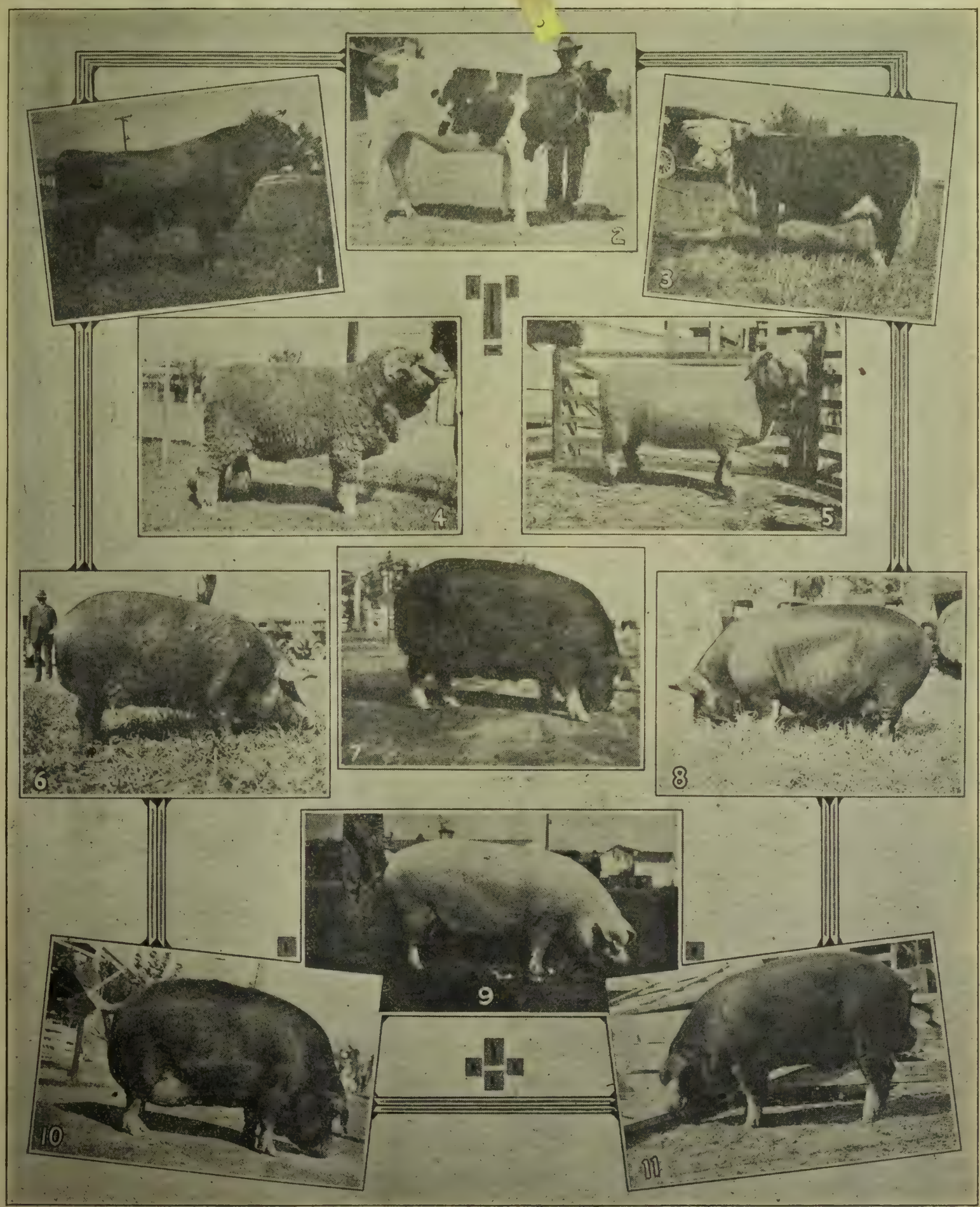


VOL. C—No. 12 Fiftieth Year

THE PACIFIC RURAL PRESS

SAN FRANCISCO SEPTEMBER 18, 1920 LOS ANGELES



Some of the Grand Champions at the State Fair: 1.—Dairymaid's Gay Prince. Jersey owned by M. Fortini. 2.—The $2500 Junior Champion Holstein, Addie Creamcup Pontiac Burke, owned by Clay Stammerjohan. 3.—Bocaldo Beauty, Hereford Cow, owned by Romie C. Jacks. 4.—Hercules, Rambouillet Ram owned by Bullard Bros. 5.—"Bishop's 757," Shropshire Ewe, owned by Thos. Bishop Co. 6.—Pleasant Hill Luella, Tamworth Sow, owned by Pleasant Hill Farm. 7.—Liberty Girl 3d, Poland-China Sow, owned by A. D. McCarty. 8.—Grapewild Rose 6th, Berkshire Sow, owned by A. B. Humphrey. 9.—Wonder, Chester White Sow, owned by H. H. Huffman. 10.—Queen of Pathfinders, Duroc Sow, owned by Diamond Bar Ranch. 11.—King George Big Bone, Poland China Boar, owned by Johnnie Gusing.

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Northern California Will Have Railsback Service on Allwork Kerosene Tractors

To the hundreds of farmers in Northern California who have felt the need of thoroughly efficient service to help them get the utmost earnings from their Allwork Kerosene Tractors, we take pleasure in announcing that we have been appointed distributors for the Allwork Kerosene Tractor for Northern California and Nevada, in addition to Southern California, which we have heretofore represented for Allwork Kerosene Tractors.

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No special kerosene carburetor required with an Allwork Kerosene Tractor—because the Allwork engine is **designed and made to burn kerosene.** And experience in California under varying soil and climatic conditions has proved that the Allwork is the **one** successful kerosene-burning tractor.

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We now have the agency for Los Angeles County for the famous Killefer line of farm implements. These implements will give unusual service—because they are designed and made to meet California soil conditions. Our efficient **Service** Department insures you the utmost usage and service from your Killefer Implements.

If you are not using Killefer Farm Implements—it will pay you to let us tell you about them, and explain their vast superiority over implements that are not adapted to Southern California requirements.

A partial list of the Killefer line includes Clean-Cut Weeder and Mulcher, Combination Sub-Soil Plow, Gopher and Drainage Plow, Adjustable Extra Heavy Orchard Cultivator, Automatic Double Tractor Disc, Cross-Kill Clod Crusher and Tractor Chisel.

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Manager for Northern California and Nevada Temporary Address, Travelers Hotel
SACRAMENTO, CALIF.

AGRICULTURAL NOTES.

Stanislaus County will produce 105,000 sacks of rice in their crop this year on 3,500 acres, valued at over $500,000.

The harvesting of Northern California's $10,000,000 rice crop is now under full headway on the red lands west of Oroville. This is the first rice of the season to be harvested.

The Sutter Basin Company has made one shipment of over 50,000 bags of barley from their 44,000 acre farm in Reclamation District 1500 of Sutter County to a warehouse in Stockton.

Booth and Lent have commenced to harvest the crop from their 400 acres of tomatoes planted on the Sacramento River. The entire production will be handled at their Pittsburg cannery.

The forecast of the sweet potato crop of California for this season is 1,162,000 bushels. The crop throughout the United States promises to be 101,779,000 bushels, or about 2,000,000 bushels less than last season.

Collecting and disseminating farm statistics is a slow and expensive proposition, but there is no other medium which largely aids an agricultural state in promoting its farm, orchard or animal resources as do accurate and dependable farm figures.

The oat yield for California looks good; the forecast for the year's crop is 5,576,000 bushels, and the forecast for the total production of the United States is 1,442,000,000 bushels, an increase over last year's crop of about 194,000,000 bushels.

Owing to the long hot spell of weather in July and August the Butte County rice crop will be harvested three weeks earlier than in 1919. The crop will be heavy; the contemplated water shortage proved to be of little consequence.

L. B. Guerney, president of the Brown's Valley Irrigation Company of Butte County, has filed an application with the State Water Commission to impound 50,000 acre-feet of water in a site near Oregon Hill to supply 20,000 acres with water.

J. M. Cremin, a Wheatland farmer, states that the hop growers of that district are netting upward of $1200 an acre. On this basis Durst Bros. will clear $1,000,000 from the yards of 800 acres. The great majority of the Wheatland hops are being shipped to European breweries.

The Madero family, of which former President Madero of Mexico was a member, next year will plant 35,000 acres to cotton in the Laguna district, State of Coahuila. The Maderos are reputed to own more than 2,000,000 acres of land. One-fifth of the State of Coahuila belongs to the family.

The banks of Santa Clara County have positively refused to advance money on tomato crops of that district that have been contracted for by the canneries, and with no other market but the canneries the growers are in line for a loss unless something unforeseen develops in a financial way.

The government forecast is that California will produce 12,900,000 bushels of Irish potatoes this season, an approximate increase of 2,000,000 bushels more than 1919. The forecast of the United States for 1920 is 412,933,000 bushels, which will be about 55,000,000 bushels more than the total production in 1919.

The Pacific Rice Growers' Association is making provision for spending $200,000 in an advertising campaign to put California rice on the market this year in competition with the rice of other States. A brand will be agreed upon. The package will be uniform and the marketing will be controlled by the association.

The Wheatland district is harvesting an immense crop of hops this season. Hop growers are netting upward of $1200 an acre. The major portion of Wheatland hops has been shipped to European breweries, and contracts for nearly the entire crop in that district have been signed between growers and the British, French and German brewers.

The Lindsay cantaloupe growers were more fortunate than some of their neighbor producers. Prices according to the shippers of the district have been entirely satisfactory. The Lindsay melons are lucky in the matter of arriving at maturity ahead of the melons of the upper San Joaquin Valley.

A big commercial farm is to be developed through the agency of a private irrigation project in the Pleasant Valley section of Nevada County. This property has been transferred by private owners to the Fred Blinman Company. Some of the best orchard and agricultural land of that section is involved.

"I think Kern County has a remarkable future in cotton raising," said Wylie M. Giffen, president of the California Associated Raisin Company. "I was particularly impressed with the fine crops I saw on a recent trip through the county. There is no cotton any place in the State which looks better than that in Kern County."

Some food for thought. Of the oats and barley raised in the United States, the increase alone of oats, as forecasted for the season of 1920, is 194,000,000 bushels, while the total crop of barley, as forecasted, in the United States is only 194,858,000 bushels, which shows that the oat production will be 1,247,142,000 bushels more than that of barley.

There is always something to give the producer an unexpected jolt. The latest to add to their troubles is in the cutting of prices on canned tomatoes by the Army commissary department. The growers in the Santa Clara district assert that housewives laid in their yearly requirements and as a result many tons of tomatoes will go to waste.

Sugar is on the skids, and we hope they are well lubricated. Someone is liable to hear something "drap" if the report of production is true. The cane sugar crop of Louisiana alone is estimated at 358,000,000 tons, an increase of 116,000,000 tons over last season's production. The sugar beet producing districts are yet to be heard from.

Five points loss in the condition of the California cotton crop last week as compared with a month ago is reported by E. E. Kaufman of the Bureau of Crop Estimates, Department of Agriculture. The condition is given as 80, while last month it was 85. Throughout the United States the condition of cotton has dropped from 74.1 to 67.5. One year ago it was 64.1.

The rice growers of the State are determined to let it be known that California is becoming one of the great rice producing sections of the world. The latest move along that line is an advertising campaign that is to be started by the Pacific Rice Growers' Association. The association is making provisions for spending $200,000 in that way. A brand will be agreed upon. The package will be uniform and the marketing will be controlled by the association.

Our little colored adopted daughter —Cuba—has put her foot down on further importations of rice until January 1, 1922, except under government license. This step was taken as a means of arriving at a solution of the financial problem which arose between Cuban importers and American exporters of rice through the failure of the former after a slump in the market to fulfill contracts covering between $25,000,000 and $30,000,000 of rice shipped to Havana.

HORTICULTURAL JOTTINGS.

The Co-operative Cannery Company at Tulare is working but part time. Cool weather is retarding fruit ripening.

The Carson Reid vineyard at Reedley has been sold to J. W. Godnight. It consists of 40 acres and price paid was $47,000.

The August rainstorm did no damage to the fig crop in Merced County. The fruit is now ripening, and weather is fine for drying.

M. Flanary of Exeter cured fifteen tons of raisins from a five-acre vineyard, selling them at 24 cents per pound or $7,200 for the crop.

The orders being placed by shipping concerns for refrigerator cars in which to ship grapes are meeting with about 40 per cent deliveries and this shortage is expected to continue fully three weeks.

Folsom, one of the leading Tokay grape shipping sections of the State, is now busily engaged shipping several cars per day from that point. Folsom Tokays take on a very high color and always command splendid prices.

Fred Snelberger, horticultural commissioner of Alameda County, is ready to back up his judgment with the coin that Alameda County's fruit crop will register 100 per cent by the end of the season. Fred is a good guesser, so boys look out.

According to E. A. Foley, American Agricultural Commissioner in London, England is nearly without apples owing to an unfavorable season, and in the recovery of English exchange it will open a wide market for American apples as well as canned fruits.

Another "honest packer" has been made to feel the standardization gaff. George Green of Orosi, Tulare County, will know better next time, as it has cost him $25 to learn that he must ship his grapes in strict conformity with the State fruit standardization law.

The California Peach Growers' Association are not receiving any further orders for the present season's crop, so announces A. J. Sturtevant, Jr., sales manager. Decrease in crop estimate shows 11,000 tons or 24,000 total, compared with 35,000 tons last year.

The San Leandro Canning Company intends to reincorporate and double the size and capacity of the present plant. The name adopted by the reincorporated company is the California Growers and Canners Association. The growers will unite to put their own crops upon the market in canned and preserved form.

A winery once, a winery "still." How about this? Is it possible that the "flowing bowl" is to be resurrected? One would naturally think so if the report is true that "Wineries all over California are preparing to press grapes this fall in apparently as large quantities as ever. The prohibition director's office is daily issuing permits to make wine and receiving the bonds of the manufacturers who formerly were bonded by the Internal Revenue Department. The permits do not limit the quantity manufactured."

Fruit Growers' Day at the State Fair was a howling success. At a meeting of a large number of fruit growers in Assembly Hall, Agricultural Pavilion, G. H. Hecke presided. Geo. C. Roeding delivered the address of welcome. Dr. J. C. Whitten addressed the assemblage on "Suggestions on Fruit and Vegetable Exhibits." W. S. Killingsworth on "What Standardization of Fruit Exhibits Means to Fruit Shippers from Marketing Standpoint." Professor Geo. P. Weldon, "The Relation of the Score Card to Fruit Exhibits." J. J. Fox, "Production and Preparation of Fruit for Exhibit."

GET A WADE BEAN THRESHER

Buy the Thresher built especially for the man who wants a machine for his own crops. You do not have to thresh with the Wade "by the day" to make it pay for itself and a good profit besides.

Built for Western Conditions

The Wade Thresher is manufactured by R. M. Wade & Company, Portland, the oldest agricultural implement house in the West. It is especially designed to meet Western conditions.

Plenty of Separation Surface

The Wade has plenty of separation surface and strong, well-controlled air current. Doesn't crack the kernels. Built of best materials throughout. Threshes beans, peas, China peas, lentils, Soy beans, vetch, or other legumes. Capacity 20 to 35 bushels per hour.

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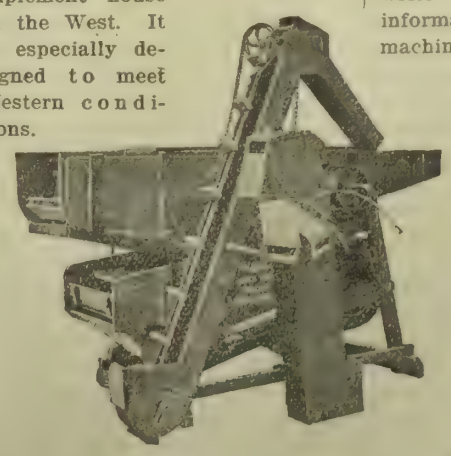

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THOS. F. McCONNELL - - Livestock
RALPH NEWMAN - - - - - Dairy

EDITORIAL

CO-OPERATION OR CONTROL.

A MOST important and fundamental issue is raised in the proceeding against the California Associated Raisin Growers by the United States Attorney-General on the basis of a report made by the Federal Trade Commission, alleging that the organization is operating in restraint of trade and therefore transgressing the anti-trust law known as the Sherman Act. It is important that this issue should arise, and important also that it should be passed upon by the highest courts of the land, and it is desirable that the indicted association should put up as stiff a defense as possible of their form of organization and of the policies and methods which it has adopted. Agricultural producers desire their full rights in organization and doing their own business and the very last iota of their rights, and the way to find out exactly what their rights are is to fight to the last ditch for their conception of them.

Therefore we are glad to see, by the statement of President Giffin, that they are not cast down by the onset which is being made upon them; that they believe they are right and will meet the issue with strong hearts and clear consciences. In such contention as they decide to make when the issue comes up in the United States District Court in Los Angeles on September 20, the Raisin Growers should have the full sympathy and support of the other producers' organizations and of the California public, because, unless the matter is met energetically and expertly, some very important aspect of it may be overlooked and some producers' right may be obscured and forfeited. Although the issue arises in the name of the United States, it must not be forgotten that all during its incubation, which has taken much more than the length of time to hatch a chicken, Uncle Sam has had his ears deafened by the cries of the non-producing, commercial classes and had his leg pulled by the whole team of them. Therefore producers should rise as one man in defense of the Raisin Growers to the end that our venerable uncle should have his auricles excavated so that he may hear the truth, and his leg-joints pushed back so he may make a good run in the right direction as soon as it is revealed to him. For farmers in this, as in all other public affairs, desire only the right. By their organizations they have freed themselves from the imposition and robbery formerly practiced upon them, and have achieved a volume of high-class production, and of standardization and distribution of it, which rendered the country independent and safe and themselves competent to carry on. They will not yield this attainment and throw themselves, and the country with them, back again into the slough of industrial despond into which the packing and trading class formerly crowded them. It is their right not only to produce but to market their own product. If they are not exercising this right in the right way, which is the right way? They are ready to be shown that; it is up to Uncle Sam to do that!

A MISFIT COMPLAINT.

Uncle Sam is starting off on the wrong foot in this matter. Judging by the outline of the complaint which is telegraphed from Los Angeles, we see no issue raised that producers are combining against the public interest and fixing prices higher than purchasers desired to pay. Perhaps that, which should be the chief reason for Uncle Sam's intervening at all, was knocked out by the fact that purchasers, at a recent large auction sale, freely paid more than the association's prices. On that demonstration it is hard to see how the producers could be in restraint of trade when they fixed prices below those which traders demonstrated themselves to be willing to pay. And so, when the traders, for their own reasons, knocked Uncle Sam off his proper legs in this proceeding there seemed to be nothing left for his little lawyers to do but to knock out claims in behalf of the public and submit a weepy document claiming that the producers were abusing each other! We judge from the outline we have seen of the complaint that it would be laughable if it were not such a shameful impeachment of producers' purposes. They combined for the purpose of helping each other to get their farms out of the hands of the mortgagees, to get the crops out of the hands of packers and traders who would not give them enough for their produce to pay for the labor, equipment and supplies which were required to make it. And when producers had saved themselves from ruin by securing for themselves what traders formerly robbed them of, they are arraigned for imposing upon each other, when they simply do what is necessary to show their fellow-producers the way to be saved and require them to walk therein, while packers and traders were spreading all kinds of temptations to lead them astray. This is only what any kind of an organization has to do to keep its membership true to its purposes. Even a church, no matter how clear its record may be for beneficent public service, has to resort to all kinds of forceful propaganda to keep its membership out of the hands of the devil! And Uncle Sam's lawyers complain of this as though it was some sort of a crime! They seem to have taken some old form of complaint, which charged an oil or some other trust with squeezing out a few competing producers and transmogrifying it into a complaint charging ten thousand raisin producers with squeezing a few hesitating industrial brothers of theirs into an association which saved their industrial lines! It seems to be an impeachment of a great association for getting membership and holding it true to a great cause while opposing interests are trying to mislead them for their own purposes. What business has Uncle Sam to be trying to unscramble farmers for the advantage of those who will devour them one by one! We fail to see service to any public interest in the undertaking against the raisin growers!

BETTER CO-OPERATIVE SPIRIT.

But while we are quite sure that Uncle Sam's claim, that the raisin growers must be protected from each other, is immaterial and irrelevant to the puposes of the Sherman act, we also have a conviction that possibly our product-selling associations may be helped to a better manifestation of the truly co-operative spirit. It is possible, of course, that too much emphasis has been placed upon the idea of control and too little attention given to growing strong by the membership's thinking and acting together in more popular ways, and causing the association's government to be more democratic. Perhaps if that can be shown to be practicable, we may see Uncle Sam coming around and saying, "Bless you, my children!" and not scolding Tommy for throwing mud at Johnny while they are in the old swimming-hole together. We have long had an idea that our several co-operations like too much to go away and co-operate by themselves and not co-operate enough with each other to secure public attention to great farming needs and conditions by doing better team-work with recognized agencies for the general promotion of agriculture. For example, there are three weekly journals of general agriculture in this State, with probably about a hundred thousand subscribers. These journals are well thought of, or else their subscribers would not pay for them. Every effort at co-operative organization of producers gains its first impulse toward success, because these journals approve its purpose and give them publicity. Co-operation gets this service without a cent of cost and can continue to have it on the same terms for everything they do which is for the benefit of the public and for the increasing numbers of producers doing their own business. These journals co-operate enthusiastically with the organizers and managers of the associations, but there is no such reciprocation as true co-operation requires. Among the first things co-operative associations usually do is to start near-farming papers of their own—not merely "circulars" or "house-organs," which they may properly require, but they undertake to invade the reading-field, advertising business and subscription support of the established farm press with their endowed and subsidized publications. What effect do they have? As an editor who gets no nearer to the business department than its pay checks, we do not know whether competition with these publications has any effect or not. But we do know this: the three weekly journals to which we refer have to buy the paper they use and pay the printers they employ, and their systematic and serious discussions of farming facts and interests must needs present themselves to subscriber in the habiliment of distress and poverty, while the pleasant personalities and socialiabilities of the business office and the packing houses of the associations are carried free to the memberhip on sumptuous paper and in a printing style which no publication divorced from a general expense account could afford. And yet these three journals are the progenitors of the associations, and when trouble comes upon them they are the defenders of them. They can speak to the public ear and the hireling journal cannot. The issues which are now arising will be settled in the public mind and the real spokesman for producers' rights in the future, as in the past, will be the established agricultural journals which have constituencies which trust their own disinterested motives and their discernment of the motives of others. Our conviction is that the time will come when the mass membership of the associations will insist that they be reached by the hundred thousand subscriptions to agricultural journals which they are now paying and not through the special publications which are being sent to them free—at the expense of the returns which should be made to them as producers.

DRIVING PEOPLE INTO FARMING.

To the Editor: I am expected to prepare an essay on farming as a sphere for women, and I would be thankful for some suggestions showing why women should enter this sphere and giving reasons why women should take part in the "back to the land" movement.—Reader, Sacramento.

We would like to be useful to you, but we have a firm conviction that neither men nor women should be encouraged to go into farming unless they know something about it; enjoy the life and work of the farm and have capital enough to go into it in a proprietary way and have enough to work with. Those who have these qualifications will go into it on their own initiative—which is the proper way. We do not believe at all in the outcry of "Back to land!" Unless each one hears a clear call in his or her own soul and is able to get well outfitted on the land, he or she should stay where they are and do the best they can to live busy, useful and happy lives. We do not need more farmers so much as we need more cooks, school teachers, farm-helpers, mechanics, storekeepers, capitalists, etc., who will pursue their several activities for fair remuneration, and stop driving the farmers off the land. We have land enough now under cultivation and in pasturage to roll up immense surpluses of foods of all kinds. If masterful farmers are driven off the land, either by temptation of too high land prices, or by exaction of more for service than their business can pay, or by competition with cheap foreign products, we shall have more "farmers" and less food production. That, as we conceive it, is the real danger at

the present time. It was once said of an old minister who, to a youth who came saying that he had a "call to preach," said this: "Be sure, young man, that it is not some other noise you hear, and when you are sure of that listen to the call with all your soul." It is much that way with a call to farming such as you are "expected to prepare." It is likely to be that "other noise" which may mislead many unprepared persons into disappointment and hardship. Whoever goes into farming should know in his own soul that he has a true call!

QUERIES AND REPLIES

By the Editor.

Inquirers Must Give Full Name and Address
Answered Questions also on other pages.

Bad Work of Bark-Beetle.

To the Editor: I send a cherry twig which appears to be stung by some beetle or insect. I am afraid I will lose one tree, which suffered from drouth, as every fruit spur seems to be stung. Does this insect only attack weakened trees, or does it have no effect on the stronger trees. I have 60 trees and 57 of these, which are vigorous, show no sign of attack, while three weaker trees, widely separated, have been attacked severely. What are the habits of these insects and what spray shall I use and when?—H. J. R., Beaumont.

Professor Essig recognizes the burrows and gumming in thin spirals, which your twig shows, as the work of the bark-beetle—Eccoptogaster rugulosus. This is a minute beetle, only about one-tenth of an inch long and one-third as wide, which makes very small "shot-holes" in the bark. It has been previously reported as infesting cherry trees in your section. It is in the tree practically the whole year in various forms and probably has several broods in the year. It is especially given to attacking sick trees, and one preventive is to keep trees in vigorous condition. Trees badly infested should be burned. Spraying with carbolated whitewash (one pint of crude carbolic acid to ten gallons of whitewash) has been recommended. Spraying with thin cement to make a coating on the bark has also been prescribed. Where the pest attacks small twigs, as in your case, the only way to get these applications in place will be early in the spring, before the foliage comes, and in the fall after the leaves fall. In this State the insect is probably active all winter.

Summer-Dying of Cherries.

To the Editor: I have cherry trees eight years old. Every year there are several trees on which the leaves turn red and drop off during July and August. The roots keep throwing out new vigorous shoots, as if the sap could not go to the upper limbs. Eventually the whole tree dies. Is there some remedy?—A Subscriber, Santa Cruz.

Our notion is that your soil is so shallow that much water cannot get into it, or so coarse and leachy that it cannot hold enough of what gets in to keep the roots supplied in midsummer, and the result is die-back of the top. The roots do, however, remain strong enough to try to make a new top by suckers and then give it up. The remedy would be irrigation in June and July to help the roots force more sap into the top and keep it alive and the leaves busy until the end of the summer. The cherry tree dislikes too wet soil in winter, and it will not stand too dry soil in summer.

Sweet Clover Pasture.

To the Editor: I have heard a great deal about sweet clover for pasture for dairy cows. How long will it yield, and is there any danger of it infesting my land so that I cannot get rid of it satisfactorily?—L. R., Modesto.

White sweet clover (melilotus alber) is a good cow feed after cows learn to like it, which usually does not take long. The yellow sweet clovers are ranker in flavor and not approved as forage plants. White sweet clover is usually counted a biennial, and therefore does not make a permanent stand like alfalfa. It volunteers freely from the seed, however, and carries on that way. It has no running roots, and so far as we know is not counted a pest except in alfalfa fields, where the cows will let it alone as long as they can get alfalfa and sweet clover in alfalfa, hay is not considered desirable.

Winter Growth of Peas.

To the Editor: Please tell me when to plant peas. I have planted some on different occasions, but have never had any results. Would also like to know if cherries and prunes would do well here. My land is very sandy and it sometimes gets very foggy here.—S. D., Torrance.

So near the Los Angeles coast as you are you ought to be able to have a good winter garden by planting after you get rain enough to wet deeply, unless your sandy soil contains too much salt. Do other vegetables grow well? If so, you can get peas in the winter, for although they like a more retentive soil they will take sand if it does not get dry. They may need inoculation of the soil, and your seedsman can fix that for you. Fog does not hurt peas—they get fat on it. We should not expect much from cherries and prunes.

Winter-Growing Cover Crop.

To the Editor: I wish to plant a cover crop in my fig orchard and plow it under, to give life and mulch to the soil. What would you suggest in this locality and what month to plant? The soil is very heavy.—J. C. S., Merced.

The chief points for the particular purpose of getting green stuff, with no regard to forage uses, are these: to select the plant which will make most growth from the cheapest seed; to sow it early, that is, as soon as moisture comes to start and carry it, and to plow under early in the spring, so that it will disintegrate and not use up late rains or interfere with preparation for good summer cultivation. The plant which gives best growth from the cheapest seed is yellow sweet (or sour) clover (melilotus indica)—according to the data which we now have at hand.

Application for Corn-Ear Worm.

To the Editor: Can you tell me what to use on corn to prevent worms on the ears? I have heard that to sprinkle a preparation on the silk just as it begins to appear will check the trouble.—J. S., Hollister.

We have printed several times reports that sprinkling or dusting the silk with lead arsenate powder will cause the worm to bite poison as soon as he hatches from the egg, which is laid on the silk by the parent moth. We are not sure of the efficiency of this method and would like reports from gardeners who have tried it. It would, presumably, not be practicable in field growing of corn.

Home-Made Beet Sugar.

To the Editor: I have raised a few sugar beets, and I will be thankful if you will give me a receipt for making sugar. Also when it is time to pick the beets.—W. M., Marysville.

It is not practicable to make edible beet sugar on a small scale. Freeing the sugar from ill-flavored impurities requires elaborate refining operations, and this can only be economically done with the best equipment, distributing cost over a large volume of product. You can make a homemade syrup from sugar beets and full details of how to do it may be found in Farmers' Bulletin No. 823, which will be sent you free on application to the U. S. Department of Agriculture, Washington, D. C., but we doubt if you will care for the syrup after you make it. A much better syrup can be made by boiling down grape juice, and we doubt if any Californian will long care to bother with beet syrup.

Treatment of Bad Spots.

To the Editor: In the spring of 1918 I planted 10 acres to hairy Peruvian alfalfa. There are some spots all over the field that are not producing as well as the balance of the field. It seems the more I water those spots the harder they get. In a few days they are hard and dry. One of my neighbors advised me to blast those hard spots. What do you thing about it? The land is loose, gravelly soil.—P. E. H., Sisquoc.

Bore or dig down in one of the spots and see if there is mud below after the surface gets hard. If you find it wet below, blasting ought to drain the spot and improve both the surface soil and the growth upon it. If you do not find the water held up by hardpan, but the soil cementing nevertheless, cover the spots with stable manure now, plow it under in a couple of months and then, next spring, disk lightly and give a new sowing of alfalfa to the spots thus treated.

Peach on Heavy Soil.

To the Editor: I have three acres of land three miles west of Redwood City. The land is heavy, black soil, practically level. Will Tuscan cling peaches and apricots be advisable to plant?—E. B., Los Gatos.

There are heavy, black soils which do not hold too much water for the peach root. Look around the neighborhood and see if you can find thrifty peach trees on the same soil. If you do, go to the Tuscans. If not, you had better chance it on apricots on myrobolan roots.

CALIFORNIA WEATHER RECORD

The following rainfall and temperature record is furnished the Pacific Rural Press by the United States Department of Agriculture Weather Bureau at San Francisco for the week ending September 13, 1920.

Station—	Rainfall Past Week	Rainfall Seasonal To Date	Rainfall Normal To Date	Temperature Highest	Temperature Lowest
Eureka	.41	1.01	.53	68	54
Red Bluff	.00	.00	.15	90	66
Sacramento	.00	.00	.10	88	60
San Francisco	.00	.00	.01	72	56
San Jose	.00	.00	.10	76	54
Fresno	.00	.14	.00	90	62
San Luis Obispo	.00	.00	.07	84	56
Los Angeles	.00	.00	.00	74	62
San Diego	.00	.00	.00	72	64
Winnemucca	.00	.66	.37	82	52
Reno	.04	.62	.49	82	52
Tonopah	.00	.94	.90	78	56

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We also have limited quantities Early Baart, Sonora, Diener's Hybrid-Baart and Diener's Hybrid Sonora Seed Wheats. This is our first year with last two varieties and data not yet sufficient to permit our making definite conclusions or recommendations. Both tiller well, permitting light planting, and neither shatters so badly as Sonora.
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Will Turlock Cantaloupe Industry Survive?

Written for Pacific Rural Press by R. E. Hodges.

The writer bought a flat crate of fifteen big cantaloupes in the San Francisco produce market recently for 50 cents. The crate cost the grower 30 cents. Later on we bought nine big sound cantaloupes from a fruitstand at Ripon for 25 cents, where standard crates containing 45 were selling for $1.00. A day or two later we observed the sign in a cheap San Francisco restaurant, "One-half cantaloupe 10 cents." The season's sales for Turlock cantaloupes started at $7.50 per crate. For the past several weeks Turlock cantaloupes have been rotting in the fields, not alone because the rains of August 21 and 23 injured them, for sound cantaloupes have continued to come to San Francisco in ruinous quantities at ruinous prices. Can the Turlock cantaloupe industry survive? There are well-informed people who shake their heads. At any rate, this season's experiences have convinced quite a number of growers that the co-operative organization, the Turlock Merchants and Growers Inc. must have better support hereafter than it had this year. Its marketing record for 1920 has created a favorable impression among growers who did not participate, although their prices were dragged down with the rest until they hit the $1.25 mark.

So we asked Manager D. F. Mahaffy what were the causes for such a slump. Several adequate causes were pointed out. "Too many melons," said he, and this was corroborated by others whom we have asked.

But a similar answer was given years ago as a cause for ruinous prices on other California food products whose tonnage has been multiplied since it was said; and their prices have gone up instead of down. However, cantaloupes this season have proved to be in the same class as peaches—they have been grown for market in almost every State of the Union. Iowa, for the first time a notable exporter, shipped 25 to 30 carloads per day. Colorado, Washington, Idaho, Utah, New Mexico, Arizona, Texas, Arkansas, and the Eastern States produced unequaled quantities, while Turlock cantaloupes paid as much as a dollar a crate greater freight charges to the same markets.

More Icing Facilities Needed.

Lack of ice for Eastern shipments of Turlock melons forced great quantities of them onto the local and San Francisco markets by motor trucks and local freight. Ice is normally furnished from a plant at Modesto whose maximum capacity is 150 carloads per day. A plant may be built at Turlock for next season. Plenty of cars were always furnished by the Southern Pacific and Santa Fe, though many Eastern railroads gave very bum service. The Turlock district shipped nearly 4,000 carloads, besides a regular motor truck traffic

More Teeth in Standardization.

Mr. Mahaffy blames lack of enforcement of the standardization law for much of the grief of low prices; though Horticultural Commissioner A. L. Rutherford points to the half-dozen inspectors he had at Turlock during the season to indicate his effort at law enforcement. However well they may have worked, they could scarcely hope to adequately inspect the flood of melons; and Mr. Mahaffy states that the several inspectors employed at T. M. & G. shipping sheds refused to pass great quantities that were offered; and these were promptly taken to some of the dozen or more other shippers in town and loaded without any attempt at inspection there. They included great numbers of immature and rotten melons which never should have been shipped. High early-season prices brought a rush of everything that resembled cantaloupes. Practically no prosecutions resulted. Of course, when Eastern markets learned they could not depend upon Turlock quality, they were all the more ready to use melons grown nearer home. The immoral rush for early high prices with melons not fit to eat killed the goose that would have laid golden eggs throughout the season and reflected plainly a silliness on the part of shippers which is ordinarily ascribed to the goose.

Shippers Would Not Co-operate.

Imperial Valley shippers get together daily and arrange their shipments to various markets so that all will be supplied and none glutted. No such co-operation existed at Turlock; and the result was conditions like those at Chicago where 100 carloads rolled in one day—at least six times as many as could be profitably sold. Whenever high prices were reported from any market, all the shippers diverted their rolling cars to that point and broke the prices while other markets received none.

Congressional Penury Condemned.

The idiotic economy of Congress in cutting appropriations for use of the Bureau of Markets this season aggravated these sore conditions. One Government man was stationed at Turlock until August 19, but he admitted that his market information was about a day too late to be of most use to shippers, and it was almost useless anyhow, because it was woefully incomplete regarding shipments, and it covered prices on only a few markets. The Turlock shippers did get together enough to contribute to our poor Uncle Sam so the Bureau could get reports from a few additional markets.

Necessary Steps for Survival.

Answering our question whether the industry can survive beyond local markets, we believe it will be increasingly difficult to compete with eastern melons since eastern farmers have wakened to their production possibilities; and certainly a full season of profits can never again be expected unless the cantaloupes are adequately standardized, adequate shipping and market information supplied, enough icing facilities provided, and the shippers co-operate to market intelligently.

Rice Prices Lower but Not Ruinous

The increased rice crop in the United States and the Orient, a holdover of Oriental rice in Cuba, and a general reduction in food prices, seem to justify lower prices for our 1920 crop, but certainly do not justify less than five cents a pound, for which Louisiana and Texas growers are holding.

Crazy reports of ruinous prices for California rice are afloat. Some speculators are repoted to have offered California milled rice at $8.50, but efforts to find anyone who has bought paddy at corresponding prices have failed. There is practically no contracting such as obtained last year; and speculators are trying to bear down the market. There is little excuse for this in American markets, for the Pacific Rice Growers' Association states that there is no holdover of No. 1 rice in the Southern States, and not over 10,000 bags in California. Such holdover as there is in the South is of damaged rice, and it will have practically no effect on marketing of the 1920 crop if the latter shall escape storm damage during harvest. Southern rice millers, growers and bankers met August 8 in New Orleans and agreed to stand firm for a minimum of $8 per barrel of 162 pounds for all varieties. This is almost 5 cents per pound. The Western organization has fixed no price for its product; but of course will stand for no reduction below five cents. The last sale of the 1919 season went at 45 per cent above that price. One reason for the possible reduction to five cents is the mess in which the Cuban market not long ago refused to accept delivery of cargoes of Oriental rice which are now in storage, a heavy menace to 1920 rice prices in Cuba. Importers suffered heavy losses during the past season, and it may be that the burned fingers will avoid fire by importing less in 1920. If so, the Oriental crop this season will not affect American prices seriously. Millers realize that it is necessary to hold up American prices in order to encourage production to keep their $10,000,000 investments busy.

There is every reason to expect a good Oriental crop instead of the poor crop of last year, which led to embargoes on exports from several of the normally heavy producing countries. The American crop on August 1 was put by the U. S. Bureau Crop Estimates at 52,000,000 bushels, as against 41,059,000 bushels last year—a 25 per cent increase. The California crop was estimated to have increased in a still greater proportion, estimates of the Bureau being on August 1 for 9,421,000 bushels, as against 7,881,000 in 1919. The Pacific Rice Growers' Association puts the figures at 3,625,000 bags, an increase of 125,000 bags over last year, but a much smaller crop than the Government estimates. A great deal of old acreage is fouled with weeds, but aside from abandonment of 25,000 acres on account of water shortage, there seem to be no other troubles, and the crop on new land is showing up fine. The long hot spell with no winds was a great benefit. Water has already been taken from some of the earlier fields of "1600" and Suehero, which will be in the cutting when this article appears. This early rice may come on the market about the first of October, but the California rice market will not open formally until October 10. Meanwhile rice growers have no reason for a stampede.

MERCED TOMATOES PAID WELL.

The Merced tomato shipping deal which recently closed netted the growers something over $2 average per 30-pound Los Angeles lug-box, although the acreage was twice as great as it ever was before, according to G. J. Hunt of Hunt, Jewett & Bontz, who acted as shippers for the Merced Growers and Packers' Ass'n and who took supervision of the packing about mid-season. Heretofore the growers have been shipping mostly ripes to local markets. If their 125 carloads had gone that way this season, the prices would have disappeared and these prime shipping tomatoes would now be ketchup. About 85 per cent were actually shipped green to many new markets as far east as Kansas City, as far north as certain Canadian points, and as far south as Arizona. All markets complimented the pack and said they never had better quality throughout the season. They are already inquiring for next year's business. It is known that next season's acreage will be increased at least 30 per cent, and Mr. Hunt thinks that the entire crop will probably be shipped green. All of them will be wrapped in paper whether ripe or green, as this season's experience shows the need of paper for cushioning the tomatoes, supporting their shape under pressure, and absorbing juices of any that may be crushed.

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A Review of California's Splendid Achievements

Written for Pacific Rural Press by W. S. Killingsworth.

Little more than three-quarters of a century ago civilization first peeped over the Sierra Nevadas and gazed out upon the gorgeous landscape below. Caravans of covered wagons, creeping like mammoth snails with their shells on their backs, crossed the barren wastes, the inmates suffering hardships which none but those with a determination to reach the El Dorado of the West could stand. They did not dream that the ragged, rosy-cheeked children who crowded under the wagon covers were the prophecies of the wealth and power and glory of the greatest Empire West of the Rockies. But so it was. Those caravans landed their precious freight on the hills and plains of California, the blue smoke began to curl up from the cabins of the pioneers, the burnished plowshare began to slice the broad prairies, the reaper like a phantom ship began to sweep across amber seas of grain, and the miner with his pick, shovel and pan, set to work to realize what he had dreamed of during this long and tedious trip across the plains. Time in its onward flight has ushered the little ragged candy-haired children into a racé of the fairest women and bravest men that the sun of heaven ever shown upon. Their hardships made it possible for us to rejoice as one people in the triumphs of the past and the promises of the future. And now when we look upon our colleges and universities, and our magnificent cities and splendid towns, manufacturing establishments second to none, farms, orchards and vineyards enriching the industrious millions within her borders, the writer almost feels a pang of regret that he is not a native son.

During Sixty-Six Years.

Sixty-six years ago this mere handful of pioneers, with but a limited knowledge of conditions, could see the possibilities of California's agricultural and horticultural future and they set to work in order that these possibilities might be realized, and as a result the great commonwealth of this great State have just witnessed the greatest exhibition of products that were ever assembled under the auspices of an agricultural and horticultural society of any State in the Union. While the fair functioned a purpose in the beginning, it was not until within comparatively recent years that it proved of much value to the agricultural and horticultural industries of the State, it being more a place of amusement than of education. However, new blood was eventually injected, and as each succeeding fair becomes a part of California's history there is an increased degree of enthusiasm displayed by all who have the welfare of the State at heart.

It was evident that the grounds and housing accommodations of the old "amusement" park were inadequate to serve the purpose of increased popularity and prosperity, hence the present spacious, well arranged location became the home of the State Agricultural Society, where the products of California in whatever form they assume are annually exhibited. As each annual event takes place, interest displayed becomes more noticeable, counties, associations and individuals, not only from California but other States, come forward with their productions, consisting of the products of tree and vine, farm, dairy, livestock and manufacturing, all of which establishes a new standard for the exhibitors of each succeeding fair to compete. In bringing the State Fair to the present high standard of proficiency the layman must not overlook the fact that it required an abundance of patience, nerve and "sticktoitiveness" to steer clear of the rocks. An exhibition of such successful piloting was demonstrated at the session recently held.

Record-Breaking Crowds.

Never before in the history of this annual event were such crowds assembled, on the grounds, in the buildings and in the tents temporarily erected to house the greatest exhibition of "power on the farm" ever held west of the Missouri River. These crowds assembled not merely to have it said that it was their moral duty to attend the State Fair, but because there was something somewhere within this great enclosure that they were interested in and from which something might be learned. It may seem a little "far fetched," however, it is true; an additional exhibit of less than one dozen head of cattle would have surpassed the cattle exhibit of the great Panama Pacific International Exposition, held recently in San Francisco. While our mind is fixed upon the large things of the fair we will add that the largest tent exhibit of automobiles ever held on the Pacific Coast was very much in evidence as one journeyed from the entrance to the grounds to Agricultural Hall. Judges who seldom, if ever, display their knowledge of the superior qualities of the Duroc, Jersey, Tamworth and Berkshire, other than at the international ringside, have gone on record as proclaiming this to have been the best swine exhibit ever to have taken place west of Kansas City.

Reviewing the Exhibits.

In last week's issue of the Pacific Rural Press we rendered an opinion of the agricultural-horticultural exhibits as we viewed them on the run, the first day of the fair, knowing that later our official duties as one of the judges would permit of our rendering a more comprehensive version of the actual merits of individual and collective exhibits. After five days, of ten hours each, carefully going over and recording the merits and demerits of individual exhibits, of collective exhibits and county exhibits, as a whole, we naturally became familiar with conditions. At times there was such a similarity in quality, condition, color, size and pack of contending exhibits that it required the closest attention of the five judges to arrive at a conclusion, and many occasions it required a second and even a third viewing before a final decision was made. Some counties made a display of every commercial product produced in the county; for example, Kings County, winner of second prize, exhibited more than 450 specimens of agricultural-horticultural products. Butte also had on display, but not entered in the prize contest, the finest commercial packed box of Phillips cling peaches in Agricultural Hall, also equally as meritorious a box of red Bellflower apples from a tree 35 years old.

Mendocino County had a most creditable exhibit, not such a variety as many others, but the quality and condition was up to the highest standard. The Bartlett pear exhibit was exceptional for color and quality. The vegetable exhibit was good but limited. There was a 15-pound specimen of wool. The general make-up of the booth was striking in appearance, constructed entirely of redwood as coming from the forest.

Fresno county, while the recipient of first prize, has no license to make faces at her less fortunate sisters in the contest; however, it was a clean-cut decision on the part of all the judges. The exhibit was viewed from every angle. The six points coming under the head of "quality" were considered in detail; so were the ten points under "condition." It was necessary that such be done as a decision to be reached was reduced almost to the point of splitting hairs, so Fresno county has every reason to feel justly proud of carrying off the laurels. Again she may feel proud of the fact that she had an exhibit that stood the scrutiny of such master minds of horticultural productions as Dr. J. C. Whitten, of the School of Pomology of the University of California, and Professor George P. Weldon, of the Chaffey Union High School of Ontario, California—men whose knowledge of horticulture is such that they have been called into consultation in all parts of the United States and Europe.

Display from the South.

To say the least, we were very much disappointed in the Los Angeles exhibit. It was a "dandy" as far as it went, but it didn't go far enough. Its construction and arrangement was odd as well as unique. Its massive revolving artistically decorated "float" was surmounted by a figure typical of the name of the county from whence it came—an angel. This beautiful, well-proportioned figure, with wings hoisted and arms outstretched, was pleasing to the eye, however—as much so as any angel we have yet seen—but in conferring honors our instructions were to confine our attention to only the products that have made Los Angeles famous. Los Angeles county is the largest producer of walnuts of any county on the American continent. It is also the largest producer of vegetables of any county in California, but both walnuts and vegetables were conspicuous by their absence.

Kern county, like Los Angeles, failed to exhibit the many products for which that county is so famous. With the exception of a few sheaves of grains and grasses the exhibit consisted solely of cotton, pears and grapes. However, the exhibit attracted a great deal of attention as their cotton exhibit was very artistically arranged, and as it was the only cotton exhibit, it was a curiosity to those who had never seen the staple. The exhibit of Tehachapi Bartlett pears was exceptionally good.

Calaveras county, taking first prize for minerals, has every reason for feeling proud of her mineral exhibit, both as to quality, quantity and arrangement. It attracted as much attention as the fruit-ladened booths. However, there was a most creditable showing of fruits and vegetables, and while they were fully up to standard in quality and condition, they were lacking in variety and quantity.

Last Minute Entry.

Alameda county, at the last minute, decided to exhibit; however, with that handicap she was there with the bells. She had the only potted shrub exhibit of note, consisting of more than 100 varieties from the California Nursery at Niles. The best exhibit of nuts as to variety—101 jars—came from the nursery also. The same may be said of a splendid selection of apples, plums and pears.

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Citrus Marketing Conditions for 1920

(Written for Pacific Rural Press by W. S. Killingsworth.)

From the annual statement just issued by the California Fruit Growers' Exchange, the tonnage of citrus shipments during the year ending August 31, 1920, reaches a high point in the history of the industry, 38,077 carloads of oranges and 8,680 carloads of lemons, a total of 46,757 cars. In these shipments are to be included 226,266 boxes of grapefruit. Of the total amount the exchange shipped 34,461 carloads, a remarkable showing for this the greatest co-operative fruit organization on the globe. Such showing is noticeable to those of us who have watched the steady growth of the Exchange from its organization in 1895.

Car shortage has seriously interfered with the distribution of the Valencia crop in the fall of 1919, causing a large part of it to be marketed in competition with the Navels from Central and Northern California, and with the grapefruit and oranges from Florida, and disorganizing the seasonal distribution of varieties.

The returns made to the growers for fruit shipped through the Exchange will be approximately $59,221,329. Now, if we use the Exchange returns as a basis, the returns to California for the total crop of 1919-20, including the portion of the 1919 Valencia crop which was sold after August 31, will approximate $81,200,000, representing a delivered value in the wholesale markets of $106,600,000, including $25,400,000 of freight and refrigeration charges.

The Exchange shipments for the twelve months' period represents 73.7 per cent of the total shipment of citrus fruits from California, which is an increase of approximately 1.4 per cent over the preceding year. The Exchange membership has increased during the past year from 10,000 to 10,500 growers, and the combined number of shippers, associations and district exchanges belonging to the organization has increased from 216 to 219.

In the matter of losses from bad debts the Exchange certainly makes an unprecedented showing; for example, during the past year the losses from bad debts and uncollected bills amounted to $435.83, representing 3/4,000 of 1 per cent of the f. o. b. value of the fruit. Their statement shows that they have returned to the growers $376,000,000 during the last 17 years. The loss of all kinds during this period has been $8,775, or 9/4,000 of 1 per cent of the f. o. b. returns.

The most remarkable feature of the Exchange's workings is the low operating cost. This showing is ever a thorn in the side of the independent packers and shippers who have never been able to compete, hence they are not getting the business. As an example of this great showing we find the Exchange services, exclusive of advertising, cost an average of 5.51 cents per box in 1919-20. This service includes the maintenance of all Exchange departments, the salaries and expenses of agents, brokerages, the daily market news service, the collection of claims, legal expenses, the California Citrus League, the field service of the Exchange—including the development of membership, the organization of new associations, the Industrial Relations Department, the Exchange Research Laboratory, and all other operating costs, all of which is accomplished for the exceeding small amount of 5.51 cents per box. Can you beat it?

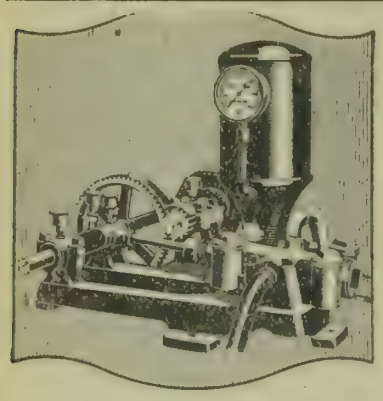
The average cost of the district exchanges has been 1.12 cents per box, making the total average operating cost of the Exchange marketing service 6.63 cents per box. As a result of the increased cost of doing business, the operating cost of the Exchange increased 1.25 cents per box during the year. Yet, because of the increased volume of fruit marketed through the Exchange, the operating cost per box is less than it was ten years ago. For a number of years the Exchange has been advertising to increase the sales opportunity for citrus fruits. This continuous use of printed salesmanship, as a supplement to other selling efforts, has been a patent factor in stimulating the general use of oranges and lemons. During the last year more than 119,000,000 copies of national magazines contained Sunkist advertisements. A new feature in advertising in the form of "Orange Weeks," held in 154 cities during the past year, has proven to be a successful innovation.

The Fruit Growers' Supply Company, which purchases the orchard and packing house supplies for the members of the Exchange, has transacted a business during the year in excess of $8,500,000. The lumber operations, the property of the Exchange at Hilt, Siskiyou County, will total $1,676,000. This volume of purchases will have been accomplished at an approximate cost slightly less than $1.50 per $100. After paying all expenses, and 6 per cent interest on the capital invested, there will be a refund of $250,000 to members who purchased through the supply company. Investigation on the part of the Bud Selection Department are being conducted into sources of nursery seed supply. These seeds are being tried out at the supply company experimental station with other experiments in budding and propagation of nursery stock. This department will have furnished to date approximately 1,000,000 buds from selected trees since its organization in 1917.

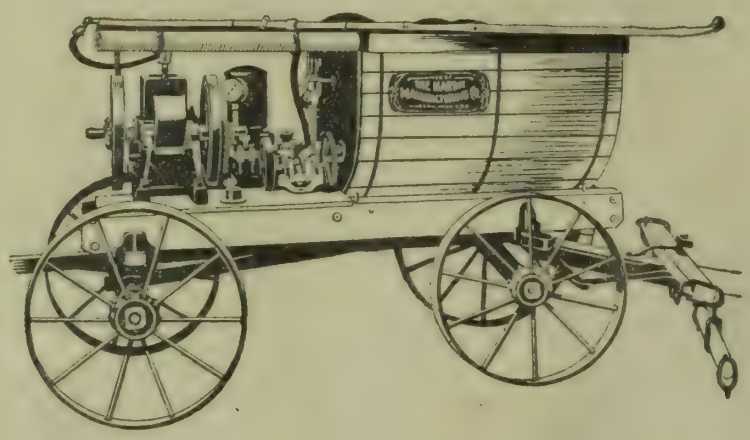
The marketing of the lemon crop has been filled with uncertainties from the beginning of the season. The summer lemon market was the most unsatisfactory since 1915. This was due to the following unfavorable factors: (1) Cool weather, which prevented the usual demand for lemons. (2) The depreciation of Italian exchange, which resulted in heavy importations of foreign lemons at low prices. (3) The high price of sugar, which discouraged the making of lemon drinks, and the increase in the number of soft drinks. (4) The shipment of weak and over-sized fruit which had accumulated in California as a result of the above factors. The year's importation of foreign lemons totaled 1,553,374 boxes, which is an increase of 76 per cent above the previous twelve months and 13.6 per cent above the average of the last five years. While foreign lemons have been selling at an average of $2.33 in New York, it has been costing California lemon growers not less than $3.00 per box merely to grow their fruit and prepare it for shipment.

As previously stated, Uncle Sam will have to shut the door against foreign lemons, else the lemon industry of California will be crippled beyond redemption. As for the sale of oranges during the past season, there is little if any fault to be found. Shipment of Navels amounted to 4,958,411 boxes, as compared with 5,723,794 boxes in 1918-19. The shipment of miscellaneous varieties of oranges, exclusive of Valencias, equaled 576,481 boxes. Shipment of grapefruit amounted to approximately 500 carloads. There was little opportunity to market the grapefruit crop in the East in face of the competition of the large Florida supply. The Valencia orange, as usual, has met with a good market. Exchange shipments in 1920 totaled 3,692,489 boxes to September 1st, as compared with 4,060,658 boxes for 1919.

The Whitten ranch in Tulare county is to be set to vines.



Note the extreme simplicity and accessibility of the Hardie Junior pump. It is the smoothest and easiest running pump of its kind made. Connected to the engine with positive chain drive running on cut sprockets, it receives all the power from the engine.



Spraying Economy and Speed for the Small Grower

Here's a power sprayer—THE HARDIE JUNIOR—that is guaranteed to supply two lines of hose and maintain a pressure of 200 pounds yet selling at a price so low as to make hand spraying thoroughly unprofitable.

The Junior has a full 1½ horsepower engine equipped with magneto. The Hardie Junior pump is a marvel of simplicity—the rocking cylinder does away with the sliding cross arm, the most troublesome part of any power pump. It has bronze bearings, cut gears, brass ball valves and all the operating equipment is fully curtained and cabbed. The tank has a capacity of 150 gallons and is equipped with rotary propeller agitator.

This Hardie machine is of the same high quality in workmanship and materials as the larger Hardie Sprayers—differing only in capacity and price.

See this low priced, high quality, Hardie Junior Sprayer. It does the work quickly, thoroughly and economically—an ideal sprayer for the small grower.

Hardie Sprayers are made in different sizes and capacities to fit every spraying need.

For growers who need greater capacity and pressure, there is the famous Hardie Triplex Sprayer and other models.

HARDIE MANUFACTURING COMPANY

For 20 years the foremost, exclusive manufacturers of hand and power sprayers, including the FAMOUS HARDIE ORCHARD GUN

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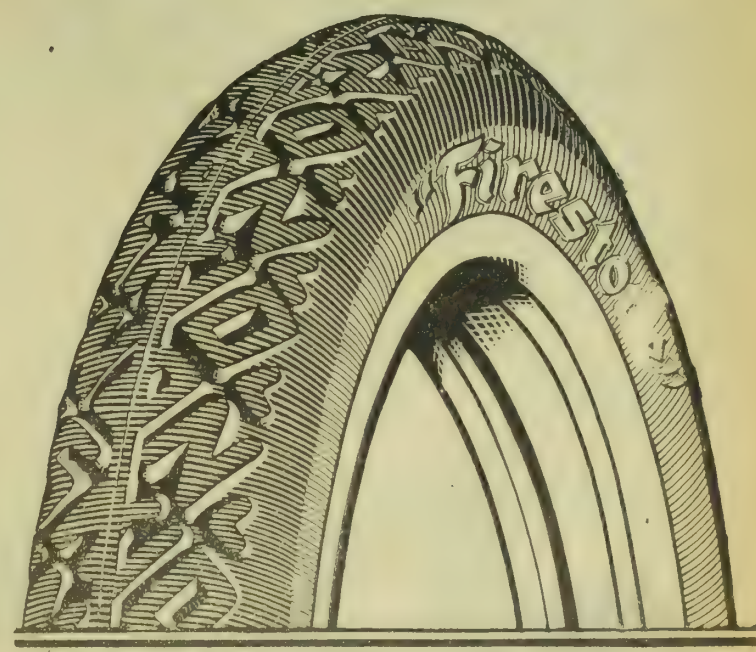
The Firestone thrifty 3½ is leading the small-tire field today. Because it is built on real thrift methods from start to finish.

Firestone experts on the spot in the raw material markets of the world are able to get first choice of quality at quantity purchase prices.

Firestone men have worked out the way to produce this tire by concentrated methods —no waste material, no waste motion, no waste space.

And Firestone volume output, through thousands of dealers, permits selling at a close margin. The user gets the benefit. Try this Firestone thrifty 3½.



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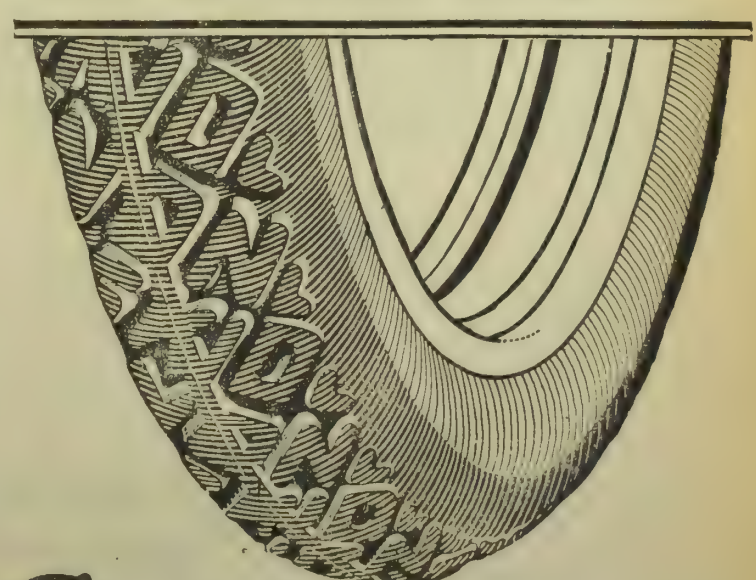
$22.50

Gray Tube $3.75
Red Tube $4.50



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Mariout Seed Barley

PURE UNIVERSITY FARM STOCK.

Clean, heavy, free from noxious weeds and smut.

Carload lots or less. Sample on request.

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FRUIT TREES and ORNAMENTALS for 1921 PLANTING

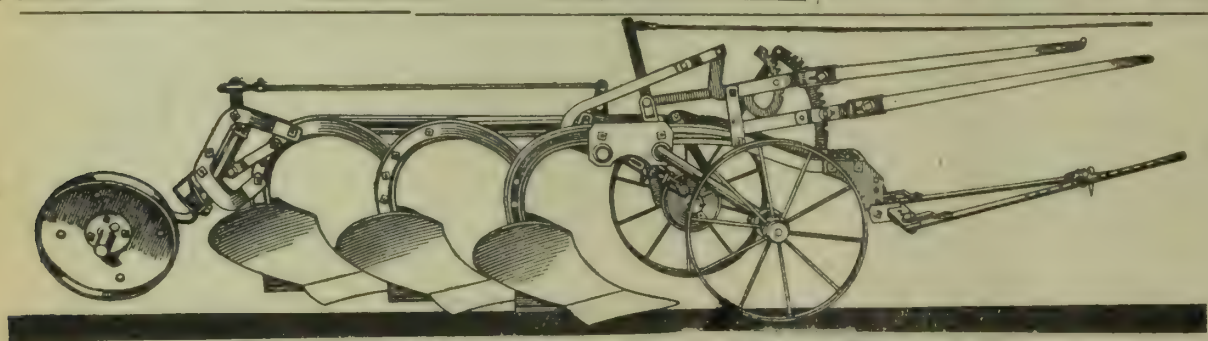
WRITE FOR OUR NEW PRICE LIST

There will be a decided shortage of Fruit Trees again this year. We therefore advise our customers to place their orders as soon as possible in order that the stock may be reserved for them before the supply is exhausted.

We wish to call particular attention to our Improved French Prune and the New Double X Prune.

CALIFORNIA NURSERY COMPANY

NILES, CALIFORNIA



Gets Up Close to the Rows Without Harming Trees

THE reversible hitch permits setting the John Deere No. 8 out to either side for work close to the row. Special lever adjustment permits angling the levers in where they are handy from the tractor seat, out of the way of branches and free of the tractor wheels when turning. Special wheel-base design permits close work without harming the trees.

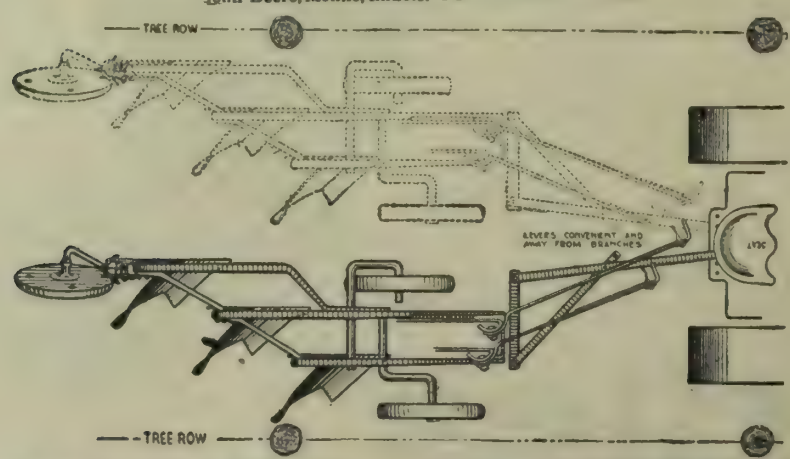
JOHN DEERE No 8

ORCHARD TRACTOR PLOW

is just what you have been wanting. Note its special hitch and lever construction, illustrated below. It's an easily-handled, low-down, power-lift, three-bottom plow, especially designed for use with small tractors in orchard plowing. Good for general field work too. Full stock at San Francisco for quick distribution.

Be sure to find out all about this special John Deere plow.

Write today for a folder describing it. Address John Deere, Moline, Illinois. Ask for booklet 0-638



JOHN DEERE

JOHN DEERE MOLINE, ILL.

THE TRADE MARK OF QUALITY MADE FAMOUS BY GOOD IMPLEMENTS

Timely Work in the Orchard

Cutting Pear Blight.

In many sections of the State pear blight is reported to be more prevalent than in the past few years. It is useless to go into detail as to the cause and effect, as every one who has had any experience combatting pear blight should be familiar with the method of preventing its spreading as far as such work has ever been accomplished, and there is no better time than the present to check it. In the slightest form its presence may be detected by the red appearance of the leaves on the parts most effected. When this discovery is made the branches should be carefully examined. In all probability the bark will be found to be drying and shrinking, possibly turning a dark brown to black. This should be traced as far as any sign of such is perceptible. Then the limb should be removed and the wound well sterilized, and before the work of removing other branches should be done the tools used in the work should also be sterilized. The disinfectant now giving the best result, according to F. C. Reimer, of Talent, Oregon, is the pure cyanide of mercury at a strength of 1 to 500 (one gram of pure cyanide of mercury to 500 grams of water). Mr. Reimer claims that after the use of this treatment not the slightest indication of disease could be found.

A Decision of Importance.

The orchardists of the deciduous section of the State who use electric power for pumping purposes have been very much exercised over a ruling by Power Administrator Butler. This ruling was to the effect that power would not be furnished for pumping purposes of orchard irrigation, which of course would have proven a serious loss to all orchards that have been accustomed to irrigation, as at the present time the coming season's fruit buds are developing and to stop their supply of moisture would result in serious loss. In the case of the olive growers of the State, now is the time they are in most need of water, and it was those growers who won the point by it being decided that the former ruling of Butler that pumping for irrigation purposes would be limited to rice crops would be rescinded. At the meeting Butler agreed with the olive growers that olives as well as other orchard crops should be given the same privilege as was rice.

Remove Dead Wood from Prune Trees.

Where old prune trees have suffered from the effects of drought there is at the presnt time more or less dead wood among the smaller branches, more noticeable throughout the top of the trees. Where such prevails, and other portions of the tree are healthy, the leaves will have dropped from the dead limbs. These limbs should be taken out at once, for if allowed to remain until the tree is completely defoliated, then it will be a difficult matter to detect the dead limb and more especially the extent to which the dead portion extends. Should these dead limbs be allowed to remain they not only spread the effects of its disease, causing death to other portions of the tree, but continue to consume moisture that would benefit the living portion, therefore they should be removed at once and the wounds should be well painted.

Saw Off Unsightly Knots.

How often is it the case where contract pruning is done there may be found large knots scattered throughout the tree. Especially is this the case in apricots and pears. Where these knots are to be found they should be carefully sawed off and the wound well painted. Where they are allowed to remain they continue to grow and from them there comes each year a mass of small growth, which not only detracts from the looks of the tree, but furnishes additional wood to be nourished and from which very little results are obtained as this mass of brush never develops sufficiently to develop fruit buds of any consequence; therefore, the sooner these unsightly deformities, from neglect in pruning, are taken off the better results will be obtained from the tree.

To Open New Plant.

On September 11 the new packing plant of the California Prune and Apricot Growers Inc. was opened at Napa, and invitations were extended to all members of the association to view the building which is one of the largest now owned and operated by the association. The building is of reinforced concrete, having a floor space of 141x162 feet and a bin capacity of 1,000 tons. The attractive feature of the new plant is its carloading apparatus, which is electrically controlled. The designers of the plant showed good judgment in the allotment of space for a platform of large dimensions, this being 20x162 feet. Active work was put under way on Monday, September 13.

During the grape harvesting season a special weather report will be furnished to the Alta and Dinuba grape growers. This service is rendered by the California Associated Raisin Company.

PRUNE AND APRICOT ASSOCIATION REORGANIZE.

The board of directors and trustees of the California Prune and Apricot Growers, Inc. have voted to change the form of their organization from a corporation to a non-capital stock association. This is done for the purpose of showing that the association is a legitimate non-profit co-operative growers' selling organization, attempting to comply in all ways with the spirit as well as the letter of both Federal and State laws governing growers' co-operative marketing associations. This reorganization will take place immediately by altering the form of contract now signed by the growers when they join the association. The reorganization will be completed by 1922, when all of the present contracts held by the association with its 10,000 grower members expire. The reorganization plans voted by the association, according to H. G. Coykendall, general manager, are in no way influenced by the suit filed in Los Angeles by the Federal Trade Commission asking for the dissolution of the California Raisin Company on the grounds that it was a monopoly in violation of the Sherman anti-trust law. Mr. Coykendall also stated that the changes to be made by the California Prune and Apricot Growers, Inc. were the result of a series of informal conferences held between the representatives of the association and the Federal Trade Commission. At these meetings, which began last February, and have extended over several months, Coykendall said there was a frank and open discussion as to just what the purposes and objects of growers' co-operative associations should be. These changes were not the suggestions of the Federal Trade Commission, but entirely voluntary on the part of the association. Coykendall further stated that the Federal Trade Commission always has recognized that the prune association could not in any sense be looked upon as a monopoly because of the already large and steadily increasing Oregon and Washington prune production.

STATE FAIR HONORS.

Sonoma county had a fair exhibit. One hundred pounds of Gravenstein apples, a few prunes and potatoes, etc., consisted of her agricultural and horticultural exhibit. Of course, the hen fruit was there in evidence in a basket capable of holding a million or so dozen, perched on a pedestal so high that one with difficulty could tell that it was intended as an egg exhibit. Too bad, when Sonoma county has the world backed off the board when it comes to the productin of certain varieties of apples, that they did not have an exhibit that we know they are competent of producing. The display of Gravenstein apples were in a class by themselves. We have never seen finer stock.

Yolo county, as usual, was there with the best ever, but with that feeling and grace of a good winner or loser, after having captured first prize on several former occasions, she gracefully declined to enter the contest for the grand prize.

Solano county, one of the old-time prize-winners, was at the fair with a splendid exhibit from Mare Island and Benicia Arsenal; also many processed fruits and photographs representative of the county's products. Unfortunately the orchards of Solano county suffered beyond endurance during the season from pests of many kinds, rendering her fruits below her usual high standard of quality and size.

Sacramento county was the first lady of the occasion and to show how much she appreciates the association of her sister counties, and that they might go away satisfied, she merely remarked: "Girls, come along and be my guests. I will accompany you in the grand march, but in the prize contest it will be thumbs down." Good for Sacramento—the true sport she is. However, her exhibit would have made some of the topnotchers take notice had she not have declined to enter the contest.

The Silent Alamo
—furnishes electric light and power for the country home. Runs without vibration. Write for catalog.

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The all-round water system for the household. Furnishes water under pressure at small cost. Send for catalog.

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—enable dairy farmers everywhere to add hours to the day for other duties. Write for catalog.

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Horizontal pumps, Vertical pumps, Deep-well pumps, Direct-connected Outfits, etc. Write for catalog.

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Get 25 per cent more milk, save feed, and save labor, by making your cows comfortable with Louden Equipment. Write for catalog.

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We can furnish you with any kind of an engine in any size you require. Write for catalog.

Name .....
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Cut out this ad, sign your name, check the catalogs you want, and mail to us.

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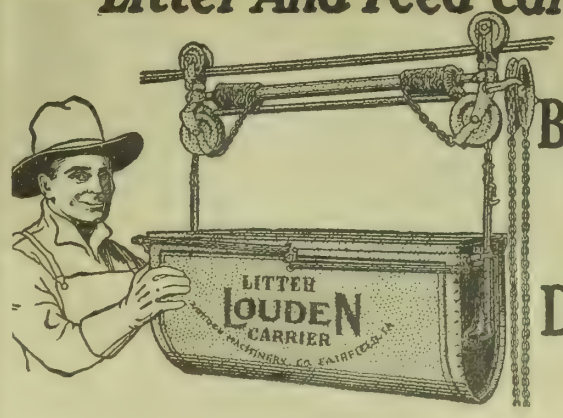
Litter And Feed Carriers



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You can save half the time cleaning the barn and feeding your stock every day. You can cut out the back-breaking labor. You can quit scattering feed over the barn floor. You can put an end to the 50% loss in the fertilizing value of manure. You can do all this and more with Louden Litter and Feed Carriers. They move easier, lift more, and have no trouble-making, dangerous hit-or-miss ratchets, brakes or clutches. Built in any style.

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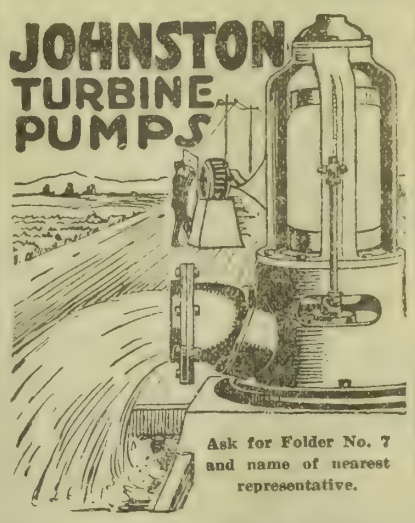
JOHNSTON TURBINE PUMPS



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AMERICAN WELL & PROSPECTING CO.,
407 E. 3rd St., Los Angeles

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Farmers, Miners, Builders—people in every kind of business are saving money buying used or renewed pipe from us. We sell every kind of pipe. Send in a list of your requirements today and get our prices. We have saved hundreds of people 33 1-3 to 50 per cent on their pipe bills. Here's a partial list of some of the miles of pipe we have in stock for immediate delivery.

8,000 ft.	6 in.	Riveted	16 gauge
700 ft.	8 in.	"	16 "
5,000 ft.	12 in.	"	12 "
1,000 ft.	18 in.	"	12 "
800 ft.	22 in.	"	14 "
300 ft.	24 in.	"	14 "
500 ft.	36 in.	"	12 "

10,000 feet light wrought iron 8-inch pipe with cast-iron collars.

All above pipe thoroughly overhauled and inspected and ready for immediate use.

We also have large quantity standard pipe and screw casing, pressure tested and guaranteed.

Don't delay—write for our prices on your pipe requirements today.

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makes
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Money back if it don't.
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THE E-B LINE
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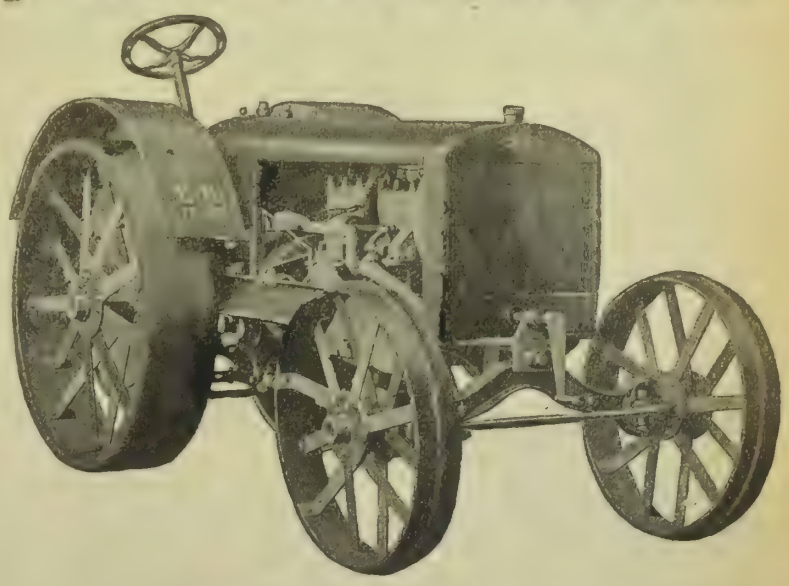

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HIGHEST QUALITY GOOD CLEAN SEED FROM TESTED, HEAVY YIELDING STOCK.
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CERTIFICATE OF QUALITY
MELILOTUS INDICA
Purity 99.35% Germination over 92%
Found free from the following noxious weed seeds:
Dodder, Star Thistle, Thistles (Circuim spp., Carduus spp., Cnicus spp.) Morning Glory, Johnson Grass, Hoary Cress and Ribwort
GERMAIN SEED & PLANT CO.
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Accept Only the Genuine!

Germain's
MELILOTUS
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99 35/100 %
PURE!

Insure bigger, better, more luxuriant cover crops by planting only Germain's high-test Melilotus Indica.

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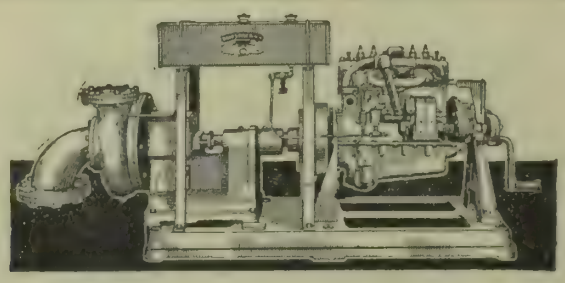
"King of Cover Crops"



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BEAN SPRAY PUMP CO.
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Distance to water below surface of ground _____
Probable distance to water when pumping _____
If water is to be raised above surface of ground, how high? (Length and size of pipeline) _____
Volume of water desired (Gals. per min. _____
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If you have pit, give width _____ length _____
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H.P. of motor or engine if you have that equipment _____
Give total depth of well _____
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Be independent. Run your pump as long as you please. You can do it with this Bean Direct-Connected Outfit.

It consists of a heavy 4-cylinder engine (Bosch High Tension Magneto) direct-connected to a Bean Universal 4-inch Pump. Handles a wide variation in head and throws a big stream. Will deliver water at either of two heads by the simple turn of a gate valve. Runs 10 hours on 6 or 7 gallons of fuel. Start it in the morning and forget it till you are ready to turn it off at night.

Send the coupon. Fill it in carefully. Let us help you solve your water problem.

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Branches: Fresno Los Angeles

Bean

Centrifugal Pumps

Agricultural and Mechanical Service

"Perfection" Barley Undesirable.

When you are offered "Perfection" barley seed, bear in mind the following quotation from Prof. Geo. W. Hendry of University Farm:

"Perfection barley has been grown at the University Farm experimentally for a number of years. The chief defect of this variety, which is common to all varieties of that type, is that the straw is very weak just below the head at maturity, and considerable loss occurs through the breaking off of the head. It also shatters badly, and cannot be allowed to stand in the field after ripening for any length of time. The grain would be of no value for malting purposes for the reason that it is hulless, but has a good feeding value. There is very little market for grain of this type, and we should not encourage its cultivation on a large scale. At Davis, it has yielded about 75 per cent as much as common barley, but the grain is heavier, and averages in the neighborhood of 120 lbs. per sack."

Mariout Barley in Sutter County.

"We could get no water on our Mariout barley and we just watched it dry up in seventeen continuous days of north wind; but in spite of its dry appearance, we got thirteen sacks per acre from 85 acres, while common barley similarly handled on adjoining land made only three and four sacks per acre," writes Paul J. Krausnick of Sutter county to Prof. G. W. Hendry of University Farm. "We of course attributed the greater yield to superiority of the Mariout. We had about 25 sacks left over from our own planting so we planted some for the Alameda Sugar Company on ground which was much better. This was seeded at a little less than 50 pounds per acre; and it yielded 23½ sacks per acre, 112 pounds per sack; while the same kind of land all around, planted to common barley, yielded about fifteen sacks per acre, weighing a little less than 100 pounds per sack.

Completely Motorized Farms.

To the Editor: Do you think tractors will ever replace horses on the ranches of California?—J. H. M., Australia.

We know a number of large and small ranches in California where horses have been entirely displaced by tractors, motor trucks, and automobiles. We believe the time will never come when all the horses in the State will be dsplaced economically. But to one who has studied the tractor exhibit at our recent State Fair, the lively interest displayed by inventors in producing machines that do all the work that horses ever did and then a good deal more, there is every reason to believe that completely motorized farms will be very common in the future. The fuel they will use will cost more than at present; but with the certainty of increased population, the enormous waste of land now occupied in raising horse-feed must be minimized and that land must produce human food or feed for productive domestic animals.

Knotty Beets—Naughty Nematodes.

Has anything been found to stamp out nematodes on beet land?—J. M. P., Los Angeles county.

Grow grain and sorghum crops for several seasons, then be careful. The only way to kill these worms is to starve them. They thrive on almost everything except the grains. They are so deeply and generally distributed through the soil that no commercial way of reaching them with gas or poison has been devised. Complete and long-continued drying would finally exterminate them, but would probably require as many years as to starve them by rotation.

A Good Seed Program.

A lot of seed shipped by a midwestern seed house, as alsike and timothy mixture, contained 28 different kinds of weed seeds, amounting to nearly 12 per cent by weight. Laws in some States have a certain effect on such shippers; but even laws need intelligent popular support. For this reason, State Director of Agriculture G. H. Hecke recommends: (1) courses of study in the schools and articles in newspapers and farm journals teaching identification and control of weeds; (2) co-operation of dealers, producers, and users, for establishment of standardized grades of approved strains and varieties grown and stored in California under favorable conditions; and (3) plain, honest, descriptive advertising as to variety, merits, etc.

Morning Glory Springs Eternal.

A man salted some morning glory on moist soil, and killed the land. He has used distillate without results. What will kill it?—M. J. P.

Morning Glory is like nematodes—the only commercial way to kill it dead is to starve it or dry out the roots. The latter can in some cases be worked in summer if the former is diligently worked in fall and spring. The only way to starve it is to cut off all sprouts before they appear above ground. Weekly working with a weed cutter kills most of it in a season. Easy, effective short-cuts to extermination have been much talked about but seldom if ever worked. Better have live morning glory than dead land.

Melilotus Fertilizes Peppers.

To get pemiento-pepper land into good shape to produce its own fertilizer, melilotus or bur-clover is broadcasted among the plants by S. C. Oertly of Orange County, late in September, at the rate of five or six pounds of seed per acre. This is just before the heavy setting of fruit prevents cultivation. The last cultivation works seed that fall between the rows into the ground. Seed in the rows come later. The melilotus grows up among the plants after picking is finished, and is turned under the next spring. Being planted early it makes a big growth, which is disked down with a weight on the disc to help cut up the stems. Then the plow runs in the same direction to turn it under clean.

Do Not Drain Rice Too Soon.

Two fields of rice side by side, each about 100 acres, were treated entirely the same by the same people, as noted by H. O. Jacobsen of Butte county. It was a cool, late season. One was drained ten days earlier than the other. It yielded 38 centals per acre, while the one on which water was held longer yielded 59.97 centals per acre. Pretty good pay for the extra ten days! Where water is drained off too soon, kernels are chalky or green, not so plump or dense as they should be. This practice has repeatedly proved almost disastrous, still there are people who stampede at the thought of wet weather.

Dry Plowing Gives a "Half-Fallow."

Dry plowing is considered more important by Ranch Manager A. G. Baker of the Salinas Land Company than to get full benefit of pasturing the stubble. He began plowing this year in July, aiming to finish before rain starts. "This gives us a half-summer-fallow, and airs the land out," says he. After the first rain has sprouted weeds, the soil is spring-toothed or chiseled quickly into a good seedbed for early planting and better crops.

Temporary Fence Practicable.

Hobson Bros. of Ventura county pasture beef cattle on stubble and beet tops systematically. They clean up the pastures as they go, using temporary fences built of two wires strung on light wooden posts. A fence gang is busy all the time; for Hobson Bros. fatten thousands of cattle this way.

Let the hens help themselves to a dry mash.

FARMERS NEED BETTER SELLING SYSTEM.

To the Editor: In your reply to my article on the eight-hour day you acknowledge that the eight-hour day can be applied on any old farm by any farmer that possesses an ounce of ingenuity, if he can get money from what he sells. By using just one ounce more I think we can make the farm quite a different undertaking. A better selling system is what we need in order that we can make both ends meet and have something left. You have had hundreds of statements in your magazine from farmers, claiming that they must go out of business because they can't make a living on the small margin of profit allowed the farmer.

These conditions do not speak very well for the one basic industry upon which this country and its people must depend upon in order to exist.

You have noticed the arguments that one of the other basic industries have put up, that they must have a fair return on their investments or else they must go out of business also. I mean the railroads. We can't get along without our transporting systems, and I think that they are asking only for what is right and what they are entitled to. The farmers should have the right to set a price on everything that they produce so that they may exist also. The farmer today does not set the price upon what he produces; in fact as a class we do not have anything to say about what we should receive. We have had to take what we are offered by the buyers who make all the profits. All other industries such as meat packing, flour milling, butter and cheese factories, sugar refineries, tanneries, woolen mills, lumber mills, and all other industries that get the raw material that is produced by the farmer at a loss, set the selling price on their finished product to cover all costs and profits. They pay good wages and get good work out of their help. They get the best workmen and the farmers get what is left.

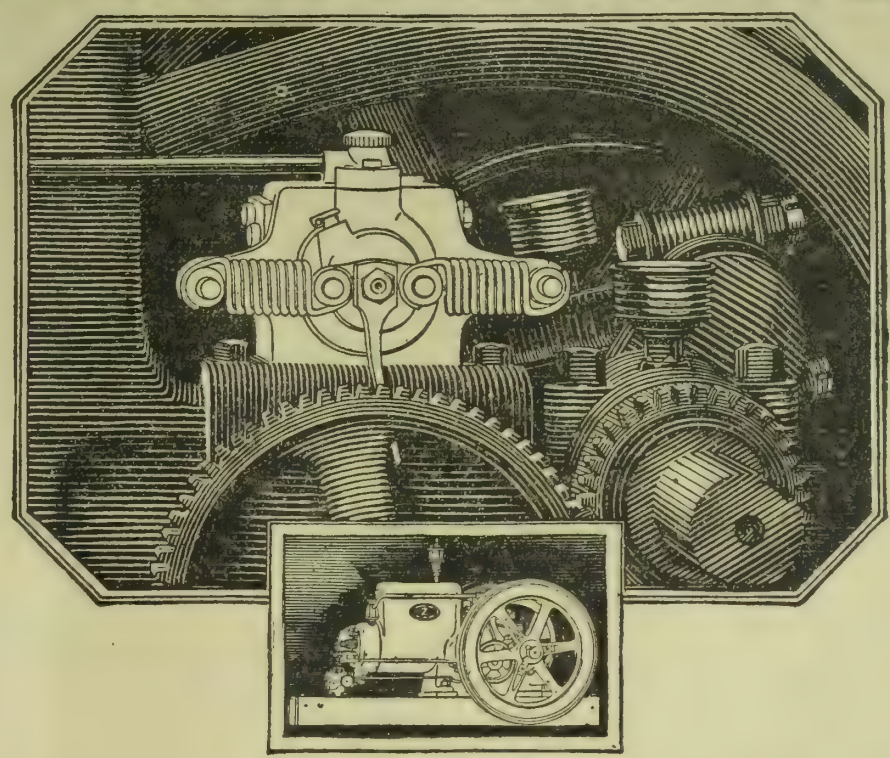
Uncle Sam guarded the morals of his boys overseas by giving them full rations. A man will not fight when half fed; neither will he work when half paid. The farmer can not exist when half paid for his produce. Let us change our selling system on the farm first, then the change of heart and morals of the boys and hired help will automatically follow and not before.—C. E. M., Berkeley.

FOOD TARIFF BENEFICIAL TO ALL.

California is a world factor in food production, but our food producers are entitled to better living conditions than they can have if they are compelled to sell in competition with producers of other countries using cheap labor and a cheap financial exchange to undersell American producers. Among the California farm products that have been, are, or are likely to be affected are beans, rice, eggs, butter, wool, lemons, raisins, almonds, walnuts, sugar beets, etc. Now if representatives of all these lines should get together and pledge their entire support to a program for tariff protection for all of them, the first great step will have been taken. Then it will be necessary to get co-operation of producers in other States who are suffering for lack of tariff on such crops as beef, cotton, and even peanuts (a Congressional district contest was recently made on the platform of tariff or no tariff for peanuts). Then only will enough producers be united to get a tariff that will assure profitable production. Then also can consumers hope that enough producers will be attracted to the farms so that the costs of living will come down. This phase of the subject will have to be presented forcibly to consumers before they can see that a tariff on food products will result in their favor.

The pigs owned by five of the members in the Stanislaus County Pig Club made an average gain of over one pound per day in the second month of the contest.

FAIRBANKS-MORSE "Z" FARM ENGINES



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Other "Z" features are: Runs on kerosene as well as gasoline; more than rated power; parts interchangeable; clean-cut design; long life.

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PRICES 1½ H. P. ..... $ 85.00; 3 H. P. ..... 135.00; 6 H. P. ..... 220.00 — All F. O. B. Factory

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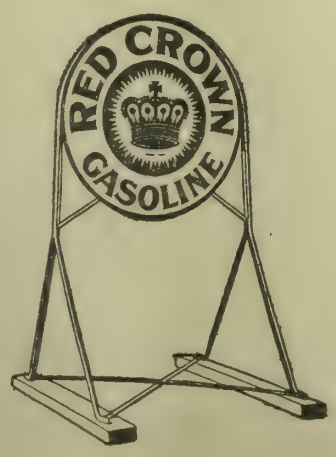

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The Apiary Department, which is in charge of experienced Bee-keepers, is one of the largest of its kind in the United States, and maintains a constant excellence of product and unsurpassed service.

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RHUBARB Wagner's GIANT

PLANT NOW—September, October and November are the best months to plant. Growers who planted last July and August have already harvested over 15 tons per acre, netting $1,000 eleven months from planting. For further information, write J. B. WAGNER, Rhubarb Specialist, 1550 East Villa St., Pasadena, Cal.

Significant Agricultural Pointers

Legislative Committee Acts.

An agricultural committee to consider the financial budgets of the California College of Agriculture, the State Department of Agriculture, the State Board of Agriculture, the State Board of Forestry, the State Supt. of Weights and Measures, and the State Market Director was appointed by the Agricultural Legislative Committee at its meeting in Sacramento, Sept. 9. The committee consists of Geo. W. Pierce of Davis, Fred Bixby of Long Beach, Aaron Sapiro of San Francisco, L. B. Scott of San Jose, and J. L. Nagle of Sacramento. This committee will work with several subcommittees representing livestock, poultry, vegetable, and fruit industries. Another committee was appointed to study the Alien Land Law and report at the October meeting. Single-tax and anti-vivisection measures to appear on the ballot next November were condemned.

Big Car-mile Earnings on Grain.

It isn't so much the earnings per ton-mile that affect railway profits as the earnings per car-mile. This was brought out forcibly in recent hearings regarding freight rate increases when Clifford Thorne, representing the American Farm Bureau, showed that while grain traffic produces about the same ton-mile earnings as other traffic, it gives railroads two or three times as great earnings per car-mile. This is due to full loading and long shipments. Mr. Thorne argued that on this account the proposed 60 to 90 per cent increases asked on wheat rates would be unfair and would discourage production. He asked for a lower classification on wheat.

Crops Indicate Future Prices.

U. S. crops of 1920 as figured by the U. S. Bureau of Crop Estimates, Sept. 1, 1920, are tabulated below in bushels:

Crop	Sept. 1, 1920	Dec. 31, 1919
Potatoes	413,000,000	358,000,000
Wheat	770,000,000	941,000,000
Corn	3,131,000,000	2,917,000,000
Oats	1,442,000,000	1,248,000,000
Barley	195,000,000	166,000,000
Sweet Potatoes	102,000,000	104,000,000
Average, 1914-'19.		
Potatoes		382,000,000
Wheat		822,000,000
Corn		2,760,000,000
Oats		1,415,000,000
Barley		215,000,000
Sweet Potatoes		75,000,000

Growers of these crops will study the figures to get a line on reasonable expectations for market prices.

Stanislaus Crop Acreages.

Stanislaus County field crops as figured by the County Board of Trade for 1919 include 30,000 acres of wheat, 120,000 barley, 20,000 oats, 57,403 alfalfa, 23,816 beans, 4,381 cantaloupes, 1,517 casabas, 2,513 corn for silage, 19,472 for grain sorghums, 5,566 hay, 2,607 sweet potatoes, 2,322 rice, 771 tomatoes, 2,403 watermelons, 135 spinach. Total acreage in field crops and fruits in 1919 was 311,292, as against 222,172 in 1918. Value of 1919 field, fruit, dairy, and poultry sales $36,264,990, which is some increase from $23,364,348 in 1918.

Community Organization Formed.

Men and women of the Waterford district in Stanislaus County met night after night to prepare their community agricultural exhibit for the State Fair. This resulted, according to Horticultural Inspector E. F. Perry, in their organizing the Waterford Community Association about August 20. Many more such organizations would make community life happier. These people prepared sheaves of seven varieties of wheat, two of rye, and three of barley among their other exhibits.

New Potato Varieties.

Scottish Chief is a rather new but promising variety of potato developed by A. J. Young of Orange County from British Queens. The Scottish Chief has practically no eyes, is a fine baker, and as grown this summer by W. P. Whitsett in San Fernando Valley, they yielded twelve or thirteen tons per acre. One hill pulled in the writer's presence yielded fourteen medium-sized beauties. White Rose from locally selected seed produced 244 sacks per acre last spring for Mr. Whitsett. Early Harvest King is another variety developed by Mr. Young. It produced over 200 sacks per acre for Mr. Whitsett, proving to be uniform, extra large size, rather deep eyes, and good bakers.

Beet Yields and Sugar Decreased.

Sugar beets in the Huntington Beach district are very poor both in stand and sugar test. Nematode, aphis, and rot are the main troubles. This is reclaimed land well tilled with good drainage. Beets are raised with little irrigation, as the soil holds moisture well. It has had good stands with high test as a rule until the past two years.—P. M. J., Los Angeles County.

AVOCADO DAY AT PASADENA.

The semi-annual meeting of the California Avocado Association will be held at Pasadena, October 9. Heretofore the meetings have lasted for more than one day. A feature of the meeting will be an avocado luncheon, a complete meal with avocados served in every course. There will also be a display of the many varieties now grown in California. Well known avocado growers will speak on such important features as "Increase in Membership," "Simplify and encourage keeping individual tree records," "Consider steps towards establishing marketing center," "Urge revision of University's Correspondence Course in Avocado Culture," "Continue co-operation in experiments by Citrus By-Products Laboratory," etc. The association is particularly interested in having all avocado growers attend the meeting.

CALIFORNIA HIGHWAY ACCOMPLISHMENTS.

One thousand, two hundred and fifty-five miles of concrete State highways have been completed in California previous to August 20, 1920, according to Assistant Highway Engineer W. B. Hunter. In addition to this, 455 miles of graded roads are completed, 202 miles have been paved with oil macadam, sixteen miles with asphalt surface on macadam, 57 miles asphalt on concrete, and 16 miles of asphaltic ("bituminous") concrete, totaling 1991 miles of highways completed. Six miles of asphalt on concrete, 228 miles of concrete base, and 269 miles of graded roads are under construction; but work has been suspended on some of this until the November election, which is hoped to make the new highway bonds merchantable. About two per cent of the completed highways were built by counties and turned over to the State for maintenance. Probably the counties have built more pavement than the State has constructed, but the counties have learned the lower first cost and practical absence of maintenance on asphaltic concrete while the State still clings to cement concrete.

The California Associated Raisin Co. has installed a raisin seeding plant at Livingston.

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Styleplus are known all over the United States as excellent clothes at medium prices. Thousands of men wear them season after season. They have full confidence in the Styleplus Label. So you take no chances when you buy the famous Styleplus suits and overcoats and save on their medium prices. In addition, you get the full protection of our guarantee which insures good wear.

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NATIONAL TRACTOR AND IMPLEMENT SHOW.

An unequaled opportunity to see the latest improvements in tractors and farm implements is presented during the week of September 20 to 26, at Verdugo Woodlands near Glendale, where the First National Tractor and Implement Show of the West will be staged under the auspices of the four big associations of the Pacific Coast. It includes exhibits from most of the eatsern and western manufacturers. Visitors will be there from many nations; and they will see the latest ideas designed to overcome whatever weaknesses or difficulties may have troubled tractor users in the past. Buyers of farm tractors, tractor accessories, implements, motor trucks, trailers, lighting plants, etc., will here have opportunity to make their selections under ideal conditions.

LAND LEVELERS ENGAGE MUCH ATTENTION.

(Written for Pacific Rural Press.)

Unconsciously perhaps, but all the more sincerely did the machinery exhibits at the State Fair reflect the increasing sentiment in favor of bringing more land under irrigation. This does not refer to pump and pipe exhibits which were notable for their scarcity, but it refers to the almost universal featuring of tractor-drawn land levelers. The pioneers in this line of course are the Schmeiser Mfg. Co. and the Holt Mfg. Co. Both were there with their full lines, requiring 75-horsepower tractors to work the largest, which cuts 11½ feet wide, and about 20-horsepower engines for the smallest. The big Holt levelers are regulated for depth of cut or height of lift by a loose belt from the axle, a belt pulley-tightener being the regulating device. The Schmeisers work by air compressed by the tractor on large sizes and by hand wheels on the midget sizes four, six, and eight feet wide. Their newest "Babies" arrived very recently. They are of five, six, and seven-foot widths, designed to be operated by the drivers of medium-sized tractors as one-man outfits. They have the same type of bucket as the Giant sizes. Wheels on all models follow the scraper, so they run on leveled ground.

The theme of the entire land leveler exhibit seemed to be "one-man outfits" to be operated by the tractor drivers. Perhaps the most startling development in this line is the Throop twelve-foot power-lift scraper. D. R. Throop was with the Schmeiser Mfg. Co. for many years; but has begun building scrapers of his own design and a full line of sizes. The twelve-foot one-man machine is lifted by a 1½-horsepower gas engine mounted on its platform and belt-connected to a sliding gear immersed in oil. To push the blade into hard ground and hold it there with no let-up, just push on a hand lever beside the tractor driver to engage the clutch. To raise the blade to any point desired just pull the lever, pushing it back to neutral center at any desired height. This model has a control on its platform so it may be operated as a two-man outfit. Wm. McMillan of Madera County, who has used one two months, believes that the tractor driver has enough to do. Mr. Throop exhibited two machines of smaller models, one to be operated by the tractor driver and the other separately. The latter was bought by a rancher during the fair, though Mr. Throop says the one-man machine will move more dirt at about half the labor cost. It is worked by a hand-wheel located close to the tractor seat.

A leveler of entirely new principle—we wonder that it was not in common use years ago, is one designed by R. E. McCauley of the J. M. Conley Co. Cut away two-thirds of the circumference of a cylindrical tank like that used with domestic water heaters, leaving the circular ends entire and fast to the remaining third. An axle is to project outward from the center of each end, fitting into a frame to which your tractor will be attached. When you start your tractor, the one-third of a tank will rotate on its ends. To prevent this, put a dog near the edge on the outside of each end. Fix on the frame a "locker bar" which engages the dog and is held there by a coil spring. A steel shoe projects from the lower edge of the rotating device perhaps. When held from rotating and pulled forward, this device scrapes up a lot of dirt. It is dumped by pulling a rope attached to the spring locker bar. Forward movement makes the scraper rotate and dump the dirt, the pin catching the dog again after a complete revolution. To dump more slowly, put another dog a few inches around the edge from the first one. The locker bar will catch it and stop rotation while dirt is dumped slowly as the scraper is pulled forward. If you want to dump quickly, hold the rope taut until the second dog has passed the bar, then release it so the spring will set the bar to catch the first one. These directions are given merely to convey an idea of the general appearance and working methods.

Barney Sandstrom was there with his one-man leveler attached to a tractor, the Woodward Co. had some unnamed six-foot tractor levelers, and J. M. Stone announced that he had recently arranged for quantity production of the Cambers balancing scraper described in our reports of the 1919 State Fair. This is for horses, but a tractor scraper similarly designed and intended to be worked by the driver with a system of levers to do the balancing act was on the way but did not arrive at the fair on time. Several minor scrapers and ditching implements were included in various displays.

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Now is the time to plant it. Buy only seed that has a quality test tag on every sack. It protects you against seed of low germination.
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Light Weight Farm Motors

Weigh only 40 to 60 pounds per horsepower, about one-third as much as ordinary farm engines, yet are more powerful, more durable, more economical.

We get increased power without increased weight because of an improved design, better material, higher grade mechanics, accurate balancing and improvements in carburetion, ignition and lubrication.

4 to 20 H.P.

Because of their light weight, and also because they can be run at various speeds, Cushman Motors are known as All-Purpose Engines. They not only do all stationary jobs, even more satisfactorily than ordinary engines, but they may be attached as power drive to such machines as harvesters, hay presses, corn binders and pickers, potato diggers, etc.

Cushman Motors are equipped with an accurate Throttling Governor, Carburetor, Friction Clutch Pulley and Water Circulating Pump, without extra charge. (310)

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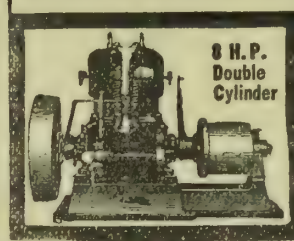

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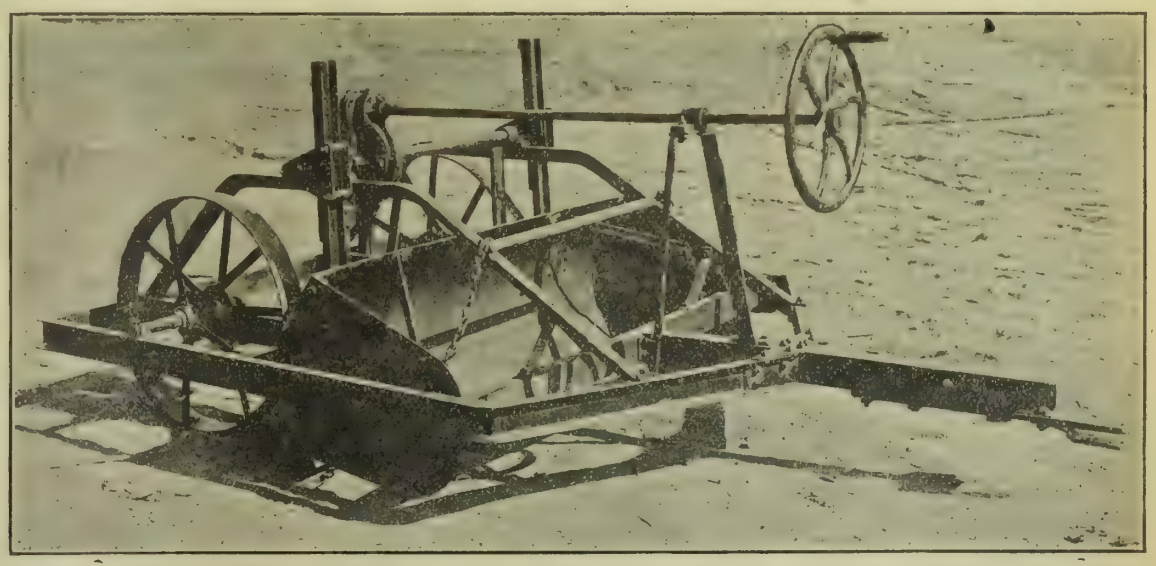

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Well Constructed

THE THROOP LEVELER is carried on substantial wheels of correct height. The frame is made of channel steel, so braced as to give the desired combination of light weight and great strength. The cutting blade is made of plow steel and has a double edge. The blade may be removed by simply taking out a few bolts. The bucket is constructed of high grade steel.

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THIS LEVELER is easy to operate. You simply shift the gear forward or reverse, as you would do with your automobile transmission. It may be operated from leveler seat or from tractor. This applies to our power-lift machines which are equipped with dust-proof gas engine. By the use of a worm control we have a mechanism in operating the hand-lift machine that is absolutely positive in every action.

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New Tractors at State Fair

Written for Pacific Rural Press by R. E. Hodges.

A new idea in driving the track, a new carbureter, a new system of hitching the drawbar, these are outstanding features in the "Henneuse 40" tractor designed and manufactured at Sacramento by C. A. Henneuse, an engineer who has been connected with several tractor manufacturers. The track is made of manganese steel cast links connected by pins of the same material, and using no bolts or rivets. Separate clutch for each track. Track links so constructed that the track will not give inward. Drive-wheel in center between two idlers of same size, has sunken sprockets cast as part of removable manganese steel band surrounding the iron wheel driven by internal gear. Advantages include ability of tracks to pivot independently on the sprocket axle; to minimize strain on that axle and the track in turning; and to apply the driving pressure to straight part of track whose pins and links are not frictioning on each other at time pressure is applied to them. The Linga carbureter has two compartments both operated by the same control. Opening gasoline needle valve automatically closes kerosene needle valve and vice versa. Drawbar with spring shock absorber being hitched to dead axle between drive sprockets on which most of weight rests, avoids shock and twist on frame of machine. Tracks removable en bloc making place for wheels for fast road work.

The two-wheel orchard model Allis-Chalmers tractor has never been shown before in California. It is built lower in all projecting features than the older two-wheel model. For use with all implements, the latter being connected integral with the tractor by means of a special frame, and the operator riding the implements or the frame.

The C. L. Best 60, introduced at the 1919 State Fair, has proved so popular that a "New Best 30" modeled on almost identical lines was announced at the recent State Fair. The first machine of this model had been working two months 24 hours per day in three shifts with operators who never drove a tractor before. The load is a sled piled up with steel castings so the dynamometer registers 4500 pounds drawbar pull. This test is to continue two months yet. The enlarged factory will deliver about fifteen 30's per day beginning in January, and will not slacken production on the 60's, of which half a dozen per day are being turned out. Tracks manganese steel with Best rocker joints. Ensign carbureter, impulse starter, force-feed lubrication. Weight 6700 pounds, height 59 inches, width 53¼ inches.

A track-type Leader tractor is the new one shown along with the better known wheel-type. Both use the same size and kind of engines, delivering 3500 pounds pull at the drawbar in high gear. The new track machine is about 4½ feet high. Track links are open so all mud pushes through and cannot clog or stretch the track. The drive sprocket is about 15 inches in diameter, being located between and higher than two larger idlers which carry the machine's weight. Early in October the Leader people expect to have a vineyard model on the coast, running on tracks with no tiller wheels. This is 54 inches wide, 96 inches long, and can pull 50 inches of plows in moderate plowing. Several carloads have been sold in advance.

Responding to demands and suggestions of Yuba tractor users the Yuba Mfg. Co. displayed for the first time a 15-25 model built closely to the same plan as their 20-35 model. The 15-25 tracks are governed by independent clutches by which all or any part of the engine's power may be thrown to one track or part may be used to reverse one side while the other goes forward in a circle. Track sprockets and gears are more closely enclosed than in old models. A major improvement is that there are no bolts to keep tightening while the tracks are new. Shoes are of manganese steel. Master oiler between and above tracks is accessible from driver's seat and cannot be shut off or changed by brush, cornstalks, etc., as in old models. Driver's seat has simple but effective safety catch in case its spring might crystallize; and an easy back adds to the driver's comfort.

The Stutes-Mar 15-30 track-type machine is being made on orders from the Orient but will soon be available for California. The one exhibited at the State Fair had been in use 18 months and the track was only brightened, being of manganese steel. Its feature is a chain of rollers about two inches in diameter, on which the weight of the machine rests rather than on ordinary truck wheels. Each track has an independent clutch. It extends the full length of the machine, about eleven feet. A new model direct from the foundry arrived late, showing the cast steel frame by which the weight rests on and travels over the rollers. Drawbar hitches to the center of this tractor directly under transmission.

To disk the ground before plowing, roll the loosened dirt, plow, harrow and cultipack it all at one operation is the province of the Gray tractor, never publicly shown in California until the recent State Fair. The rolling is done without hauling a roller, for the driver on this tractor is a drum about 60 inches wide and four feet in diameter. This makes it especially valuable for working plowed ground into a seedbed, as the whole outfit weighing 6200 pounds has its weight distributed partly on two front wheels but mostly on the drum which is the equivalent in bearing surface of three or four times the number of drive wheels on an ordinary tractor. This reduces pressure per square inch to a point desirable for rolling the soil to a firm seedbed. The tractor is rated at 18-36 horsepower. While pulling a disk on the left side, a corrugated roller on the right, and a harrow behind the plows, it is intended to pull three plows in moderate ground.

A novelty in track construction is the feature of the Union Bulldog muley-type tractor. The manganese track links are so designed that they support themselves in an arch between the driver and idler wheels, eliminating the truck wheels used in other tracks and preventing all buckling inward. Thus all of the tractor's weight is always distributed throughout the full length of the tracks, which are practically as long as the tractor. This machine is rated as 18-30 horsepower.

A two-plow, four-wheel tractor, weighing only 2900 pounds and rated at 12-25 horsepower, is the Wetmore machine, first shown in California at the fair. It has a strict minimum of parts, but has a number of the standard refinements such as impulse starter, Timken bearings, oil, pump, etc.

"Buy a Tractor Built to a Standard, Not to a Price—
Buy a Stockton"

—THE—

Stockton Sure-Grip

Will Be Shown at the

National Tractor Show

THE "STOCKTON "SURE-GRIP"—See It at the Tractor Show.

The "STOCKTON" TRACTOR is particularly adapted to Pacific Coast conditions. For orchard and vineyard work it is in a class by itself. It is powerful enough for open field work, and small enough for odd jobs. It delivers a very high percentage of the power of the motor at the draw-bar through a correct rear reduction.

The New "Sure Grip" will be sold with a positive 2-year guarantee on the tracks. Why?

It is made of manganese steel, and has no loose pins nor bushings.

The same specifications apply to the "Stockton Sure-Grip" Tractor as the "Stockton Model "A" Wheel Tractor, excepting the traction members.

The sprockets are larger than ordinarily used in crawlers on Tractors twice the size of the Stockton "Sure-Grip." The driving sprockets are placed where they do not run in the dust and mud, which insures much less wear than occurs where drive sprockets run on bottom of track. All bearings in crawlers are Hyatt Roller.

Buy a Tractor, Not a Price! Buy a "Stockton"

A. B. Johnson Co., Distributors

Sacramento, California

FARWEST SALES CO., Los Angeles, Southern California Distributors

Dairy Stock at the Fair Best Ever

(Written for Pacific Rural Press by Ralph Newman.)

Both in quantity and quality the dairy stock display was the best ever made in the State. This is not an individual opinion but the concensus of opinion—and all this in spite of the fact that several of the well-known breeders did not exhibit.

"Comparisons are odorous," as the colored preacher said, and we are not going to attempt any so far as breeds and breeders are concerned, leaving the premium lists to tell their own story. And it is a pretty fair story they tell. The judges, John L. Smith of Spokane, Washington, for Holsteins and Milking Shorthorns, and Professor W. E. Tomson of the University Farm for Jerseys and Guernseys, worked carefully, consistently, intelligently and hard, and when they placed a ribbon it was placed where it belonged as far as such a thing is humanly possible. Professor Tomson had judged the calf club Holsteins, Saturday, before the arrival of Mr. Smith. I was interested in following such of these calves as appeared in the later classes and noted that Smith confirmed Tomson's judgment, giving the junior championship to the calf Tomson had awarded the blue ribbon in her class.

There has been a change from the good old days as to condition and fitting. Every animal on the lists was groomed to a nicety, and while a few breeders still need to learn that a good bloom—call it "beef" if you will—is a modern essential, the animals as a whole were in the pink of condition.

"Black and Whites."

Two notable features among the "blacks and whites" were the new breeders who landed in the money, and the large, splendid class of calves owned and exhibited by calf club boys and girls. And you will note that in the big show several of these calves were there with "bells on." The owner of the junior champion paid $500 for his calf. When she took first at Patterson he was offered $700. When she repeated in the calf club contest Saturday this bid was raised to $1000. When she took first in an open class Monday the offer went to $1500, and when she calmly walked out with a championship a breeder raised the bid to $2500. The boy still owns the calf. He says he wants to get a start in purebreds and these offers do not interest him a bit. For the future of the dairy industry this calf club display was the most hopeful feature of the fair, as I heard many people remark. Without indulging in comparisons, the statement may be made for their benefit, that the other breed organizations may well follow the lead of the Holstein men in this calf club movement.

Guernseys.

Everybody will admit that the Guernsey men did themselves proud. Without a doubt they had on exhibition the most uniformly high-class lot of Guernseys ever assembled in the State. In the South at least, where practically all the milk finds a ready market as certified or guaranteed, the Guernsey is growing in popularity.

Jerseys.

The sensation of the Jersey show will be found in the story told by the premium awards. It goes to show that quantity is not essential to quality and that intelligent care can go far with a few cows.

Ayrshires.

Only one exhibit of Ayrshires was there but this was a full herd of mighty fine animals, and their exhibitor may well be proud of them for all no other breeder was there to give him a run for the money.

Bouquets Deserved but Missing.

The fair directors in charge of the stock well deserve a bouquet. Hampered as they were for space and equipment, they did more than seemed possible to accommodate and serve everybody impartially and keep all the wheels turning. When we get the extension and the new equipment! By the way, do the new plans provide for a stockman's club house? At the Patterson fair the writer shared a friend's quarters in the hog exhibit one night, since when he has been strong for stockmen's club houses at fairs. Hogs are fine animals but, by hokey, they are not the best possible bed-fellows. They snore too much. Caring for stock at a fair is mighty hard work and the men who do it deserve better quarters than they are getting.

Something Else Missing.

A write-up of the dairy machinery exhibit would read like the boy's essay on snakes in Ireland. There was no exhibit! No, Mabel, they have not stopped making dairy machinery, and it is presumed that dealers still have it to sell and rather enjoy selling it. The trouble is this: Ever since there was a fence, the dairy machinery men have been lined up along it near the Holstein barns. This year the plan was changed and they were asked to go with the other machinery men to the "Power on the Farm" lot—which is a splendid arrangement—and pay for space as other exhibitors did. And the dairy machinery men said if they couldn't have the old fence they wouldn't play. They didn't play and hundreds who were anxious to compare milking machines and other dairy equipment went away disappointed and in none too good a frame of mind toward the dealers who had failed them.

Co-operation is the watchword of the fair. Co-operation means give and take with a smile, and it is to be hoped that the dairy machinery men will get back to normal before another fall and be ready to co-operate in making the next fair even greater than this one has been.

STATE FAIR STOCK NOTES.

The Berkshires were first in the ring and Monday night saw the exhibit from Grapewild Farm, Escalon, owned by A. B. Humphrey and shown under the management of Charles Maurer, with both grand championships to their credit. Escalon Big Joe was the winning boar and Grapewild Rose 6th, the daughter of the grand champion female of last year, was the topnotch female this year. Enhancer, owned by Castleview Ranch, was reserve grand champion boar.

The Poland-Chinas were out in greater numbers than ever and swine growers from north to south were present to try for the supreme honors. Johnnie Glusing's senior yearling boar carried off the purple in the boar class, and Alex D. McCarty won the grand championship on the sow side with Liberty Girl 3rd. Last year Mr. McCarty won the same honors with Big Mary 3d.

First honors in the boar classes of the Duroc Jerseys were won by the V. F. Dolcini's Choice Wonder 3d, a junior yearling boar in very strong competition. The grand champion sow was Queen of Pathfinders, that great sow owned by the Diamond Bar Ranch. This sow is a wonder in that for all of her great size she has the quality, bone and conformation that places her close to perfection.

Tamworths were out in larger numbers than ever before shown on the Pacific Coast. Three herds from the East with Dr. J. J. Summerfield's herd of Santa Rosa made a great showing of the English bacon hog. Both grand championships went to the eastern hogs, although the Santa Rosa contingent captured junior and reserve grand champion.

Chester Whites were well represented and grand championships were won by Harry Huffman of Chico. E. E. Fulton of Fair Oaks carried off most of the honors in the young classes.

Hampshires and Yorkshires were represented by one herd each.

Registered sheep in all classes are becoming more popular every year in California. In all classes the exhibit was the best ever seen at the State Fair. Bullard Bros. made their usual great exhibit of Rambouillets, winning practically everything.

Shropshires, Hampshires, Corriedales and other mutton breeds were well represented, as can be seen by looking over the detail awards.

The Goats Have Butted In

(Written for Pacific Rural Press by Ralph Newman.)

M. D. Woodruff, Alice Brown, H. J. Bierwiler and the University Farm staged a dairy show at the State Fair that made many a confirmed old cowman take notice and that attracted as much attention as any livestock display on the grounds. Lined up along the fence where the dairy machinery used to hold forth were pens containing 38 choice pure-bred Toggenburg and Anglo-Nubian Milk Goats. And said goats were in evidence all the time, kept there by their own activities and the wide-awake boosting of their breeders.

These goats, the ones in milk, produced some seven gallons of milk a day which was given to interested visitors who pronounced it good; some of them showed what a goat can do by giving six quarts of milk a day; they demonstrated that eight of them, fed to the limit, will eat no more than one of the Holsteins across the way; they made a fine showing in the "two million dollar livestock parade," and they staged an innovation by being judged by a woman, the first time a woman has ever appeared on the list of State Fair livestock judges—at least, it was so reported.

The judge was Mrs. W. Winthrop Howlands of Riverside, herself a breeder and the first in the country to import pure-bred milk goats. She states that Southern California will come to the fair with 200 of the finest goats in the world next year if suitable quarters can be provided.

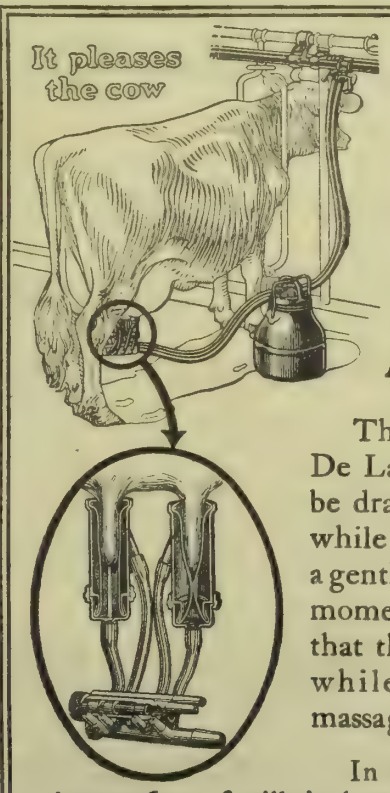
By the way, do you know that California now has more milk goats than all the other States combined? The breeders say that is a fact.

For all one of the blue bloods calmly ate a breeder's sign while said breeder's back was turned as he talked to me, these are not the tin can kind of goats. They were getting a ration of alfalfa hay for roughage with a concentrate composed of 2 parts beet pulp, 1 part rolled barley and 1 part bran. Oh, they are dairy stock all right and respond to a real dairy ration just as a good cow does.

While other dairy breeders are worrying about tuberculosis, the goatmen go serenely on their way; for, so far, T. B. is not among the goat's shortcomings. This fact, together with the easy digestibility of the milk, causes the product to be in demand for baby feeding and for invalids, a demand, the breeders say, that is growing rapidly—much more rapidly than the supply.

Belgian stock carrots and good oat hay will carry horses along nicely when not on full work, but Manager Troup at the Rancho San Julian, Santa Barbara, found that fed in sufficient quantity horses would do very well on them when on full work. This was fully tried out the past season when the price of barley went "in high."

Milk cooled in running water had only one-tenth the number of bacteria found in the uncooled milk is the summary of results of an investigation carried out in Oregon by the U. S. Department of Agriculture.



The DE LAVAL MILKER

Alternating Action

The alternating action of the De Laval Milker causes milk to be drawn from the two front teats, while the two rear teats are given a gentle massage and rest. The next moment the action is reversed, so that the two rear teats are milked while the two front ones are massaged.

In this manner an even and continuous flow of milk is drawn from the udder, harmonizing with the milk secretion process which is also continuous.

The De Laval Milker is positive and uniform in action from day to day; and faster, more economical and more reliable than any other method of milking. An additional insurance of lasting satisfaction to users of De Laval Milkers lies in the De Laval Company's well-known facilities and reputation for service.

Write to nearest De Laval office for Milker Catalogue, mentioning number of cows milked

DE LAVAL DAIRY SUPPLY CO.

61 BEALE STREET SAN FRANCISCO, CAL.

Dr. Christman, veterinarian at Yuba City, announces that Sutter County's theatened anthrax epidemic has been avoided by vaccination. As soon as it was discovered all animals in the threatened district were vaccinated.

McCarty-Shinn-Elliott
SALE OF
Big-Type
POLAND-CHINAS
Tulare Monday September 27th

ALEX. D. McCARTY will sell:—

NEBRASKA GIRL, one of the best sows ever sold in the West; first prize futurity junior yearling sow, PERFECT BEAUTY; also two beautiful gilts out of Liberty Girl 2, Grand Champion sow at State Fair, 1920.

HUGH C. SHINN will sell:—

Two gilts of the great litter by THE CALIFORNIAN and out of Bridge's Bobbie that won 1st and 2d in class, 1st young herd, 1st Get of Sire and 1st Produce of Dam; 2 boar pigs and 2 gilts by THE PILOT, world's champion boar.

A. J. ELLIOTT will sell:

Two fall gilts by HERCULES, the largest fall gilts ever shown at Sacramento; 9 great gilts by THE CALIFORNIAN that are corkers; a herd boar prospect out of the first prize futurity litter sired by BIG GERSTDALE JONES.

All stock cholera immune.

All pedigrees delivered on day of sale.

For Catalogues Write H. C. Shinn, Tulare

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Raise Poland Chinas
And You Won't Worry About the Barley Market

Our Polands are the kind that are profitable on the farm. They are easy feeding, quick maturing and prolific.

We have a fine lot of spring pigs, sired by our Great Boar, LAKESIDE DEFENDER, coming on in fine shape, and offer them at very reasonable prices. Also some outstanding past yearling gilts by Matchless Big Bob.

LAKESIDE STOCK FARM

GEO. V. BECKMAN & SONS LODI, CALIF.

York's Registered Berkshires
AT AUCTION AT THE RANCH
MODESTO CALIFORNIA
Tuesday September 28, 1920
35 HEAD 35 HEAD
SOWS WITH LITTERS BRED GILTS SERVICE BOARS
Sows by RING LEADER 20TH, 239,090, STAR LEADER, LORD PREMIER SUCCESSOR and ESCALON SUPERB.
Many sows bred to ESCALON ROYAL LEADER, a son of BIG LEADER. Several growthy SERVICE BOARS by RING LEADER 20TH in this offering. There will be bargains in this BERKSHIRE SALE. DON'T MISS THEM.
SEVEN SOWS with their LITTERS—THINK OF IT.
CLARK, HUNTER and CLARK, Auctioneers, Modesto, Cal. GEO. M. YORK, Owner

TAMWORTH--The Bacon Hog
PIGS OF BOTH SEXES FOR SALE
FROM MASSIVE
PRIZE WINNING PARENTS
J. J. SUMMERFIELD, SANTA ROSA, CALIFORNIA

Livestock Assn. Meetings at State Fair

The Holstein Breeders.

The newly elected president of the California Holstein Breeders' Ass'n is Frank L. Morris of Woodland, a member of the firm of A. W. Morris & Sons Corp. Other officers elected were R. L. Holmes, Modesto, first vice-president; E. Swift Train, second vice-president, San Francisco; C. L. Hughes, Sacramento, secretary. Directors, J. E. Peck, Calexico; Earl Sturgis, Santa Anita; R. H. Condee, Chino; H. V. Bridgford, Patterson; A. R. Magruder, Ripon; W. J. Higdon, Tulare; Gion W. Gibson, Williams; J. M. Henderson, Sacramento; F. W. Kiesel, Sacramento; Owen Duffy, Napa, and De Lancy Lewis, San Jose.

President Morris was empowered to appoint a committee to confer with other cattle associations relative to having efficient bovine tuberculosis laws placed upon the statute books.

Berkshire Breeders' Banquet.

Thirty or more members of the Western Berkshire Congress met pursuant to annual custom on the evening following the judging of their swine around the festive board in the banquet hall of the Travelers' Hotel. In the talks following the feast note was made of progress during the past year and optimistic prophecies for the future. The resignation of Field Secretary Bennett was announced and accepted with regret. W. F. Sandercock acted as toastmaster in a very impartial manner, as he called upon every one present for an expression of their sentiments.

Poland-China Men Meet.

Association annual dues raised from $1 to $15 is one of the important moves made at the yearly meeting of the Poland-China Breeders' Association. The increased amount thus raised is to be used in breed promotion work. More than money enough was subscribed at this meeting to pay for the new headquarters building erected this year on the fair grounds. Officers elected were: Geo. V. Beckman, Lodi, president; J. F. McSwain, Merced, vice-president; H. K. Dickson, Bakersfield, secretary-treasurer; J. F. Lehman, Lodi, A. Buckland, Fresno, H. L. Graham, San Fernando, and R. J. Yates, Orland, directors.

Pacific Coast Hereford Breeders Have Feast.

Thirty-five "Whiteface" breeders assembled in the banquet room of the Travelers Hotel the night after the Hereford judging to help the winners celebrate and plan future benefits for the breed. Resolutions were passed commending Secretary Paine for his management of this great fair; also that a night letter be sent Prof. Gordon H. True expressing regret at his absence, the first since he became identified with the livestock interests of California. The Federal Accredited Herd plan for the eradication of tuberculosis was discussed and action favorable to its adoption by the State was taken. Discussion of a get-together barbecue for summer meeting was started by Mr. Barngrover and met with favor. Better accommodations for herdsmen while at the State Fair found ready endorsement. Finally the subject of a livestock show for San Francisco next year was mentioned and gone into thoroughly. All were in favor of a show and showed they were in earnest by signifying a willingness to subscribe $1,000 toward paying a manager an annual salary if other breed associations in California would raise an amount to complete the financial requirements for a year. The plan is to put a man in the field immediately or as soon as proper arrangements can be made.

Duroc-Jersey Swine Men Meet.

Some sixty Duroc breeders with their friends assembled at the Sacramento Hotel on Tuesday evening of State Fair week. After satisfying the inner man business matters occupied the attention of members for some time. The financial report of Secretary Walker was read, discussed and adopted. New by-laws were also in line for discussion and were then adopted. These new rules make possible the division of the State into zones with 3 directors in each. This allows the management to be in close touch with conditions at all times.

California Jersey Breeders' Annual Meeting.

Election of officers resulted in the following: Judge Peter J. Shields, president; J. E. Wherrel, Riverside, vice-president; Prof. V. C. Bryant, Berkeley, secretary; N. H. Locke, Lockeford, treasurer; E. E. Greenough, Merced, and S. F. Williams, Chico, directors. Committees were named to work for the eradication of tuberculosis through the Federal Accredited Herd plan, improvement of State buildings, and to endeavor to secure the adoption of the Jersey as the official breed of dairy cattle at the Delhi State Land Colony.

The National Dairy Show Special

A large party is now being formed to attend the National Dairy Show in Chicago, October 8th to 16th. About forty people from the southern part of the State have already indicated their intention of going. The party will be headed by Professor H. E. Van Norman, and the details of the trip are in the hands of Sam H. Greene, of California Dairy Council.

One of the principal attractions will be the Exhibit by the Federal Government, the Dairy Division of the U. S. Dept. of Agriculture. The idea is to show what is being done by experimental work in factory practices and new products.

A miniature of Grove City, Pa., will be shown, which is the center of a big development work in both production and manufacturing lines. The advantages of co-operation in creamery centers, of purebred, high production community breeding and what the support of the financial interests means. The work at this place is attracting the attention of wide-awake dairymen all over the world. Better arrange to see it.

Last year California took nearly all the prizes, both in cattle and dairy products, in the classes in which entries were made. There should be more entries this year, and it is confidently expected that California exhibitors will repeat the triumph of a year ago.

The opportunities to see what is the "last word" in dairy production and manufacture are unlimited at a show of this kind, a whole college course in dairy cattle demonstration and factory work in one week. A trip of this kind cannot help but be profitable.

Reservations are now being made in the National Dairy Show Special which will leave San Francisco on the Overland Limited, Tuesday, October 5. Reservations can be made through all local railroad agents. Ask to have your berth reserved in the "National Dairy Show Special Car."

More food can be stored in a given space in a silo than in any other building, making it a cheap storage. The silo also makes possible growing the crop until it has produced the greatest amount of food per acre, and keeping this food in the best form for the animals till it is needed. Silage is like having pasture for the livestock the year around.—N. Dak. Ag. College.

Sunflower silage showed results equal to that of darso (an Oklahoma sorghum) silage as a part ration for beef calves. The experiment extended over 150 days and would indicate that sunflowers would receive considerable attention as a silage crop in Oklahoma in the future.

AN EVENT NOT TO BE OVERLOOKED.

Right between two of the best fairs in the upper San Joaquin valley comes a sale of Big Type Poland-China hogs, with an unexcelled offering from the viewpoint of up-to-date breeders of this popular hog. We are referring to the McCarty-Shinn-Elliott Poland-China sale of September 27th. The offering is of such quality that we urge upon our readers who have in contemplation perhaps the purchase of new stock in the East to attend this sale, for it is almost a certainty that by so doing they can supply their needs, less the express.

Mr. McCarty at the State Fair this year and last showed the grand champion Poland-China sow, besides making other noteworthy winnings.

Hugh C. Shinn will offer some of the young stock with which he made conspicuous winnings in Sacramento last week. Mr. Shinn won more on stock of his own breeding this year at the State Fair than all other breeders put together.

Anothr breeder in this combination sale is A. J. Elliott of Tulare, who will offer some of the largest October gilts ever shown at the State Fair.

L. A. Weaver, Profesosr of Animal Husbandry in the University of Missouri, who judged the Poland-Chinas at Sacramento this year, says: "I have found the Poland-Chinas exhibited here compare very favorably with those shown at any exhibit I have attended, especially in the sow classes. I considered the quality of these equal to any in the country." Why go East?

LEWIS COMPANY LINING UP THE GOOD ONES.

Retests are becoming a regular thing at the Lewis Company's Hollister Ranch, where a number of very fine records are being made. The three-year-old Dominita Korndyke De Kol, with her test still in progress, has made 31.20 in 7 days; while Sarala Segis Pontiac, at four years and six days, has completed a record of 35.09 lbs. Probably no more normal record has ever been made than on this heifer, she having produced consistently nearly 100 lbs. of milk per day, testing slightly over 4 per cent. No special preparation was made for this test, which was made under most ordinary conditions. Other records lately completed are: Mutual Cherry De Kol 26.90 and Portious Creamelle, 26.06.

The Lewis Company has sold a number of very fine registered Holstein cows and heifers, bred to their herd sire, Ormsby Segis Marie Lad, to Charles Lucas, for shipment to Honolulu; also heifers to L. S. and Ramona Piersen.

FRESNO FAIR FLINGS OPEN GATES.

After weeks and months of preparation the beautiful Raisin City will open their fair on the morning of September 27th for a full week of sight-seeing and jollification. They have a reputation for drawing immense crowds, and those who wish to get their livestock before the public will make no mistake by entering their animals at this fair. Again, those who could not attend the State Fair will find it to their advantage to nose toward "Fresno, the Fair." Instruction and amusement, so completely and happily blended that those in attendance will absorb the first while enjoying the latter. The best place to take the childrn, the most profitable for the middle-aged and better than interstitial surgery for the old.

BUY A BETTER BULL.

Who is there so moss-grown that they do not wish to improve their condition, especially the earning capacity of their business. Suppose you have 20 cows, 20 machines for turning hay, grain and grass into that greatest of all health-giving tissue and bone-building material, milk. You want them to manufacture to the utmost to produce two quarts two years from now where they produce one now. They are doing well now, but you want them to do better. An opportunity is right at your door, those who live in the counties north of San Francisco Bay. A sale of registered dairy bulls will be staged at Petaluma on September 23d under the management of the Dairy Dep't of the Sonoma County Farm Bureau. Your favorite breed will be there, as the offering has been selected from the popular dairy breeds. Not only have they been selected for individual appearance but they have been chosen with regard to the performance of their dams. Every animal that will be offered has a dam with a production of not less than 400 pounds of butterfat annually.

At The STATE FAIR

A calf owned by the Six Brothers Dairy, Turlock, Cal., raised on AN-FO Calf Meal, took all First Prizes in every class entered. This against calves fed entirely on whole milk, and other foods. AN-FO Calf Meal contains more fat, is easier to digest, does not scour, costs only one-quarter to feed. At your feed dealers, or Animal Food Co., Oakland

AN-FO BRAND CALF MEAL

San Ramon Shropshires At 1920 State Fair

Were awarded every first prize except one. All second prizes. All awards for pens and flocks, Champion ewe, and Gold Medal.

FOR SALE—Ewes and rams of same breeding at reasonable prices. Also some purebred unregistered ewes and rams.

BISHOP BROS. Props.

SAN RAMON, Contra Costa Co., Calif.

The Final Test

Sooner or later you will buy a BRAENDER TIRE. You will test its merits by actual performance. If it makes good with you, you will probably buy more, and that is the final test of our tires.

Every tire that leaves the Braender Factory must give the sturdy, self-reliant service that the Bull-Dog symbol implies, for at any moment it may be called upon to undergo this final test. BRAENDER TIRES are making new friends daily because of the Bull-Dog fidelity which safeguards the quality of all of our product.

The conscientious attention to details is the biggest thing you buy when you buy a BRAENDER TIRE. It is real tire insurance.

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Ask your dealer for them. If he cannot supply you, write to

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LOS ANGELES
OCT. 2-10 INC.

The Greatest Combination of Educational Live Stock Features and Program of Amusement Events Ever Held in Los Angeles in one single Show.

Blooded Stock — BEEF CATTLE, DAIRY CATTLE, SWINE, SHEEP, GOATS .:. :. : POULTRY, PIGEONS, RABBITS.

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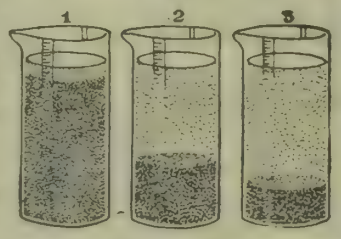

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SALE OF HOLSTEINS

Dispersal of the E. Peterposten Herd at
HUGHSON, CALIF., OCTOBER 20, 1920

40 Head of extra choice Holsteins.

20 cows in milk, balance heifers and young bulls

This sale will be held under the management of the Stanislaus County Holstein Breeders' Association.

Watch later issues for particulars and write for catalog.

E. M. MORROW, Secretary, Modesto, Cal.

The Greatest and Best Livestock Show

Written for Pacific Rural Press by Thomas F. McConnell.

It is the usual thing to say that any livestock show or fair is going to be or was the greatest ever, but usually allowance is made in the minds of the readers not for poetic license, but for enthusiasm, due to exhilaration of the moment. In this case, however, after careful consideration of all classes, we are compelled to write the above title as a true one for the exhibit of farm animals at the California State Fair for 1920. Those who have been in close touch with exhibitions of this kind in the past were unanimous in saying that never before within the borders of the Golden State had such an aggregration of purebred cattle, swine and sheep been brought together. The draft horses perhaps have been shown in larger numbers but the quality was surely up to standard.

Much of our space this week will be devoted to the detail of the awards, and no doubt errors will be found, but every effort has been made to eliminate mistakes by comparison of personal data with official lists of awards.

The Shorthorn exhibit was excellent and young stock of California breeding predominated in many classes. T. S. Glide won both grand championships in this popular bred.

The show of Herefords excelled that made at any previous fair both in numbers and quality notwithstanding the absence of several well-known herds of the State from the show-ring. Jno. H. Cazier & Sons Company of Wells, Nevada, won grand championship on their two-year-old bull, Beau Blanchard 76th. The grand championship female was placed on the wonderfully thick-meated 2-year-old cow, Bocaldo Beauty, exhibited by Romie C. Jacks, owner of the Imperial Herd of Herefords of San Francisco and Chualar.

Jas. Marwick, owner of Braemar Ranch, Santa Barbara, was the lone exhibitor of Aberdeen-Angus.

The Milking Shorthorns were represented by five exhibitors. Truly a great showing for the foremost dual-purpose breed, which is surely coming into its own in California. Innisfail Herd, shown by J. D. Rowe & Sons of Davis, carried off the grand champion honors in both bulls and cows, although hardly pressed for such honors by the Santa Rosa Stock Farm herd. Like many other breeds this year competition was keen and decisions close.

What the dairy cattle and milk goat exhibit was like is taken care of in a very efficient manner in another column.

Market hogs have, like many other things, suffered a decline in prices during the past season, and some admirers of purebred swine were afraid it would affect the exhibit in this line adversely, but not so. To be sure some breeders that have had herds on exhibition in the past were not present, but others were there to take their places, and when all were set and ready for competition, the largest and best showing of swine ever seen at Sacramento were ready for the fray.

The judges of the different breeds were Dr. C. W. McCampbell of Manhattan, Kansas, on beef and fat cattle and draft horses; Prof. L. A. Weaver of Columbia, Mo., on Poland-China and Duroc-Jersey swine, with Wilson Rowe of Davenport, Iowa, caring for the Berkshires, Tamworths and fat hogs. Prof. J. F. Wilson of the University Farm, Davis, tied the ribbons on the sheep.

The detail of all awards not published last week are given in this issue.

SHIRE HORSES.

Exhibitors.—Easton & Ward Blackhawk Ranch Diablo. Merritt-Bowers Co., Tulare.

Stallion, four years old or over.—(1) General Sherman. Merritt-Bowers Co. (2) Severn Donald. Merritt-Bowers Co.

Stallion, two years and under three.—(1) Blackhawk Clansman. Easton & Ward.

Mare, four years old or over.—(1) Blackhawk Chessie. Easton & Ward. (2) Mellington Princess. Easton & Ward. (3) Hawton Bounce. Easton & Ward.

Mare, two years and under three.—(1) Blackhawk Choice. Easton & Ward.

Group, Stallion and three Mares.—1, Easton & Ward.

Group, three mares, any age.—1, Easton & Ward.

Shire, Champion Stallion.—General Sherman. Merritt-Bowers Co.

Champion Mare. — Blackhawk Chessie. Easton & Ward.

Above awards duplicated in State classes.

CLYDESDALE HORSES.

Exhibitors.—O. H. Brandt, Shellville. O. H. Brandt, as the only exhibitor of this breed, received all awards and prizes in both open and state classes.

BELGIAN HORSES.

Exhibitors.—Merritt-Bowers Co., Tulare. The Merritt-Bowers Co., as the only exhibitor of this breed, received all awards and and prizes.

DRAFT HORSES.

Percherons.

Exhibitors. — M. Bassett, Hanford; J. A. Franklin, Durham; L. A. Hall, Mountain View; Thos. Harrison, Santa Rosa; Jas. Marwick, Santa Barbara; Palo Alto Percheron Farm, Stanford University. N. W. Thompson, Patterson; Merritt-Bowers Co., Tulare.

Stallion, four years old or over.—(1) Ithos, Bassett. (2) Sensation. Thompson.

Stallion, three years and under four.—(1) Pedro. Thompson. (2) Kingston. Bassett. (3) Halo II. Thompson.

Stallion, two years annd under three.—(1) Herold. Thompson. (2) Don. Thompson. (3) Gano (Noodles). Thompson.

Stallion, one year old and under two.—(1) Oak Grove Chief. Thompson. (2) Fairhake. Thompson.

Mare, 4 years or over, with foal.—(1) Cassie and Foal. Palo Alto Percheron Farm.

Mare, 3 years old and under four.—(1) Chlinda. Palo Alto Percheron Farm.

Mare, two years and under three.—(1) Palo Alto Eastern Girl. Palo Alto Percheron Farm.

Mare, one year and under two.—(1) Palo Alto Marigold. Palo Alto Percheron Farm. (2) Lune. James Marwick.

Stallion or Filly Foal, under one year.—(1) Palo Alto Mignonette. Palo Alto Percheron Farm. (2) Jean of Braemar. James Marwick.

Get of Sire.—1. Palo Alto Percheron Farm. 2. J. H. Saltzman & Sons.

Produce of Dam.—1, Palo Alto Percheron Farm.

Five Stallions, any age.—1, Thompson; 2, Thompson.

Groups, best three mares.—1, Palo Alto Percheron Farm.

Champion Stallion.—Ithos. Bassett.

Champion Mare.—Palo Alto Marigold. Palo Alto Percheron Farm.

Above awards duplicated in the State classes.

DAIRY CATTLE.

Holstein Friesians.

Exhibitors: Allana Farm, Dixon; Anderson & Fogarty, Sacramento; M. Azavedo, Jr., Patterson; Azavedo Bros., Patterson; Anita M. Baldwin, Santa Anita Rancho, Santa Anita; E. D. Barry, Jr., Daggett; Dean Beeman, Woodland; Adelbert Benoit, Modesto; J. W. Benoit, Modesto; Bridgford Holstein Co., Patterson; California George Jr. Republic, Chino; Harold L. Cobeen, Live Oak; H. E. Cornwell, Modesto; Fred Cornwell, Modesto; Linnie Cornwell, Modesto; R. H. Davis, Modesto; Del Paso Heights Stock and Swine Breeders' Association, Del Paso Heights; V. F. Dolcini, Davis; Everett W. Fox, Modesto; Wilhelmina Fox, Modesto; R. C. Gruhlke, Dixon; R. L. Holmes, Modesto; W. J. Higdon, Tulare; Wilbur Rutherford Live Oak; Jared W. Scudder, Santa Rosa; Six Brothers Dairy, Turlock; Clay Stammerjohan, Turlock; George Stammerjohan, Turlock; Katie Stammerjohan, Turlock; Loney Stammerjohan, Turlock; Ruben Stammerjohan, Turlock; William Stammerjohan, Turlock; Dorothy Strom, Live Oak; Kenneth Vantress, Live Oak; Dr. E. J. Weldon, Sacramento; George M. York, Modesto.

Senior Champion Bull.—Merci Lad Korndyke Burke, Baldwin.

Junior Champion Bull. — Prince Bonnie Walker, Higdon.

Senior Champion Cow.—Josephine Johanna Oak De Kol, Allana Farm.

Junior Champion Cow. — Addie Creamcup Pontiac Burke, Stammerjohan.

Grand Champion Bull.—Merci Lad Korndyke Burke, Baldwin.

Grand Champion Cow.—Josephine Johanna Oak De Kol, Allana Farm.

Bull, three years or over.—(1) Merci Lad Korndyke Burke. Anita M. Baldwin. (2) Sir Johanna DeKol Rag Apple. H. E. Cornwell. (3) Segis Pontiac Abbekerk, R. L. Holmes. (4) Model Domino Glista. Jared W. Scudder. (5) Lone Oak Terzool Korndyke. J. W. Benoit.

Bull, two years and under three.—(1) Dean Fayno Segis. Dean Beeman. (2) Inka Faskie DeKol. Six Bros. Dairy. (3) Sir Aaggie Hiske Walker. E. D. Barry, Jr. (4) Bonita Sir Cornucopia Glista. Del Paso Hts. Stock & Swine Breeders' Ass'n.

Senior Yearling Bull. — (1) Prince Bonnie Walker. W. J. Higdon. (2) Lone Oak Valdessa Finderne. J. W. Benoit. (3) Karlray Pontiac Ormsby. R. L. Holmes.

Junior Yearing Bull.—(1) King Korndyke Pontiac Acme. Anita M. Baldwin. (2) Golden State Rag Apple Korndyke. Geo. M. York. (3) Pontiac Segis Abbekerk. Jared W. Scudder. (4) Tosantos Korndyke Pietertje. E. D. Barry, Jr.

Senior Bull Calf.—(1) King Tora Pontiac Prilly. Azavedo Bros. (2) Dean Tule Segis. Dean Beeman. (3) Admiral Pietertje Mechthilde. Allana Farm. (4) Prince Walker Cornucopia 19th. Anita M. Baldwin. (5) Oak DeKol Ormsby Hengerveld. Allana Farm.

Junior Bull Calf.—(1) Jupiter Inka De Kol Segis. Anderson & Fogarty. (2) Holmes Chimacum Jane Woodcrest. R. L. Holmes. (3) Unnamed calf. Azavedo Bros. (4) King

Korndyke Leda Pontiac. W. J. Higdon. (5) Sir Bonita Hartog Korndyke. R. H. Davis.

Cow, 4 years old or over.—(1) Ida Lotta Winnifred Burke. R. L. Holmes. (2) Mona Fobes. R. L. Holmes. (3) Johanna Homestead Belle. Allana Farm. (4) Johanna Hengerveld Capunna. Dean Beeman. (5) Bonita Hartog Gerben of Glen Eva 2d. R. H. Davis.

Cow, 3 years and under 4.—(1) Ciruela Walker. H. E. Cornwell. (2) Princess Holland Walker H E Cornwell. (3) Bonita Pontiac. R. H. Davis. (4) Anoakia Pontiac. Anita M. Baldwin. (5) Anoakia De Kol Gelsene. Anita M. Baldwin.

Cow, 2 years and under 3.—(1) Josephine Johanna Oak De Kol. Allana Farm. (2) Bernice Na Dean De Kol. Dean Beeman. (3) Meralto Electa Wayne Colantha. R. L. Holmes. (4) Blanche Nudine Clothilde Walker. Anita M. Baldwin. (5) Jane Garden Magnolia Korndyke. Jane Garden Farm.

Senior Yearling Heifer.—(1) Pearl Na Dean De Kol. Dean Beeman. (2) Jane Garden Dirkje Korndyke. Jane Garden Farm. (3) Anoakia Burke Cornucopia. Anita M. Baldwin. (4) Holmes Bracelet Ormsby. R. L. Holmes. (5) Anoakia Alcartra DeKol Segis. Anita M. Baldwin.

Junior Yearling Heifer.—(1) Anoakia Moorland Creamelle. Anita M. Baldwin. (2) Burbank Aaggie Lincoln. Anita M. Baldwin. (3) Burbank Roderick Aralia De Kol. Anita M. Baldwin. (4) Burbank Mabel De Kol Niko. Anita M. Baldwin. (5) Princess Cornucopia Prilly. Azavedo Bros.

Senior Heifer Calf.—(1) Addie Creamcup Pontiac Burke. Clay Stammerjohan. (2) Miss Niko Pietertje Ormsby. Allana Farm. (3) Ida Lotta Winnifred Burke 2d. W. J. Higdon. (4) Fay Tritomia Hengerveld 2d. W. J. Higdon. (5) Unnamed heifer. Anita M. Baldwin.

Aged Herd.—1, Baldwin. 2, Beeman. 3, Holmes.

Breeders' Young Herd.—1, Baldwin. 2, Higdon. 3, Davis.

Calf Herd.—1, Higdon. 2, Baldwin. 3, Davis.

Get of Sire.—1, Higdon. 2, Allana Farm. 3, Baldwin. 4, Davis.

Produce of Dam.—1, Allana Farm. 2, Beeman 3, Baldwin. 4, Benoit.

Calf Club Calves.—1, Clay Stammerjohan. 2, Gladys Stammerjohan. 3, Linnie Cornwell. 4, Wilhelmina Fox. 5, Everett Fox.

JERSEYS

Exhibitors.—C. E. Barrows, Orland; M. Fortini, Orland; N. H. Locke Co., Lockeford; M. A. Luce, Santa Rosa; Guy H. Miller, Modesto; B. A. Rider, Orland; J. H. Sawyer, Galt; J. E. Thorp, Lockeford; J. B. Thorp, Stockton; H. V. Traynham, Davis; S. F. Williams, Chico.

Senior Champion Bull.—Dairymaid's Gay Prince. M. Fortini.

Junior Champion Bull.—Biddy's King of Mossdale. J. E. Thorp.

Senior Champion Cow.—Croydon's Estelle Fox. M. Fortini.

Junior Champion Cow.—Isolde of Tintagel. M. Fortini.

Grand Champion Bull.—Dairymaid's Gay Prince. M. Fortini.

Grand Champion Cow.—Isolde of Tintagel. M. Fortini.

Bull, 3 years old or over.—(1) Dairymaid's Gay Prince. Fortini. (2) Jolly Senator Raleigh. J. E. Thorp. (3) Inglenook's Lass' King. Luce. (4) Empress' Vale of L. Miller. (5) Jap's Perfection Owl. Miller.

Senior Yearling Bull.—(1) Biddy's King of Mossdale. J. E. Thorp. (2) Wanda's Altama Interest. Miller. (3) The Judge of L. Locke Co. (4) King's B's King of L. Locke Co. (5) Financial P's King of L. Locke Co.

Junior Yearling Bull.—(1) Rita's Boy Blue. Traynham. (2) Jolly Ben of Mossdale. Traynham. (3) Rider's Pogis. Rider.

Senior Bull Calf.—(1) King Arthur of Tintagel. Fortini. (2) Fairy Boy of Mossdale. J. E. Thorp. (3) Monie's Jolly Senator. J. E Thorp. (4) Golden Swift. Williams. (5) Biddy's Famous Boy. Locke Co.

Junior Bull Calf.— (1) Sir Lancelot of Tintagel. Fortini. (2) K. F. Buttercup's King of L. J. E. Thorp. (3) Ramona's Perfection Owl. Miller. (4) Financial Financier. Sawyer.

Cow, 4 years old and over.—(1) Croydon's Estelle Fox. M. Fortini. (2) Cygna of Venadera. Guy H. Miller. (3) Salome of Mossdale. J. E. Thorp. (4) King's Biddy of L. N. H. Locke Co. (5) Sonny St. Helier's Daughter. J. E. Thorp.

Cow, 3 years and under 4.—(1) Hamptonne's Buttercup. C. E. Barrows. (2) Desert's Honeysuckle. J. E. Thorp. (3) Aleta Beau. S. F. Williams. (4) Cantata of Venadera. Guy H. Miller.

Cow, 2 years and under 3.—(1) Undulata's Fox Estelle. M. Fortini. (2) Goldie's Nehalem Cowslip. J. E. Thorp. (3) Bonnie of Mossdale 2d. J. L. Thorp. (4) King Hanford's Anna Girl. S. F. Williams. (5) Christel of Venadera. Guy H. Miller.

Senior Yearling Heifer.—(1) Jewel of Tintagel. M. Fortini. (2) Violet of Mossdale. J. E. Thorp. (3) Dagmar of Venadera. Guy H. Miller. (4) Maidkin's Trix. S. F. Williams. (5) Katheryne of Venadera. Guy H. Miller.

Junior Yearling Heifer.—(1) King's Letty of I. C. E. Barrows. (2) Chico Hope. S. F. Williams. (4) Diana of Venadera. Guy H. Miller. (4) Queen Bess of Mossdale. J. E. Thorp. (5) Quality of Venadera. Guy H. Miller.

Senior Heifer Calf.—(1) Isolde of Tintagel. M. Fortini. (2) Goldie's Dame Onota. J. H. Sawyer. (3) Gloria of Venadera. Guy H. Miller. (4) King's Lady of I. C. E. Barrows. (5) Stockwell's Jolly Lassie. C. E. Barrows.

Junior Heifer Calf.—(1) Emblem of Venadera. Guy H. Miller. Ramona of Mossdale. J. E. Thorp. (3) Verna of Venadera. Guy H. Miller.

Cow, Having Official Record.—(1) Gladys of Venadera. Miller.

Aged Herd.—1, Fortini. 2, J. E. Thorp. 3, Miller.

Breeders' Young Herd.—1, Miller. 2, J. E. Thorp.

Calf Herd.—1, Miller. 2, J. E. Thorp.

Get of Sire.—1, Miller. 2, Williams. 3, Locke Co. 4, J. E. Thorp.

(Continued on page 392.)

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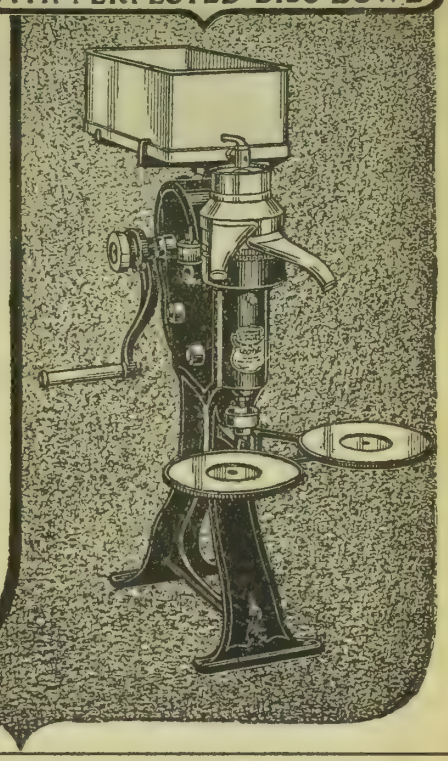

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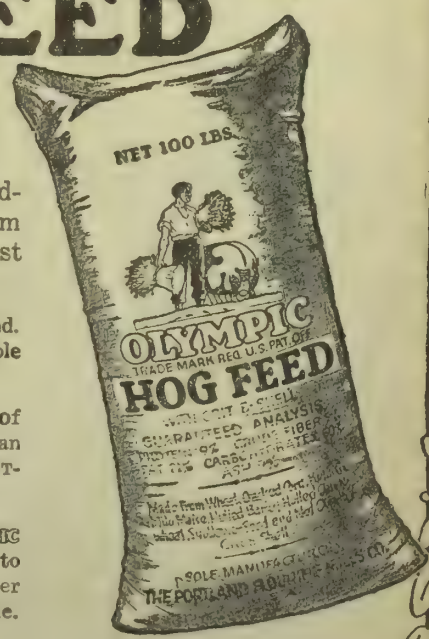

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The wide range of quantity distribution is made possible by the six feed speeds which regulate the spreading density to suit your fertilizing requirements. And with the International, because of the fast-working steel beaters and wide-spread spiral, you drive only half as far to unload as you do with a spreader that does not have these features. Some spreaders merely unload; the International **spreads.**

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C. J. Stephens of Herndon has gotten into the purebred Poland-China business rather quickly and easily. About a year ago he purchased a bred sow, Lady Herndon, for $325. She farrowed a litter of eleven. Seven were sows which were bred at 6 months of age and farrowed 42 pigs, an average of 6 to the litter. Lady Herndon's second litter, sired by Mc's Big Sampson, contained 11 pigs, making a total of 63 swine in 11 months and 26 days from date of purchase of the original sow. Out of this bunch Mr. Stephens showed a senior boar pig, Navy Boy, that was junior champion boar and reserve grand champion at the Fair.

Livestock and Dairy Notes

Dairy.

E. Peterposten, Holstein breeder of Turlock, announces a sale for October 20th, at which he will dispose of his entire herd.

M. Fortini of Orland had 7 Jerseys on exhibition at the State Fair this year with which he captured 7 firsts and both grand championships. A record hard to beat.

Walter Rodner, of Merced, is gradually working his herd over to purebred Holsteins. He has just purchased one fine young animal from the Holmes Stock Farm at Modesto.

The new officials of the California State Holstein Breeders' Association are Frank Morris of Woodland and R. L. Holmes of Modesto, president and vice-president respectively.

The Petaluma unit of the Sonoma County Farm Bureau Cow Testing Association has organized and elected S. G. Gambonini manager. He will be assisted by Asst. Farm Advisor Everett.

The Adorh Stock Farm near Los Angeles took first premium for certified milk at the State Fair, with a score of 99.2. Brant Rancho followed them closely with first in Guaranteed milk with a score of 99.1.

Jean Marigold of St. Mawes, a 15-year-old Jersey cow owned by Robt. L. Burkhart of Albany, Ore., has produced 666.25 pounds of butterfat in one year. This is a world's record for a cow of 13 years of age, and Jean qualifies as she is away beyond that mark.

Los Angeles County Farm Bureau will stage an extensive dairy exhibit at the Los Angeles Livestock Show. Last year's exhibit showing the value of cow-testing received favorable comment, and this year's exhibit has been enlarged to include not only a display calculated to bring out the value of cow-testing but also the influence in the improvement of the herd exerted by the use of a purebred sire.

With entries in six classes at the State Fair the Northern California Milk Producers' Association captured five blue ribbons, being second only in California cheese, of which they make very little. This association demonstrated the value of their powdered skim-milk by making and giving away at their booths as delicious biscuits as mother ever made.

J. D. Rowe & Sons of Davis are in for Milking Shorthorns, with both production and type. Their Innisfail Dairy, a senior two-year-old, in four months of her year test, has made half of the world's yearly record. Her dam was grand champion and her sire the sire of the junior champion at the State Fair this year. Their grand champion bull is also the sire of two heifers that carried off blue ribbons.

Allana Farm, Dixon, breeders of Holsteins, are going to have a sale on Thursday, Sept. 23d. They will offer 45 head of cattle of the kind that any man would be proud to own. They took 7 head to the State Fair and in the strongest kind of competition carried off grand championship honors on Josephine Johanna Oak De Kol, a 2-year-old heifer. This alone would satisfy some breeders, but they kept on and pulled down $207 in prize money on the 7 head shown. Such cattle are always desirable especially as they are performers as well as guaranteed breeders and have a clean bill of health.

Beef Cattle.

The California Cattlemen's Association held a successful get-together meeting at the State Fair. Addresses were made by several prominent men. Progress has been made in marketing arrangements. President Bixby has arranged to have cattle classed the same as perishable freight and cattlemen can secure cars immediately under this new ruling by communicating with the association office in San Francisco. Future meetings will be held at the Ventura Fair and the Los Angeles Livestock Show. The annual meeting will be held in San Francisco in December.

Dierssen & Vaughn is a new Shorthorn breeding firm. George Dierssen of Sacramento has associated with him Howard Vaughn of Iowa and they will exhibit Shorthorns at Los Angeles under the name of Wildwood Farm. Mr. Vaughn is now in the East selecting some show stock.

Fat cattle classes were more interesting at this fair than in former years due to more competition, but there is a chance for more to get into the game in the future. Instead of a class of four there ought to be twenty head in time. In yearling steers Easton & Ward took first, Kern County Land Company second and fourth, and J. A. Bunting third. G. W. Emmons had best steer under one year. Easton & Ward had champion steer.

Swine.

Poland-Chinas were shown in larger numbers this year at the State Fair than any other breed.

Col. Cy N. Clark, of Modesto, said the pig club boys' consignment to the last market hog auction topped the sale, bringing $15.50.

All the principal swine breeds had attractive headquarters on the State Fair Grounds this year, although the Poland-China breeders are the leaders in erecting a building of their own.

The carlot of Berkshire fat barrows that won the grand championship over all breeds at the State Fair last week will probably be carried along and with some others at the Napa State Farm be sent East to compete in the fat classes at the Chicago International.

Jack Borge, the well known Duroc breeder of Dos Palos, exhibited a good herd at the State Fair, winning several places in the money. Through a misunderstanding as to the time of showing he failed to get his best pen of junior pigs in the ring in time for competition.

Sheep and Goats.

The Cunningham Sheep and Land Company of Oregon paid $1300 at the Salt ake Ram Sale for a 2-year-old Rambouillet ram consigned by Bullard Bros. of Woodland.

Woolen mills, controlled by the American Woolen Company, resumed operations in some places on September 13th. This is looked upon as an indication of improvement in the wool situation.

A cut of 20 per cent in wool cloth prices by the American Woolen Company was noted at the company's opening of its fall exhibit at New York recently. The cut is due to a lessened demand for woolen goods.

Rambouillet rams consigned by Bullard Bros. of Woodland to the Salt Lake Ram Sale sold for the top prices in both stud and range ram classes. Their average also was the highest in these departments.

Walter Priddy, head shepherd for Bullard Bros., Woodland, attended the Salt Lake Ram Sale and he takes a more optimistic view of the results than others. He states prices were not as high as in the past but many rams were sold and for cash instead of paper, as many feared they would be compelled to take.

Fifty-seven Toggenburg milk goats were shipped recently by the Freyschlag "Ivy Lodge" Estate at 1056 South Eleventh St., San Jose, to Twigg Smith of Honolulu. This is thought to be the largest consignment of milk goats ever shipped out of California by one breeder. Mr. Smith did not intend to purchase so many but the quality of the stock was too great a temptation. "Ivy Lodge" still has over 100 head of Toggenburgs.

THE STATE FAIR OVER, NOW FOR LOS ANGELES.

With 175 prominent exhibitors in the East and West, entering a total of 1800 purebred animals to date, the 1920 Los Angeles Livestock Show promises to exceed by forty per cent any former livestock exposition held here, it was announced by the directors this week.

Overwhelming entries having filled all space in the original building plans, it is necessary now to decline additional requests for display room.

Elaborate preparations are being made to stage the daily entertainment features which include running races, rodeo, horse show and surprise events.

In the horse show $7,500 is offered in purses. The championship sweepstakes are one of $1,000 and three of $500 each. There are eleven divisions, including roadsters, fine harness horses, combination horses, three-gaited saddle horses, five-gaited saddle horses, hunters and jumpers, California stock horses and heavy draft horses, drawing purses of $125, divided $60, $40 and $25; saddle ponies and Shetland ponies.

A CHANCE TO BUY BERKSHIRES.

It is not often breeders have the opportunity to buy at their own price Berkshires of the breeding and individuality that will be offered at the ranch of Geo. M. York near Modesto on September 28th. Thirty-five head, including sows with litters, bred sows and gilts; also a very few large, young service boars.

This is a chance to buy purebred hogs of a kind that kill exceedingly well, furnishing a large percentage of marketable meat. No man who is raising hogs for market can afford to use a scrub sire. He will make still greater profits if he will have the whole herd purebred and of one type.

The list of judges for the Los Angeles Livestock Show announced thus far include three of the best livestock experts in the United States. Beef cattle will be judged by F. W. Van Natta, of Fowler, Ind., who has served at many great livestock shows in the United States and the Argentine, and is recommended by the American Shorthorn Breeders' Association and the Aberdeen-Angus people. Prof. H. H. Kildee, of Ames, Iowa, vouched for by breeders' associations everywhere, will judge dairy cattle and swine. Prof. E. A. Trowbridge, of the Missouri Agricultural College, Columbia, Mo., will judge all horses.

LIVESTOCK DIRECTORY.

Rate, 4c. per word. Cash must accompany all orders.

SWINE.

Duroc-Jerseys.

FIFTY DUROC-JERSEYS — Mostly bred sows and gilts. Some small pigs. Three service boars and five March boar pigs, grandsons of Mary Jane Pathfinder, the five pigs sired by Lord's Orion Cherry King. One son of Orion Cherry Pathfinder, out of Lamb's Model Lady. Elmer Lamb, Ceres, Calif.

LENA PERFECTION 2nd, by Redeemer, a fine type sow, farrowed September 2nd; eight very strong, active, heavy pigs by California's Great Sensation, our Junior Herd Boar. Litter of eight weighed, one hour after farrowing, 24½ pounds. Five sows and three boars. Sierra Vista Ranch, Perris, Calif.

DUROCS—BIG-TYPE—HIGHEST QUALITY—popular blood lines. Herd headed by Johnson's Defender, Jr., and Western Pathfinder. Bred sows and gilts and young boars for sale at moderate prices. Greenwood Farm, Witherow & Stafford, Live Oak, Cal.

BOYANNA BIG-TYPE DUROCS—Buy Durocs now. We offer bred and open sows, gilts, service boars and weanlings—all of excellent conformation and breeding. Write us and get get good ones. J. Boyd Harrold, Dixon, Cal.

BIG-TYPE DUROCS—Herd headed by California Orion King. Am offering excellent young boars at right prices. Inquiries invited. Harvey M. Berglund, Dixon, Calif.

JACK LONDON RANCH, Glen Ellen.—Exceptionally good weanlings. Bred sows and gilts. One good yearling boar and one fall boar. Prices reasonable.

ROCSTEIN RANCH DUROCS headed by Lord's Orion Cherry King. Breeding stock for sale at all times. W. M. Way & Son, Rt. 1, Box 320, Modesto.

BARGAINS in bred sows and gilts. Pathfinder and Great Wonder I Am blood. Derryfield Farm, Capital National Bank Building, Sacramento, Cal.

DEC. AND MARCH DUROC BOARS—Pathfinder breeding. Sterling Smith, R. 2, San Diego.

WINSOR RANCH DUROCS—Young boars and some top gilts bred to WINSOR'S GIANT ORION—Morris C. Allen, Mgr., Bonita, Cal.

REGISTERED DUROCS — Choice gilts and weanlings, either sex. Breeding and satisfaction guaranteed. H. E. Boudier, Napa.

BIG-TYPE DUROCS — Gilts and boars of Winsor's Giant Orion breeding. Falfadale Farms, Perris, Calif.

FOR THE BEST in Durocs, write June Acres Stock Farm, Davis, Cal.

Poland-Chinas.

TOHOQUA POLAND-CHINAS — Big type. A good big tried sow to sell. Has farrowed two litters of ten pigs each. Bred for August farrow. Also a dandy young boar pig from the Grand Champion sow of Glenn Co. Fair. This stuff is good, fully guaranteed and priced to sell. Ferguson and McKaig, Orland, Cal.

ELDERSLEY AND SHADY BROOK Farms big-type Poland-Chinas that make money for the Feeder, the Farmer and the Breeder. Prices reasonable. J. H. Ware, Brown's Valley, Calif.

BRED GILTS for sale. A few choice ones bred for fall farrow, to a good son of F'Big Jones, the Iowa 1920 Grand Champion. N. Hauck, Alton, Humboldt Co., Cal.

WAUKEEN HERD POLAND-CHINAS — Home of King's Big Bone Leader. A few service boars for sale. Les McCracken, Ripon.

LAKESIDE STOCK FARM—Large, smooth and big-boned Poland-Chinas. Geo. V. Beckman & Sons, Lodi, California.

DUROC-JERSEYS — Fine big-type gilts, tried sows and boars, Eastern and California bred. H. P. Slocum & Son, Willows, Calif.

REGISTERED POLAND-CHINA SWINE — Prize-winners. Finest stock in the State. Bassett Bros., Hanford, California.

BIG-TYPE POLAND-CHINAS—Good as the best. Always glad to show you. Houck & Lewis, Winton.

REG. BIG-TYPE POLAND-CHINAS—Service boars; weanling pigs. J. H. Cook, R. 4, Chico.

POLAND-CHINAS—Strictly large type. J. F. Lehman, Lodi, Cal.

Berkshires.

ANCHORAGE FARM BERKSHIRES
Orland, Calif.
HERD BOARS—STAR LEADER, Junior and Reserve Grand Champion of the World. The Grand Champion carload of barrows, over all breeds, at the San Francisco Live Stock Show, was sired by a son of Star Leader, NATOMAS BARON DUKE, grand champion of California. For sale, bred gilts, open gilts, young boars and weanling pigs. Write for booklet, prices and list of sows.

BRED GILTS.
Sired by Mayfield Rookwood 2d, a Grand Champion Boar, out of 600-700 lb. sows, and actually bred to "ACHIEVER," our English Blood Boar, the Sire that puts more bone and pork-making qualities into his pigs.
Priced reasonably and absolutely guaranteed.
Castleview Ranch, Santa Rosa, Calif.

BEST BERKSHIRE BOARS—Buy one and grow pigs that will mature quickly and make hogs that produce the largest percentage of salable meat. They carry the blood of the most noted individuals of the country. A few top females for sale also. Geo. A. Stingle, Lark Meadow Ranch, El Monte.

The only herd of English Berkshires in the West. Bigger, better, stronger litters. More pounds of meat for less feed. Weanling pig, $35. Satisfaction guaranteed or money refunded at once. Sandercock Land Co., 703 Market St., S. F. In charge Natomas Land Sales.

GRAPE WILD FARMS—Berkshires—Guernseys. Big-type Berkshire Boars of serviceable age, sired by Big Leader—greatest son of Grand Leader 2nd. Panama-Pacific Grand Champion. A. B. Humphrey, Prop., Escalon.

BERKSHIRE BOARS—Real herd sires. We are offering these at sacrifice prices to move them quickly. Write for description and price. R. J. Merrill & Son, Morgan Hill, Cal.

QUALITY BERKSHIRES — Young stock, both sexes. Geo. P. Upham, Martinez.

REAL GOOD BERKSHIRES — Cholera immune. Frank B. Anderson, Sacramento, Cal.

DAIRY CATTLE

Holsteins.

HOLSTEINS

THE LEWIS COMPANY

Registered Holstein Cattle
Bulls, Heifers and Calves
of Ormsby breeding
Tuberculin tested
Lewis Building, San Jose

EIGHT EXCELLENTLY BRED Registered Holstein cows for sale. Tuberculin tested. Just what you want. Terms liberal. Fine bull out of 24-lb. dam and sired by Segis Pontiac De Kol Burke is bred to these females. This bull also for sale. S. J. Strauss, P. O. Box 62. Phone 217, or call at 1016 Eye St., Modesto, Cal.

YOUNG BULL by grandson of Tilly Alcartra, out of dam with good record. His half sister milking 68 lbs. per day as senior yearling. Also bull calves. H. M. Cross, Merced.

REGISTERED HOLSTEIN-FRIESIANS — Both sexes choice stock; tuberculin tested. Sunnybrook Ranch, H. H. Sisson, Mgr., Willits.

PALO ALTO STOCK FARM, Palo Alto, breeders of registered Holsteins. Heifers and service bulls. Reasonable prices.

REGISTERED HOLSTEINS—Young bulls for sale. Long distance A. R. O. backing. Lester A. Driver, Nicolaus, Calif.

CREAMCUP HERD — Registered Holsteins. Pontiac bull calves. M. Holdridge, Rt. A, Box 437, San Jose.

REG. HOLSTEINS—A. W. Morris & Sons Corp., Importers and Breeders, Woodland, Cal.

Avery 6-Cylinder Tractor—Model C

A Big Success in a Small Tractor

This Avery 6-cylinder tractor is proving a big success in practically every kind of farm work. It gives to the man operating a small tractor outfit the same certainty of service that Avery owners are getting from the larger Avery machines.

This small tractor, like the larger sizes of Avery tractors, is built complete in the Avery factories. Has a powerful six-cylinder motor with extra strong crankshaft and connecting rods—especially designed for heavy-duty work. Also, centrifugal governor entirely enclosed, running in oil—high-tension magneto—thermo-siphon cooling system—selective sliding transmission—roller and ball bearing equipped, etc. Can also be equipped with a conveniently located belt pulley at a slight additional expense, so that it can be used for all kinds of lighter belt work as well as field work.

A thoroughly dependable, high-grade tractor at an attractive price, which includes regularly such accessories as platform, seat, tool-box, drawbar, air-cleaner, etc.—equipment that makers of other small tractors charge extra for.

Now is the time you need a tractor most. Now is the time to get it.

We also build another small tractor, the Avery Model "B" 5-10 H. P. size with a similar design. Ask for special circulars describing these machines or

Write for the Avery Catalog

and learn about the complete line of Avery machinery, including these small models and seven larger sizes of Avery Tractors, 8-16 to 40-80 H. P. built with "Draft-Horse" Motors and "Direct-Drive" Transmissions. Also, Avery Roller-Bearing Champion "Grain-Saving" Threshers and Silo Fillers, Avery Motor Cultivators, Avery "Self-Lift" Plows, "Self-Adjusting" Tractor Disc Harrow and other Avery Tractor-operated machines.

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AVERY
Motor Farming, Threshing and Road Building Machinery

Avery-ize Your Farm: "A Good Machine and a Square Deal."

REG. HOLSTEINS, both sexes. World's record backing. Kounias Reg. Stock Farms, Modesto, Cal.

F. H. STENZEL, SAN LORENZO—Breeder of Registered Holsteins. High test producers.

REGISTERED HOLSTEINS — Best blood lines of the breed. R. L. Holmes, Modesto, Cal.

CHOICE HOLSTEIN bulls for sale. No females. Millbrae Dairy, Millbrae, California.

GOTSHALL & MAGRUDER — Breeders of registered Holstein-Friesians. Ripon, Calif.

EL DORADO HERD OF REG. HOLSTEINS—Alex. Whaley, Tulare, California.

Milking Shorthorns.

REGISTERED MILK AND BEEF SHORTHORNS, bulls and heifers for sale; catalogue free. Thomas Harrison, Santa Rosa Stock Farm, Santa Rosa, California.

INNISFAIL HERD MILKING SHORTHORNS—Young stock for sale; both sexes. Owned by Alexander & Kellogg. Leased by J. D. Rowe & Son, Davis, Cal.

BREEDERS OF REGISTERED SHORTHORNS—Milk strain; choice young stock for sale. John Lynch Ranch, Box 321, Petaluma.

Jerseys.

SERVICE JERSEY BULL, bull calves Financial King blood, Chester White boars, prize winners. Best blood, type, production. N. H. Locke Co., Lockeford, Cal.

JACK LONDON RANCH, Glen Ellen—Two fine Jersey bulls, one ready for service.

SUNSHINE FARM JERSEYS—"Production counts." E. E. Greenough, Merced, Cal.

Ayrshires.

PENOBSCOT FARM REG. AYRSHIRES—Choice individuals, all ages reasonable prices. Cool, El Dorado County, near Auburn. San Francisco office, 360 Fremont Street.

STEYBRAE AYRSHIRES — Registered; all ages. E. B. McFarland, 414 Claus Spreckels Building, San Francisco.

NORABEL FARM AYRSHIRES—Le Baron Estate Co., Valley Ford, Cal.

BEEF CATTLE.

SHORTHORNS—The foremost beef breed—Have a limited number of stock for sale, both sexes. If you wish to start a small herd I can probably supply your needs. T. T. Miller, Hollister, Cal.

ALAMO HERD REGISTERED HEREFORDS (founded by Governor Sparks). Herd and range bulls. Reasonable prices. W. D. Duke, Gazelle, Siskiyou county, California.

RANCHO SAN JULIAN SHORTHORNS—Purebred range bulls, unregistered, for sale. Estate Thos. B. Dibblee, Santa Barbara, or Lompoc, Calif. John Troup, Supt.

THE NEVADA HEREFORD RANCH—Jno. H. Cazier & Son Co., Prop., Wells, Nevada. Reg. Hereford cattle. Breeding stock for sale.

CARRUTHERS FARMS, Live Oak, California. Shorthorn cattle and Berkshire swine of quality and select breeding.

JACK LONDON RANCH, Glen Ellen—Shorthorn bull ready for service, and some good bull calves.

WM. BRIGGS & SON, Dixon, Cal. Breeders of Hereford cattle and Rambouillet sheep.

ABERDEEN-ANGUS cattle of quality and breeding. Lilac Ranch, Escondido, Cal.

SIMON NEWMAN CO., breeders of Registered Herefords, Newman, California.

HEREFORDS — Mission Hereford Farm, J. A. Bunting, Prop., Mission, San Jose, Cal.

REGISTERED HEREFORDS—H. H. Gable, Diamond G Ranch, Esparto, California.

GEORGE WATTERSON — Breeder Registered Herefords. Bishop, California.

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SHEEP AND GOATS.

FOR SALE—Rambouillet rams and ewes—purebred; the very highest grade of large smooth body; heavy shearers; the wool and mutton type. Immediate delivery of individual or carload lots. You can find none better or of higher grade. Address Glenn, Cal. Location, 8 miles south Hamilton City, 1 mile west Ordbend. Windell Orchards Co.

F. A. MECHAM ESTATE, Petaluma, Cal—Breeders and importers of Shropshire. Rambouillets and American Merinos, both sexes. Also Red Polled cattle. Take electric car at Petaluma or Santa Rosa for Live Oak Ranch.

OAKDENE GOAT FARM, Walnut Creek, Contra Costa Co., Cal. Breeders of milk goats. Nubian, Saanen and Toggenburg registered grades. Bred and fed for milk production.

BUY YOUR FOUNDATION STOCK from the world's record flock of non-shedding Angora goats. Prices reasonable. F. A. Pierce, Trinidad, Calif.

WRITE ME for early Rambouillet ram lambs ready for light use by Sept. 1. Also a few yearlings. Carl Lindheimer, Woodland.

HARRY L. HUSTON, Winters, Calif.—breeder and importer of Shropshire sheep. Stud and range rams. Prices on application.

DR. A. S. ALMEIDA, Dixon, Calif., Breeder and Importer of Registered Shropshire Sheep. Write me for prices on Reg. Ram Lambs.

J. R. BLOOM, Dixon, Calif.—Twenty-five years breeder of purebred Shropshire sheep. Rams for sale. Single or carload lots.

FOR SALE—850 one, two and three-year-old Merino ewes. J. A. Swall, Box 742, Bishop, Cal.

DORSETS—ROMNEYS—Dorset ram lambs for sale. John E. Marble, South Padasna.

SNAP FOR SALE—1000 ewes. Will sell sell in lots to suit. Chas. G. Owens, Livermore.

HARVEY S. VAN VLEAR, Lodi, Breeder and importer of registered Hampshire sheep.

CALLA GROVE FARM, MANTECA, CAL.—Breeders and importers of Hampshire sheep.

50 ANGORA GOATS (Bailey stock), 10 mares and horses. T. C. Still, La Panza, Cal.

KAUPKE BROS., WOODLAND, CALIF.—Breeders and importers of Hampshire sheep.

CHAS. KIMBLE—Breeder and importer of Rambouillets. Hanford, Calif.

BULLARD BROS., Woodland, Calif.—Breeders and importers of Rambouillet sheep.

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BUTTE CITY RANCH
SHORTHORN CATTLE, SHROPSHIRE Sheep, Berkshire Hogs, Shetland Ponies, Bronze Turkeys, White Plymouth Rocks. Stock for sale at all times. W. B. Dwyer and W. S. Guilford, Box P, Butte City, Glenn county, California.

Pacheco Cattle Company
Shorthorns

Won at this year's State Fair in 14 classes, 4 firsts and 6 seconds, junior Champion bull and junior Champion heifer. Record at last 6 State Fairs in 71 classes shown 30 firsts and 26 seconds. In last 9 Livestock Shows and Fairs we won Get of Sire with Truedale progeny 5 times in succession and stood second with the get of his son Pacheco Lad 58th the following four times.

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PRESIDENT

Norman Hale, Herdsman, Hollister, California

Hillcrest Stock Farm
SHORTHORNS WIN BOTH GRAND CHAMPIONSHIPS

IMPORTED SCOTTISH LORD
Grand Champion Bull

LITTLE SWEETHEART
Grand Champion Cow

Also won 7 firsts, 5 seconds, 2 thirds and 1 fourth.

BULLS FOR SALE IN SINGLES OR CARLOAD LOTS

Also Breeders of Shropshire and Merino Sheep

T. S. GLIDE, Prop. Davis, Californa

OVER TWO MILLION CALVES
protected against **Blackleg** for LIFE with ONE treatment vouch for **Purity Blackleg Aggressin** (Germ-Free Vaccine made by the Kansas Process). Absolutely safe to use. Cannot transmit disease. Brand, castrate, etc., when you vaccinate. OTHER PURITY PRODUCTS—**Anti-Abortions Vaccine for Cattle; Hemorrhagic Septicemia Vaccine for Cattle and Sheep; Anti-Hog Cholera Serum,** and **High Count Mixed Infection Vaccine for Swine.** For service that counts, write, phone, or wire.

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HERD SIRES
BOQUHAN GUINEA STAMP, the great imported young Broadhooks bull.

GOLDEN GOODS JR., sire of LITTLE SWEETHEART, Grand Champion International Show, Chicago, 1919.

Bulls and Heifers for sale.
Duroc-Jersey Hogs for sale.

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Registered Hog Sales a Specialty

INNISFAIL Herd
Dairy SHORTHORNS
AGAIN TO THE FOREFRONT
Winning at the California State Fair for 1920

GRAND CHAMPION BULL
GRAND CHAMPION COW

Eight firsts, one second, three thirds in individual classes; three firsts on herds, second and third on Get of Sire, first and third on Produce of Dam, and first on Dairy Herd.

Come and see this great herd or write us.

J. D. ROWE & SONS
DAVIS, CALIFORNIA

(Continued from page 389.)

Produce of Dam.—1, Fortini. 2 Miller. 3, Williams.

Dairy Herd.—1, Miller. 2, J. E. Thorp.

GUERNSEYS

Exhibitors—Brant Ranch Owensmouth; J. Francis O'Connor, Castleview Ranch Santa Rosa; A. B. Humphrey, Escalon; Hollow-hill Farm, Colton; James Marwick, Braemer Ranch, Santa Barbara; M. A. Harris, Redwood City

Senior Champion Bull.—May King of Fern Ridge. Brant Rancho.

Junior Champion Bull.—Reuben King of Hollow-hill Farm. Hollow-hill Farm.

Senior Champion Cow.—**Princess of Meadow** Brook. Brant Rancho.

Junior Champion Cow.—**Rosie E. King of** Hollow-hill Farm. Hollow-hill Farm.

Grand Champion Bull.—May King of Fern Ridge, Brant Rancho.

Grand Champion Cow.—Princess of Meadow brook. Brant Rancho.

Bull, 3 years old or over.—(1) May King of Fern Ridge. Brant Rancho. (2) Nelly's King of the Rancho. Brant Rancho. (3) Escalon Challenger. A. B. Humphrey. (4) Royal Glenwood Champion. M. A. Harris.

Bull, 2 years and under 3.—(1) Topper Langdon of Hollow-hill Farm. Hollow-hill Farm. (2) Mysie's Linden Boy. James Marwick. (3) Nobleman of Maple Hill. A. B. Humphrey.

Junior Yearling Bull.—(1) Reuben King of Hollow-hill Farm. Hollow-hill Farm.

Senior Bull Calf.—(1) Carl E. King of Hollow-hill Farm. Hollow-hill Farm. (2) Faubion of the Rancho. Brant Rancho. (3) Adam of the Rancho. Brant Rancho. (4) Escalon Advancer. A. B. Humphrey.

Junior Bull Calf.— (1) Reuben Langdon of Hollow-hill Farm. Hollow-hill Farm. (2) Escalon Rex. A. B. Humphrey. (3) Show Boy of the Rancho. Brant Rancho.

Cow, 4 years old and over.—(1) Princess of Meadowbrook. Brant Rancho. (2) Imp. Cherry 3rd of the Effards. Hollow-hill Farm. (3) Imp. Dene Jewell. Hollow-hill Farm. (4) Imp. Brittleware Mistleto. Hollow-hill Farm. (5) Elsie of the Rancho. Brant Rancho.

Cow, 3 years and under 4.—(1) Golden Glen Pansy. Brant Rancho. (2) Jeannie of Green Lodge. Brant Rancho. (3) Rosa King of Hollow-hill Farm. Hollow-hill Farm. (4) Dorothea of Green Lodge. Brant Rancho.

Cow, 2 years and under 3.—(1) Little Queen of the Rancho. Brant Rancho. (2) Escalon Evangeline. A. B. Humphrey. (3) Red Ring of the Rancho. Brant Rancho. (4) Princess Selma. Hollow-hill Farm. (5) Primrose King of Hollow-hill Farm. Hollow-hill Farm.

Senior Yearling Heifer.—(1) Della Langdon of Hollow-hill Farm. Hollow-hill Farm. (2) Rosemary of the Rancho. Brant Rancho. (3) Elsie 2d of the Rancho. Brant Rancho. (4) Escalon Lassie. A. B. Humphrey.

Junior Yearling Heifer.—(1) Rosie E. King Hollow-hill Farm. Hollow-hill Farm. (2) Melissa of the Rancho. Brant Rancho. (3) Nesha E. King of Hollow-hill Farm. Hollow-hill Farm. (4) Escalon Daisy. A. B. Humphrey. (5) Escalon Rose. A. B. Humphrey.

Senior Heifer Calf.—(1) Caroline E. Langdon of Hollow-hill Farm. Hollow-hill Farm. (2) Eleanor of the Rancho. Brant Rancho. (3) Jeannie of the Rancho. Brant Rancho. (4) Maine of the Rancho. Brant Rancho.

Junior Heifer Calf.—(1) Dene Langdon of Hollow-hill Farm. Hollow-hill Farm. (2) Brittania E King of Hollow-hill Farm. Hollow-hill Farm. (3) Golden Sequel of the Rancho. Brant Rancho. (4) Escalon Golden Anne. A. B. Humphrey. (5) Unnamed calf A. B. Humphrey.

Cow, Having Official Yearly Record.—(1) Princess of Meadowbrook. Brant Rancho. (Subject to records to be shown). (2) Imp. Cherry III of the Effards. Hollow-hill Farm.

Aged Herd.—1, Brant Rancho. 2, Hollow-hill Farm. 3, Humphrey.

Breeders' Young Herd. — 1, Hollow-hill Farm. 2, Brant Rancho. 3, Humphey.

Calf Herd—1, Brant Rancho.

Get of Sire.—1, Hollow-hill Farm. 2, Hollow-hill Farm. 3, Brant Rancho. 4, Brant Rancho.

Produce of Dam.—1, Hollow-hill Farm. 2, Brant Rancho. 3, Brant Rancho. 4, Humphrey.

Dairy Herd.—1, Brant Rancho. 2, Hollow-hill Farm.

MILKING SHORTHORNS.

Exhibitors.—Alexander & Kellog, by J. D. Rowe & Son, Davis; Wm. Bond, Newark; Thos. Harrison, Santa Rosa Stock Farm, Santa Rosa; G. A. Murphy, Perkins; Chas. L. Weaver, Tulare.

Senior Champion Bull.—Alexander & Kellogg, by J. D. Rowe & Son.

Junior Champion Bull.—Thos. Harrison.

Senior Champion Cow.—Alexander & Kellogg, by J. D. Rowe & Son.

Grand Champion Bull.—Alexander & Kellogg.

Grand Champion Cow.—Alexander & Kellogg.

Bull, 3 years old and over.—(1) Westward Ho. Alexander & Kellogg. (2) North Star. Weaver.

Bull, 2 years and under 3.—(1) Mary's Chief. Murphy.

Bull, Senior Yearling.—(1) Count Tickford. Harrison.

Bull, Junior Yearling.—(1) Innisfail Favorite. Alexander & Kellogg. (2) Frantic Chief 3rd. Murphy.

Senior Bull Calf.—(1) Santa Rosa Pioneer. Harrison. (2) Champion Royal. Weaver. (3) Westward Clay. Alexander & Kellogg. (4) Golden Type. Wm. Bond.

Junior Bull Calf.—(1) Innisfail Lad. Alexander & Kellogg. (2) Innisfail Trickster. Alexander & Kellogg. (3) Gypsy Lad. Alexander & Kellogg. (4) Golden Star. Weaver.

Cow, 4 years old and over.—(1) Bellevue Daisy. Alexander & Kellogg. (2) Floretta Clay. Harrison. (3) Silver Lassie. Harrison. (4) Beggar Maid's Beauty. Alexander & Kellogg. (5) Princess Clay. Alexander & Kellogg.

Cow, 3 years and under 4.—(1) Alma. Alexander & Kellogg. (2) Vocalist. Harrison.

Cow, 2 years and under 3.—(1) Welfare's Belle. Harrison. (2) Bonnie May. Weaver. (3) Annabel. Alexander & Kellogg.

Senior Yearling Heifer.—(1) Valley Belle 6th. Alexander & Kellogg. (2) Hilarita Lee. Harrison. (3) Santa Rosa Queen. Harrison. (4) Cumberland Goldie. Bond.

Junior Yearling Heifer.—(1) Gypsy Girl. Alexander & Kellogg. (2) Frantic Girl. Harrison. (3) Sunnyside Helen 2d. Murphy

Senior Heifer Calf.—(1) Dolores Lee. Harrison. (2) Elsie Lee. Harrison. (3) Valley Belle 7th. Alexander & Kellogg. (4) Lady Lee. Harrison. (5) Waterloo Daisy 2d. Alexander & Kellogg

Cow, Junior Heifer Calf.—(1) Buttercup's Beauty 2nd. Alexander & Kellogg.

Cow Having Official Yearly Record.—1, Harrison, on Floretta Clay. 2.

(Aged Herd, Breeders' Young Herd and Calf Herd won by Alexander & Kellogg.

Get of Sire.—1, Harrison. 2 and 3, Alexander & Kellogg.

Produce of Dam.—1 and 3, Alexander & Kellogg. 2 and 4, Harrison.

Dairy Herd.—1, Alexander & Kellogg. 2, Harrison.

AYRSHIRES.

Exhibitors.—E. B. McFarland, San Francisco, only exhibitor. Awarded prizes in all classes.

HEREFORDS.

Exhibitors.—H. M. Barngrover, Santa Clara, Cal.; J. A. Bunting, Mission San Jose, Cal.; William Briggs, Dixon, Cal.; Jno. H. Cazier & Sons Co., Wells, Nevada; G. W. Emmons, Danville, Cal.; H. H. Gable, Esparto, Cal.; Romie C. Jacks, 614 Hobart Bldg., San Francisco; Edward T. Morgan, Northan, Nevada; D. H. Ogden, Alpine, Cal.; Charles Rule, Jenner, Cal.; P. W. Snyder, Los Molinos, Cal.

Senior Champion Bull. — Beau Blanchard 76th, Cazier.

Junior Champion Bull.—Pilot, Briggs.

Senior Champion Cow. — Bocaldo Beauty, Jacks.

Junior Champion Cow. — Ruth Domino, Jacks.

Grand Champion Bull. — Beau Blanchard 76th, Cazier.

Grand Champion Cow. — Bocaldo Beauty, Jacks.

Bull, 3 years or over.—(1) Beau Rosemon. Charles Rule. (2) Bourbon Columbus. Edward T. Morgan. (3) Paragon Dare. Romie C. Jacks. (4) Disturber Anxiety. G. W. Emmons. (5) Groves Perfection. G. W. Emmons.

Bull, 2 years old and under 3.—(1) Beau Blanchard 76th. John H. Cazier & Sons Co. (2) Woodford 34th. Romie C. Jacks. (3) Junior Grove. G. W. Emmons. (4) Don Woodford 4th. H. M. Barngrover. (5) Carlos 157th. Romie C. Jacks.

Senior Yearling Bull.—(1) Plumas Lad 3rd. H. M. Barngrover. (2) Beau Blanc Visage 9th, Romie C. Jacks.

Junior Yearling Bull.—(1) Wyoming Type. Romie C. Jacks. (2) Nevada Lad 72d. Jno. H. Cazier & Sons Co. (3) Yolo Fairfax. H. H. Gable. (4) Conqueror. D. H. Ogden.

Junior Bull Calf. — (1) Pilot. William Briggs. (2) Bourbon C. 30th. Edward T. Morgan. (3) Blanchard 1st. Jno. H. Cazier & Sons Co. (4) Nevada Lad 129th. Jno. H. Cazier & Sons Co. (5) Dan Rupert. D. H. Ogden.

Cow, 3 years old and over.—(1) Miss Dale. William Briggs. (2) Mischievous A. Jno. H. Cazier & Sons Co.' (3) Rose Donald. P. W. Snyder. (4) Anxiety Fairfax. H. H. Gable. (5) Miss Debonair 4th. Romie C. Jacks.

Cow, 2 years old and under 3.—(1) Bocaldo Beauty. Romie C. Jacks. (2) Ga. Princess 10th. Romie C. Jacks. (3) Standard Eyes 2d. H. H. Gable. (4) Beauty. William Briggs. (5) Maudy. G. W. Emmons.

Senior Yearling Heifer.—(1) Ruth Domino Romie C. Jacks. (2) Queen Stanway 2d. Charles Rule. (3) Belle Grove. Romie C. Jacks. (4) Miss Rupert 8th. P. W. Snyder. (5) Circe 5th. Jno. H. Cazier & Sons Co.

Senior Heifer Calf. — (1) Carnation 4th. Jno. H. Cazier & Sons Co. (2) Nevada 5th. Jno. H. Cazier & Sons Co. (3) Dale's Victory. William Briggs. (4) Byrdie Woodford. H. M. Barngrover. (5) Miss Verbena 3d. G. W. Emmons.

Junior Heifer Calf. — (1) Dainty Dare. Romie C. Jacks. (2) Beth. William Briggs. (3) Standard Eyes 4th. Jno. H. Cazier & Sons Co. (4) Amy Diable. G. W. Emmons. (5) Eunice 3d. Jno. H. Cazier & Sons Co.

Aged Herd.—1, Jacks. 2, Barngrover.

Breeder's Young Herd.—1, Cazier. 2, Barngrover.

Calf Herd.—1, Cazier. 2, Cazier. 3, Barngrover. 4, Ogden.

Get-of-Sire.—1, Cazier. 2, Cazier. 3, Barngrover. 4, Ogden.

Produce of Dam.—1, Gable. 2, Barngrover. 3, Barngrover. 4, Barngrover. 5, Ogden.

ABERDEEN ANGUS.

Exhibitors. — James Marwick, Braemar Ranch, Santa Barbara. Only one exhibitor who took all prizes.

BERKSHIRES, Con.

Exhibitors.—H. F. Alps, Verdi Highway, Reno, Nevada; Anchorage Farm Co., Orland; D. J. Bastanchury, La Habra; H. W. Cannon, Suisun; Castleview Ranch, Santa Rosa; Tom Hyland, Sebastopol; A. B. Humphrey, Escalon; Italian Vineyard Co., Guasti; Grace Trumbull Reed, Middle River; Sandercock Land Co., 703 Market St., San Francisco; Paul R. Sims, Jr., Elk Grove; Superior California Farm Lands Co., Hamilton City; J. G. Throckmorton, Sebastopol; Mrs. J. G. Throckmorton, Sebastopol.

Senior Champion.—Humphrey.

Reserve Senior Champion.—O'Connor.

Junior Champion.—Humphrey.

Reserve Junior Champion.—Italian Vineyard Co.

Senior Champion Boar.—Escalon Big Joe. Humphrey.

Reserve Senior Champion Boar.—Enhancer. O'Connor.

Junior Champion Boar. — May's Superb. Humphrey.

Reserve Junior Champion.—Matchless Type 2d. Italian Vineyard Co.

Senior Champion Sow.—Grape Wild Rose 6th. Humphrey.

Reserve Senior Champion Sow.—Grape Wild Rose. Humphrey.

Junior Champion Sow. — Castleview Royal Duchess. Italian Vineyard Co.

Reserve Junior Champion Sow.—Achiever's Laurel. Castleview Ranch.
Grand Champion Boar.—Escalon Big Joe. Humphrey.
Reserve Grand Champion. — Enhancer. O'Connor.
Grand Champion Sow.—Grape Wild Rose 6th. Humphrey.
Reserve Grand Champion Sow.—Grape Wild Rose. Humphrey.
Herd, over one year.—1, Humphrey. 2, Italian Vineyard Co. 3, Humphrey. 4, Bastanchury.
Herd, under one year.—1, Italian Vineyard Co. 2, Italian Vineyard Co. 3, Humphrey.
Herd, bred by Exhibitor.—1, Humphrey. 2, Humphrey. 3, Superior Calif. Farm Lands Co.
Get-of-Sire.—1, Humphrey. 2, Italian Vineyard Co. 3, D. J. Bastanchury.
Produce of Dam.—1, Humphrey. 2, Italian Vineyard Co. 3, Bastanchury.
Fat Barrows.—First, Italian Vineyard Co. Second, Humphrey. Third, Humphrey. Fourth, Humphrey.
Pen (3) Barrows.—First, Humphrey. Second, Superior Calif. Farm Lands Co. Third, J. C. Throckmorton

RAMBOUILLET SHEEP.

Exhibitors.—Bullard Bros., Woodland; G. N. Merritt & Son, Woodland.
Bullard Bros. won all prizes except third place in "pen bred by exhibitor," which was taken by G. N. Merritt & Son.

RANGE SHEEP, MERINO TYPE.

Exhibitors.—Bullard Bros., Woodland; G. N. Merritt & Son, Woodland.
Rams, two years old or over.—1, Merritt.
Rams, under one year.—1, Bullard Bros. 2, Merritt. 3, Bullard Bros.
Ewes, two years or over.—1, Bullard. 2, Merritt. 3, Bullard.
Ewes, one year and under two.—1, Bullard. 2, Bullard. 3, Merritt.
Ewes, under one year.—1, Bullard. 2, Merritt. 3, Bullard.

RANGE SHEEP, MEDIUM TYPE

Pen of three rams, one year and under two.—1, Ellenwood & Ramsey.
Pen of three rams, under one year.—1 and 2, G. K. Swingle.
Pen of three ewes, under one year.—1, Ellenwood & Ramsey.
Pen of three rams, one year and under two.—1, Spencer Ranch Co.
Medium wool, wether, one year and under two.—1 and 2, Ellenwood & Ramsay.
Medium wool, wether, under one year.—1 and 2, Ellenwood & Ramsay.
Medium wool, pen of three wethers, one year and under two.—1, Ellenwood & Ramsay.
Medium wool, pen of three wethers, under one year.—1, Spencer Ranch Co. 2, Ellenwood & Ramsay.
Medium Wool, Champion Wether.—1, Ellenwood & Ramsay.
Grades and Crosses Wether, under one year.—1, Calla Grove Farm.
Grades and Crosses, pen of 3 wethers, under one year.—1, Spencer Ranch Co.
Grades and Crosses, Champion Wether.—1, Calla Grove Farm.
Grades and Crosses, Grand Champion Wether.—Calla Grove Farm.
Reserve Grand Champion. — Ellenwood & Ramsay.

CORRIEDALE SHEEP.

The Corriedale Sheep Company of Hollister had an excellent exhibit of Corriedales, Southdowns and Leicesters, taking all prizes in these breeds.

ROMNEYS.

Exhibitors.—Spencer Ranch Co., Cranmore; Eugene C. Tribble, Lodi.
Ram, two years old or over.—1, U. of C. 657. Tribble.
Ram, one year and under two.—1, Romney Ram 525. Spencer Ranch Co.
Ram, under one year.—1, Romney Ram 28. Spencer Ranch Co. 2, Romney Ram 27. Spencer Ranch Co.
Ewe, two years old or over.—1, Singleton Ewe No. 39 of 1918. Tribble. 2, Romney Ewe 363. Spencer Ranch Co.
Ewe, one year and under two.—1, Romney Ewe 688. Spencer Ranch Co.
Ewe, under one year.—1, Tribble's No. 20 of 1920. Tribble. 2, Tribble No. 10 of 1920. Tribble.
Pen, bred by exhibitor.—1, Spencer Ranch Co.
Champion Ram.—U. of C. 657. Tribble.
Champion Ewe.—Romney Ewe 688. Spencer Ranch Co.

COLTSWOLDS.

Exhibitors.—Italian Vineyard Co., Guasti.
All awards in this breed made on flock exhibited by the Italian Vineyard Company.

HAMPSHIRES.

Exhibitors.—Calla Grove Farm, Manteca; V. F. Dolcini, Davis; C. Harold Hopkins, Woodland.
Champion Ram.—A. 9 R. 35116. Hopkins.
Champion Ewe.—A. 28, 76058. Hopkins.
Ram, one year and under two.—1, K-181, 30637. Dolcini.
Ram, under one year.—1, A. 9 R. 35116. Hopkins. 2, A. 4 R. 35112. Hopkins.
Ewe, two years old or over.—1, Calla Grove 8, 55178. Calla Grove. 2, Calla Grove 14, 60983. Calla Grove.
Ewe, one year and under two.—1, Calla Grove 24, 69131. Calla Grove. 2, Calla Grove 25, 69132. Calla Grove.
Ewe, under one year.—1, A. 28, 76058. Hopkins. 2, A. 24, 76065. Hopkins.
Hampshire Flock.—1, Calla Grove. 2, Calla Grove.
Pen, bred by exhibitor.—1, Hopkins. 2, Hopkins. 3, Calla Grove.

SHROPSHIRES.

Exhibitors.—Thos. B. Bishop Co., San Ramon; Butte City Ranch, Butte City; Corriedale Sheep Co., Hollister; T. S. Glide, Davis.
All awards in this department were won by the Thos. B. Bishop Co., except first prize on ram one year old and under two, third on "Shropshire flock" and "flock bred by exhibitor," and Grand Champion Ram, which was won by Butte City Ranch.

MILK GOATS.

Anglo-Nubians.—Flock exhibited by and all prizes awarded to A. B. Ingham, Pacific Grove.
Toggenbergs.—Flock exhibited and all prizes awarded to M. D. Woodruff, Paradise.
Registered Grades exhibited by Richards & Wagner, Montara.

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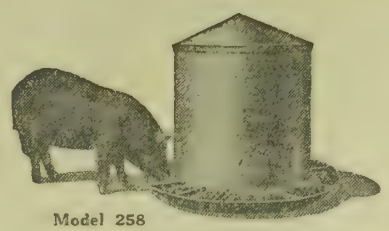
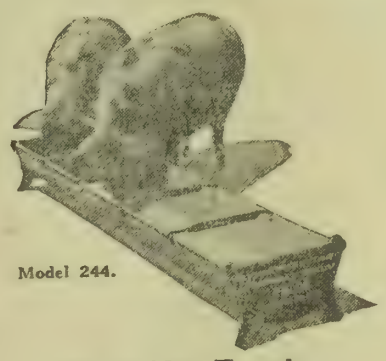
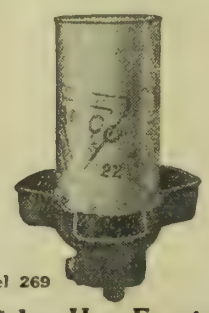

Model 258
Calco Self-Feeder for Hogs


Model 244.
Calco Hog Trough

Model 257
Calco Sheep Trough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Calco Hog Troughs—for healthy hogs—are made in sizes from 24 to 120 inches in length. Armco American Ingot Iron and Cast Iron construction throughout. Safe. Clean. Durable.

Calco Sheep Troughs—made for sheep. These troughs with capacities from 51 to 131 gallons, ready to go on supporting frame.

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Calco Automatic Hog Watering Fountains give constant supply of fresh water. Clean, durable and give long service.

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Lady Defendress 70th
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Poultry for Profit

POULTRY, PIGEONS AND RABBITS AT THE STATE FAIR.

(Written for Pacific Rural Press.)

These departments surprised all expectations in quality and numbers over farm exhibitions, proving a revelation to old-time exhibitors in these respects over former years. Especially was this noticeable in the Barred and White Plymouth Rocks, White and Silver Wyandottes, S. C. Rhode Island Reds, Buff and Black Orpingtons, Waterfowl and Turkeys. The latter department was the largest and best display of these birds ever made in California outside the P. P. I. Exposition, and all turkey breeders reported splendid sales at good prices of this popular and most profitable bird.

Another variety which exhibited the most remarkable quality in the poultry department was the S. C. Buff Leghorns, and to anyone who has ever tried their hand in breeding these most difficult and profitable birds for color can appreciate the splendid specimens exhibited here.

The ever-popular little bantams were here strong in all their glory, but we hardly thought in some classes they were up to quality of former years. This surprised us as their popularity is on the increase to a remarkable extent the past two years, as they have much to commend them in utility qualities, one commendation being that they lay a greater weight of eggs on grain consumed than any of their larger cousins.

The ever-popular White Leghorn, the great commercial bird of California, as usual, did not come up to expectations. They should in this event, there being but 12 single and 5 pens shown. Egg farmers should support the fairs better, as it has been proven to the general satisfaction of the public the bird that excels in utility and exhibition qualities can be produced the same specimen.

S. C. Rhode Island Reds contained the largest classes of any in the show-room, followed by the Barred Rocks. We noticed an increase in the Asiatics, with Anconas holding their own. Also a greater interest in "Capons," with some massive heavyweights on view of this meritorious branch of the poultry industry. Poultry Department with its remarkable growth the past several years has grown to such proportions the State's Poultry Bldg. is inadequate to properly display this great industry to the advantage and share it deserves, so vital to the interests of the commercialism of California, itself, destined to surpass those of all other states in time in the Union. With a larger and more spacious building and up-to-date cooping and equipment this department on the Fair Grounds will surpass all other departments, due to the fact of so many more exhibitors exhibiting in this department, so interesting and useful to the general public in every walk of life.

The Pigeon Department was also fully up to former years, but a more noticeable trend towards the ornamental varieties than utility breeds than former years and sales numerous. As to the Rabbit and Pet Stock Departments, the increase in displays was again remarkable, increment over former times here being over one third larger than former years, with all meat and fur varieties shown and splendid satisfaction in placing of the awards, not a murmur being heard.

Poultry Director E. F. Mitchell and his body of lieutenants were on the job continually trying to please all with satisfaction in this, the most complicated and difficult department on the State Fair Grounds.—"By Old Stand By."

A DIGESTIVE DISORDER.

To the Editor: About three weeks ago I bought forty-two half-grown turkeys. They had had very poor feed and were sall compared with mine. When I got them I noticed two with swollen places from the nortrils towards the ears under the eyes. One had only one side of the face swollen; the other, both sides. This swelling looks as though it were hard and is shiny, but not hard. Now several have the swelling, and both nostrils run and get stopped up with dirt and straws. Since I got them they have had barley stubble and all eat with fine appetite. They have always been used to roosting outside. They have plenty of good water. Do you think it might be a cold that would effect their nostrils? Would it be contagious.—Mrs. M. M., Ione.

We think this unhealthy condition of the membrane of the mouth, nostrils, and eyes of these turkeys is due to digestive disorders, and is not necesarily serious. We believe it is not contagious. Evidently they are living almost exclusively on barley grains they are able to find in the stubble, and which alone is an entirely too heating a ration. If they are not able to find a number of grasshoppers or other insects they should be provided with crushed bone and meat scrap. They must always be able to obtain all the hard, sharp grit and crushed shells they wish to eat. Some green feed will help to correct the disorder. To relieve the fowls, wash the mouth, nostrils, and eyes with a solution of boracic acid and warm water.

IMPROPER FEEDING.

To the Editor: I have 45 brown leghorn pullets six months old. A few have been laying for the past one and one-half months, and now they seem to be full of pin feathers—continually picking and eating one another's feathers. They pick the large tail feathers until a solid bleeding sore is the result. I have been feeding them salt, beef scraps, laying mash, Pratt's tonic, fresh rabbit meat, and everything I thought might satisfy their thirst for blood, but nothing seems to give results. I have also dipped them in strong Creoline water, and yet they continue their picking.—C. E. McD., Beaumont.

The presence of pin feathers indicate that the pullets are moulting, and as it is not usual for pullets hatched early in March to moult at this time of year we are inclined to believe that they have been improperly fed. Perhaps they do not obtain sufficient variety or the ration is badly out of balance. They should be fed with about an equal amount of mash and grains. Fowls that are not forced to scratch in deep litter for their grain feed are inclined to get into much mischief, including feather picking. At times this trouble is due to a total lack of salt in the feed. Occasionally it is developed by feeding a considerable amount of raw meat. This is particularly true when the parents were also fed liberally with raw meat. We recommend that these pullets be supplied with an attractive damp earth bath, and a scratching pen with litter a foot or more in depth.

A TWO-STORY INCUBATOR CELLAR.

To the Editor: An acquaintance has been telling me of a space and labor saver on the ranch in the way of a combined feed and incubator house. The incubator cellar had been dug out but instead of the usual one-story building being left, an extra story was added and this upper floor was used for a feed room. I would like to know if you think the same plan of building would be feasible for a combined incubator cellar and brooder house, the chicks to be in the upper story. I use the usual kerosene lamp incubators and a kerosene brooder stove. The principal objection to me was the fact that the heat would be rising from below and of course the brooder stove would throw the heat down, so the floor might be pretty warm. What do you think of the idea?—E. C. D., Monteca.

Quite a number of incubator cellars are provided with the additional story which is used for various purposes, including brooder houses. We know of no good reason why, under ordinary conditions, the second story should not be used for a brooder house but forethought must be used in planning for sufficient ventilation for the incubators.

Remember that it is much easier to keep birds healthy and well than to cure them after they are sick. Guard against disease by giving the fowls and chicks proper care at all times. Keep in mind the following: Lice, mites, filth, poor feed, dirty water, damp houses, drafts, and lack of care and attention breed disease. Sunlight, fresh air, clean houses and runs, good feed, fresh water, and good care and attention mean health, vigor, and profits.

Poultry Breeder' Directory

Rate, 4c. per word. Cash must accompany all orders.

BARRED PLYMOUTH ROCKS — "Nothing Better in Poultry." Wonderful layers. Choice hens and pullets for sale; also fine cockerels that will improve your flock. Now booking orders for hatching eggs. I have made a specialty of Barred Rocks for over twenty-two years. That's why our birds win at all the leading shows. Catalog free. Chas. H. Vodden, Box 3, Los Gatos, Calif.

GET MORE EGGS—Increase your egg production 100 per cent by using A. J. E. Egg Builder; positively guaranteed to double your egg yield; the results of 25 years experience; formula sent postpaid upon the receipt of $1.00. A. J. E. Laboratory, 514 Church St., San Francisco, Calif.

PETALUMA HATCHERY — Established 1902. If you want good fall layers get chicks in the fall. We guarantee satisfaction. There will be but few chicks hatched this fall. The wise ones are buying. Send for prices. L. W. Clark, 615 Main St., Petaluma, Cal.

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WHITE LEGHORN BABY CHIX from heavy-laying Hoganized Stock. Safe arrival of full count, live, strong chix guaranteed. Price list and interesting literature on application. The Pioneer Hatchery, 408 Sixth St., Petaluma, Cal.

SPECIAL SALE—Barred Rocks, White Orpingtons, White Houdans. Old and young stock. Get your cockerel for spring breeding, $2.00 and up. R. P. Lutzi, 1217 20th Ave., San Francisco.

RAISE FALL CHICKS—We will have them every week. R. I. Reds, Barred Rocks, White Leghorns. Write for special circular. See why they pay. Stubbe Poultry Ranch and Hatchery, P. O. Box 67, Palo Alto.

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GOLDCROFT BUFF ORPINGTONS, Columbian Wyandottes and White Leghorns. Heavy laying strains. Breeders and young stock. Samuel Abrams, Box 13, Los Altos.

PULLETS, $2.00 Cockerels, $5.00 each and upward; White Leghorn, Brown Leghorn, White Rocks. Mahajo Farm, P. O. box 597, Sacramento, Calif.

CHICKENS, DUCKS, GEESE, GUINEAS, Pea Fowl, Pigeons. Wm. A. French, 545 W. Park St., Stockton, California. Stamps.

EASTMAN'S "BRED-TO-LAY." Hoganized and trapnested. Barred Rocks. Fall Chicks. Fairmead Poultry Farm, Fairmead, Cal.

BABY CHICKS from selected S. C. White Leghorn hens. Write for prices. Tupman Poultry Farm, Box 7A, Ceres, Calif.

BOURBON RED TURKEYS—Buff Orpingtons. The Ferris Ranch, R. 2-144D, Pomona Calif.

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Seize the hen and dust Instant Louse Killer into the feathers. The handy sifting top can makes it convenient to use. Sprinkle it in the nests, on the roosts and floors. Put Instant Louse Killer in the dust bath occasionally—your hens will do the rest. This means louse prevention.

FOR STOCK

With one hand stroke the hair the wrong way, with the other sift in the Louse Killer. Especially good for lousy colts.

GUARANTEED. The dealer will refund your money if it does not do as claimed.

1 lb. 30c, 2½ lbs. 60c (except in Canada)

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Ashland Ohio

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FEED FOR SWINE STOCK AND POULTRY
ASK YOUR DEALER

A BOY'S DOG.

They say he's just an ordinary cur—
My pup;
An' all the 'ristocratic dogs in town
Are higher up
In ped-i-gree!
(That means dog families, an' 'bout what
Good dogs should be.)

But he's a dog—four legs, two ears, a tail—
An' not
A dog in town has more, 'cept ped-i-gree!
If so, now what?

He's got sense, too, inside his homely head,
About
Like folks; that time I couldn't swim
He pulled me out.

The stylish dogs won't chase a stick
Or bring
A package; just trot in the park
Upon a string!

His color doesn't matter; long ago
I cried
But now I know
That though they call him just a yellow cur,
He's white inside!

—Frances C. Hamlet.

THE CARDINAL'S KITTEN.

"Mistigri, will you let Raton alone? And you, Cyrus; I'll teach you not to disturb my papers!"

After having spent several hours on affairs of state, Cardinal Richelieu was relaxing for a few moments, watching the playing of his pet kittens. There were three of them—not to mention their dignified mother, Blanchette—taking possession of his severely furnished study; and they were chasing one another about, rolling over and over on the floor, jumping on chairs and secretaries, and even invading his work-table, without paying the slightest respect to the papers with which it was covered.

Mistigri was the boldest of the trio—Mistigri, whose emerald eyes were constantly in movement, and whose incipient whiskers stood out as saucy looking as the mustache of a young soldier.

Richelieu was very fond of cats. He took genuine pleasure in watching their graceful movements, and their lazy gestures as they stretched their little limbs in luxurious indolence. To see him smiling at the tricks and gambols of Blanchette and her progeny, one would hardly recognize the powerful and redoubtable Minister of State, whose terrible edicts caused all France to tremble.

No; he wasn't soft-hearted towards men, this great Cardinal. Just now it was the duellists who had good reason to know it. To abate, or do completely away with a recognized abuse, he had decreed that whoever crossed swords in mortal combat should be at once put to death. Already many nobles of the first families in the kingdom had been beheaded for disobedience to this decree.

Even now a servant introduced into his study the special judge charged with the prosecution of these duellists—the pitiless Laubardemont.

"Well, anything new, Judge?" asked the Cardinal.

"Your Eminence," replied Laubardemont, "another young hot-head has permitted himself to defy us! Baron Merancourt has been arrested just when he was provoking another gentleman to mortal combat right here in Paris."

The Cardinal turned his glance from the playful kittens. His long, pale countenance took on an expression of cold and hard resolution.

"In that case," he rejoined in a hoarse tone, Baron Merancourt will die like the others."

Without evincing the least emotion, the judge continued:

"His fiancee begged to be allowed an interview with your Eminence. She desired to throw herself at your feet and implore your pardon for the offender. Following your instructions, I informed her that you could not receive her."

"You did well, Judge. How old is this Merancourt?"

"Twenty."

"Only twenty? And on the eve of his marriage? What madness possessed the unfortunate boy? But never mind, the law must be obeyed."

Laubardemont handed to the Cardinal a roll of parchment from which dangled a red seal.

"Your Eminence, here is the sentence. It needs only your signature."

Richelieu took the parchment, and dipped his pen in the inkstand. As he was about to affix his name, however, he appeared to hesitate, as if consulting with himself. He was evidently finding it a little inconvenient to send to the scaffold a boy of twenty. For the first time, perhaps, a lightning flash of pity penetrated to his heart of bronze.

"Judge," said he to the surprised Laubardemont, "leave the sentence here. Before signing it I wish to reflect a little on the case of this young fool. Come back in half an hour. I will be at the King's Council, but you will find the parchment on the table here. If it is signed Baron Merancourt must be executed by tomorrow. If it is not signed you will await further instructions."

Laubardemont went out. The inflexible Minister of State remained alone, pensive, in the depths of his big easy chair. Mistigri was purring on his knees, while at the same time biting with its sharp little teeth at the red buttons of his cassock. Blanchette was quietly making her toilet on the carpet; and Raton and Cyrus, fatigued with their running about, were huddled up close to each other fast asleep.

Fifteen, twenty minutes sped by. The Cardinal was still toying with the pen he held between his slender fingers. Would he sign? Would he pardon? Finally political reasons overcame his scruples. With a firm hand he affixed his signature to the sentence. Then, having gently deposited Mistigri on the cushion of his chair, and looking quite calm and at ease, he betook himself to the King's Council.

Mistigri, however , did not stay long on the cushion. She appeared more lively, more mischievous than ever. Her little emerald eyes seemed to be saying: "Now that we are alone, there must be something doing."

Immediately she bounded upon Raton and Cyrus, both of whom awoke with a start. Then she set out to plague the peaceable Raton, chasing him, rolling him over, biting his ears, and annoying him so much that poor Raton, seeking a refuge, jumped on the easy chair, and from that to the work-table, encumbered with the Cardinal's papers. But Mistigri was after him without a moment's hesitation. As she jumped on the table she upset the inkstand, and the ink poured out blackening the papers and Mistigri's paws.

When Richelieu entered his study the next morning, he was in a very bad humor. It was not on account of Mistigri's accident; for his servants had cleaned things up so well that the Cardinal did not notice anything out of the way,—at least at first.

He was bitterly regretting, however, his decision of the previous evening. He had just learned that Baron Merancourt was a young man of excellent dispositions, and one who had given proofs of his courage more than once on the field of battle. And, then, he was so young!"

"Ah!" he said to himself, as he petted Mistigri, who was arching her back on the arm of his chair; "I should not have been in such a hurry to sign that document."

Just then Judge Laubardemont was announced.

"Good morning, Judge! Well, I suppose Baron Merancourt died like a brave man?"

An expression of profound surprise marked the features of the Judge.

"Died? But, your Eminence, at the present moment the Baron is as much alive as you or I."

"Alive? Thank God! But how is that possible?"

"I obeyed the orders of your Eminence. There was no signature to the document. Look at it yourself."

As he spoke the Judge took up the parchment from the table and held it out to Richelieu. It was in vain, however that the latter sought his signature; it had disappeared in a large blot of ink that covered one corner of the document,—a blot due to the antics of Mistigri.

The Cardinal remained silent for a moment, disturbed, almost suspicious.

"That blot," he asked himself—"who made it?"

As he put the question he felt an unaccustomed weight on the cord that held his gold cross. It was the disrespectful Mistigri who was clinging to it with all the strength of her sharp little claws, while purring with unusual force.

All at once her master noticed something abnormal about his favorite.

"Mistigri, Mistigri; what have you been doing with your paws?" Then, with a closer look at the dainty but discolored feet, he exclaimed: "But, my faith, it is ink! Ah, now I understand everything!"

His slender white hand rested fondly on the silky fur of the kitten as in a broken voice he murmured: "Oh, Mistigri, if you only knew the joy you have given me!"

Turning then towards Laubardemont, he said:

"Judge, we will content ourselves with sending young Merancourt to his country estates for some time. He may be married there at his leisure, and may reflect, too, on the inconvenience of lighting torches in a high wind."

As the Judge was taking his departure Richelieu glanced with a tender smile at Mistigri, who was engaged in a race with Raton and Cyrus all round the study, and moralized:

"And thus a poor little kitten can save the life of a gentleman. Ah, Judge, this shows us that Providence sometimes makes use of the smallest things to teach the great the lesson of clemency!"—Neal Mann in the Ave Maria.

Home Circle Department

CINNAMON CAKE.

One and a half cups flour, three-quarters cup sugar, one and a quarter cups milk, two heaping teaspoons baking powder, one of two eggs. Sift ingredients in a bowl, add eggs, without beating; add milk enough to make a soft dough or batter; spread dough half an inch thick in round pan; cover with sugar, cinnamon, chopped nuts, tablespoon melted butter, a little milk sprinkled over. Can be covered with fresh fruit, halved, and covered with sugar, cinnamon and milk.

FIG JAM.

If properly made it has no equal. Two pounds of figs cut in small pieces without peeling. Add about 1 pound of sugar, or a trifle more, if the taste demands it. Let stand a short time till portion of sugar is melted. Then cook till thick and the fig skins take or a crystallized appearance. Do not add any water or in any case not more than a few drops. It requires almost constant stirring after a short time, but it is worth the effort. It will cook in about 45 minutes on quick stove.—Contributed.

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Women at the State Fair

(Written for Pacific Rural Press.)

We don't mean feminine attendance at the fair, though the women were there—thousands of them. Nor do we refer to things that specially attracted the attention of women, for they were interested in everything, and just as intelligently interested in most things as were the men. But we would speak of things at the fair indicative of what women are thinking about and what they are doing along progressive lines.

The Women's Building.

Oh yes, there were wonderful displays of embroidery and hand-painted china and all the other fixings dear to the feminine heart, but there was far more; there was a revelation of the spirit of modern womanhood.

At the door, the writer was greeted by a well-dressed, womanly looking woman with a circular and a slogan. The slogan was "Help us put the luck in thirteen." The circular was a very concise statement of the reasons why the Community Property Bill, No. 13 on the ballot, should be passed. At one end of the large exhibit hall was stretched a huge banner bearing the legend, "Put the luck in 13. Vote Yes."

At the other end of the hall, white clad nurses and doctors were measuring and weighing babies and examining children's teeth, under the auspices of the Bureau of Child Hygiene, a department of the State Board of Health. I saw several cherubs weighed, measured and their mothers instructed in their care—and not a baby cried.

There you are! Interest in legislation as it affects the home, at one end of the hall. Keen interest in ideal babyhood at the other end, and between the two the pretty feminine things that women use to brighten the home. A fine revelation that, of the spirit of modern womanhood.

Home Demonstration Activity.

Over in the State Farm Bureau tent was another interesting display. The Home Demonstration Agent for Sacramento County was in charge of the women's interests there with an exhibition of what farm women are up to at the present time. Four things especially impressed the writer.

The Homemade Dehydrator.

It is nothing more than a wooden box made of old packing cases and raised from the floor a foot or so to accommodate a one-burner oil stove underneath. This box is 18x32x36 inches high. Inside are slatted trays, one above another, about six feet apart and fixed to slide in and out. It was going full blast during fair week and turning out the choicest kind of dried fruits and vegetables. The department has been demonstrating this recently in various sections, and as a result over 300 have been made and are in use. Full instructions for making and operating one may be had for the asking from the Home Demonstration Department, State University. It strikes us that any housewife is foolish to fuss with canning vegetables when 50 pounds of string beans, for example, may be dried in three hours, and later on when soaked brought back to as fine a condition as when picked from the vines.

An Individual Dress Form.

We are reliably informed that many women are now making their own dresses. Some get fits and some cause fits. To get the fit without the fits, the dress form has come into vogue. An adjustable dress form, like no woman on earth or in the heavens above (there are none below, of course), but that may be contracted or expanded to something remotely resembling a particular figure, may be had for some $25 more or less. Comes the Home Demonstration Lady, not with a dress form but with a replica of the exact figure of the individual woman who desires to make unto herself a new gown. Don't ask us how it is done. We are not that kind of a writer. But we did get it through our head that one on display, about average size we should say, cost 65c for an undervest, 10c for muslin, and 15c for shellac, a total of 90c. That's good but not too good to be true. For particulars see your Home Demonstration Agent. She knows how.

The Pressure Cooker.

The demonstrator was enthusiastic about this system of cooking. A pressure cooker is simply a heavy kettle with steam tight cover fitted with pressure gauge and safety valve. A little water is put in the bottom of the kettle, the food comes next in wire baskets, and the cover is screwed down. The kettle is then left over a full blaze till steam is up, when the blaze is turned down and the whole thing forgotten until dinner is ready to serve. It saves time, fuel, labor, temper and complexions, and it gives a better flavor to the food. Speaking of time saved, Miss Nevenzel cooked to a turn a tough old rooster with spurs an inch long in thirty minutes. With the preacher coming to dinner and only a short time to prepare for him, what a boon is the pressure cooker! It will save pullets as well as time.

The Septic Tank.

A model of the septic tank recommended by the Home Demonstration Department elicited many inquiries. Farm women are becoming more and more interested in this matter of home sanitation, and the time is, not far distant, let us hope, when there will be no farm home without an adequate sewage disposal system. The time is not far off if the women visiting the tent may be taken as an average sample. And if they are but the more advanced ones, they are going back home to be missionaries.

Stopping Waste of Woman Power.

It is about here all right—the day when power on the farm will include the house. And as modern machinery saves man power, modern machinery is going to save woman power.

As you reviewed the exhibits you could not fail to be impressed with the number and variety of machines now on the market for lessening the labor of the farm home. The electric power generator itself for sections not served with electric power, and then power machine after power machine for doing housework. Manufacturers are not making these things for fun, they are sure they can sell them or they wouldn't make them. They are making them from an ice machine to a flatiron. The day dawns.

Waterfy Your Home With the Leader

Putting in a water system to supply your home and your stock deserves careful consideration. A mistake is serious and expensive. A convenience that doesn't work right, that has to be tinkered with, is an *inconvenience*.

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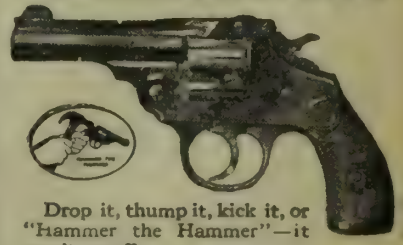

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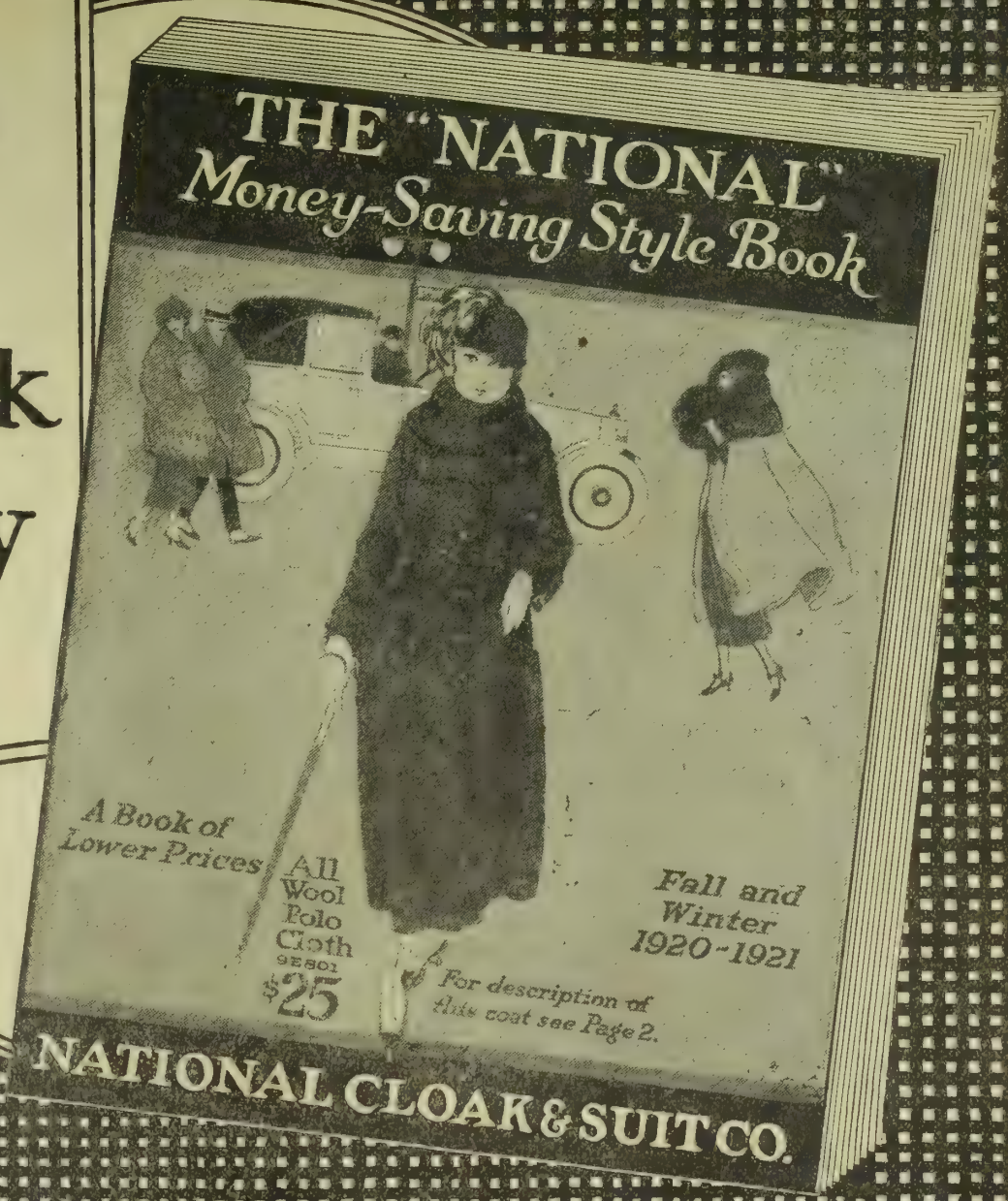

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THE MARKET REPORTS

Compiled from Independent Sources.

SAN FRANCISCO

San Francisco, Sept. 15, 1920.

WHEAT.

Although not yet very active the wheat market, along with other grains, has commenced to show some activity. The new crop is about the same to date. Wheat is very scarce.

Wheat ..... $3.90@4.00

OATS

The market is still very weak but indications point to an increased activity during the coming week. Most samples on the exchange although known as feed oats, show a tendency to feed off.

Red Feed, ctl. ..... $2.85@3.15

BARLEY

A weaker market precipitated a slight drop in prices. With a slightly increased volume of poking on coming soon. Futures are slightly lower in price, although quotations are very low.

Feed Barley, ctl. ..... $2.30@2.40

CORN

Corn prices are the same, awaiting the new crop. Small receipts are expected during the week.

Eastern, white ..... Nominal
do, brown ..... $3.10@3.75
California ..... $3.80@3.85

FEEDSTUFFS.

The feedstuffs market picked up in activity toward the end of the week it could be called lively, with increased activity indicated for the coming week. With heavy receipts the market prices have declined in some brands. Stubble and dry feed has about taken off and others are commencing to come in. Mill runs and bran are on the market. Wholesale prices are very steady.

Rolled Barley $50.00
Rolled Oats ..... $55.00@60.00
Alfalfa Products ..... $45.00@52.00
Cracked Corn ..... $80.00@81.00

HAY

Because of overstocking of the market, declines in hay prices are expected this week. So far prices remain the same as quoted last week. Receipts of hay during the week were 2,632 tons. Receipts for the previous week were 2256 tons. Trading continues dull, although alfalfa is in slightly better demand, especially for California stock. Very few inquiries for future shipments are reported and the export trade has fallen considerably. With transportation conditions good, dealers' warehouses here are becoming full, and it is thought concessions may be necessary next week to dispose of the surplus product. Hay in the fields is being offered at reduced figures and the movement is becoming higher.

Wheat, hay new ..... $26@28.00
Tame, oat new ..... 23@25.00
Wild oat new ..... 17@19.00
Barley ..... 17@20.00
Alfalfa 2nd cutting ..... 21@25.00

RICE

Heavy price declines were the order of the week with the demand growing more quiet every day. The market closed very dull. Practically all prices are substantially lower.

California, fancy (choice $9.50) $8.25
Southern Honduras, long grain $12.75
China, No. 1, double mat $10.75
Blue Rose, fancy $10.50
Fancy Head, bulk (Philips & Co.) $12.75
No. 1 Calif. Jap. $8.25
No. 2 Calif. Jap. $7.85

FRESH FRUITS

(Wholesale prices paid by commission houses.)

Apricots are off the market. Plums and pears are arriving well with a strong market to receive them. Apples are doing well. Gravensteins are almost finished. Bellflowers are plentiful and arriving very green. The market price is expected to drop on this variety during next week. Only light receipts of berries are reported, with a light market to become. The demand for cantaloupes is small with a big falling off in receipts. Fewer watermelons arrived last week. While the market became stronger, prices are unchanged as yet. Persian melons are arriving in quantities.

Apples, Gravenstein, fancy ..... 2.25@2.75
do, Bellflowers $1.35
do, Red Astrakhan ..... Nominal
do, Bellflowers $1.55
Plums ..... $1.25@2.00
Peaches, 4 baskets ..... $1.25@1.50
Pears ..... $2.00@4.00
Strawberries, 6 12-oz. boxes ..... 75@90c
do, 6 8-oz. boxes, drawer ..... 50@65c
Blackberries, drawer, 12 oz. draw. 30@35
Raspberries, drawer ..... 70c@85c
do, 8-oz boxes ..... 30c@40c
do, 8-oz. boxes ..... 40@50c
Cantaloupes, Standard ..... 85@1.15
do, Flats ..... 40@50c
Watermelon, lb. ..... 1@1¼c
Persian Melons, lb. ..... 2@2½c

POULTRY

Heavy receipts are reported, coincident with a weak market for all grades except broilers. With the exception of the latter further price declines are thought likely if the heavy receipts continue.

Broilers ..... 47½@50c
Hens, mixed color ..... 37@40c
do, Leghorns ..... 25@30c
Roosters, young ..... 42@45c
do, old ..... 17@20c
Friers ..... 40@42c
Squabs ..... 55@60c
Geese ..... 25@30c
Ducks ..... 25@30c
do, old 23c
Belgian Hare, live ..... 18@20c
do, dressed ..... 22@25c
Jack Rabbits ..... Nominal

BUTTER.

The market has been steady and remains so with price recessions at the end of the week. The demand, however is firm.

	Thu.	Fri.	Sat.	Mon.	Tu.	Wed.
EExtra	..	66	..	65½	65½	65½
Prime 1sts	..	60½	..	60½	60½	60½

EGGS

will continue to decline for some time. The market is very firm, especially on fancy eggs.

Receipts have fallen off considerably and Prices on extras dropped a little at the close of the week, while other grades ruled firm or advanced. The demand in Eastern markets is heavier by 150 per cent than it was at this time last year, and indications point to still heavier shipments East.

	Thu.	Fri.	Sat.	Mon.	Tu.	Wed.
Extra	..	67½	..	67½	66½	66½
Ex. Pullets		61		61	60	60½
Dirties	..	55½	..	55½	55½	58½
Undersized	..	43½	..	43½	44	44½

CHEESE

Average prices for the week were an advance over the previous week, but at the close some grades sold lower than last week's quotations. There is a big demand from the eastern markets for all types of cheese. Heavy receipts at the close of the week caused the firmness of the close, which is thought to be only temporary.

California Flats, fancy 31½c
do, Fancy 32½c
Oregon, triplets 26c
California Y. A. Thirds ..... Nominal

HONEY.

Honey is a little weak on the lower grades. The market on the whole continues dull with no price changes.

POTATOES, ONIONS, ETC.

(Wholesale prices quoted by commission houses.)

The market for both potatoes and onions is considerably easier. The demand was lessening toward the week end. Receipts of potatoes have been rather heavy but good stock is scarce. Buyers are picking out the best stock and there but little demand for the poorer grades. Storing of buckskin brown onions has commenced. Summer squabs has doubled in price. The market for other vegetables is dull.

Turnips ..... $1.25@1.50
Peas, Halfmoon ..... 12@13c
Beans, wax, lb. ..... 5@6c
do, green, lb. ..... 7@8c
Carrots, per sack ..... $1.25@1.50
Green Corn, each ..... $1.50@2.50
Lettuce, local, doz ..... 25@30c
Cucumbers, Alameda, lug box ..... 50@75
Tomato, River large box ..... 50@1.00
Rhubarb, Strawberry, box 40 lbs. $1.50
Summer Squash, box, 35-40 lbs. ..... 75@1.00
Egg Plant, box ..... 50@75c
Potatoes, New River, cwt. ..... $2.25@2.50
Onions, yellow, sack ..... $1.00@1.25
do, Red ..... 75c@85c
Green Onions, box, 25 lbs. ..... $1.25@1.50

BEANS

Bean prices have dropped and there is no market. Very little shipping is going on and continued quiet is expected.

Bayos ..... $12.50@14.00
Blackeyes ..... 6.00@6.25
Cranberries ..... $6.50@6.75
Pinks ..... $5.75@6.00
Red Mexican ..... $7.50@7.75
Large Whites ..... $5.50@5.75
Small Whites ..... $5.50@5.75
Limas, Ass'n prices, South $11.42
do, Baby, Ass'n prices, South $11.42
Limas, S. F. prices ..... $10.00@10.50
do, Baby, S. F. prices ..... $9.00@9.50

DRESSED MEAT QUOTATIONS.

Western Meat Co., Sept. 15, 1920.

Steers, No. 1 ..... 16½@17½c
do, 2nd quality ..... 15½@16c
Cows and Heifers ..... 14 @16c
Calves, as to size, etc. ..... 16 @22c
Sheep, Wethers ..... 16 @18c
Lambs, Suckling ..... 21 @22c
Hogs ..... 24 @25c
do, Ewes ..... 14 @16c

LOS ANGELES

Los Angeles, Sept. 14, 1920.

BUTTER.

Butter prices continue to advance, today's quotations being 2c above last week's prices. Receipts are better for this week than they were the previous week, reports report that the home trade is taking all the receipts which were for the week, ending today, 356,000 lbs. The prices for eggs are those paid the producer.

Extras, cases included 67c
California prime first 65c
California first 64c

EGGS.

Receipts of eggs marked for the week just ending show a decided slump, as against those of the week before, receipts amounting to 1,000,000 dozen, or 50,000 cases. Extras are down 3c and pullets 5c, and case counts 2c. The Exchange reports a steady demand, the home trade taking all the arrivals. For the week there was per cent of cases. We quote prices paid the producer.

Fresh ranch, extra 67c
do, case count 62c
do, pullets 58c

HAY.

The new market continues quiet especially green hay. Receipts the past week were very heavy. Not much alfalfa coming in now, sales somewhat slow. Prices weak, but they are unchanged. We quote f. o. b. Los Angeles.

Barley, hay ton ..... $22.00@24.00
Oat hay ton ..... 25.00@28.00
Alfalfa, Northern ton ..... 28.00@30.00
Alfalfa, local ton ..... 28.00@32.00
Straw ton ..... 14.00@16.00

BERRIES.

Very little change in this market since last week. Receipts are very light, but not many wanted anyway. Sale are slow because of present high prices it is said. Blackberries show a decline today as against last week's prices.

prices. We quote from growers.

Strawberries, per 30 bas. crate $5.75@6.00
do, poor to choice ..... 5.50@5.75
Blackberries, per 30 bas. crate ... $2.75@3.25

MELONS.

Receipts of cantaloupes falling off with today's report; also they are quoted higher than a week ago and a good demand for them. Honey Dew melons and Casabas slow sale, but prices remain steady. Watermelons are in very good demand at last week's prices and fair receipts.

Home-grown Tip-top, standard .. $1.25@1.50
do, Rocky Ford, standard .... $1.50@1.60
do, Pineapple, standard ..... $1.25@1.50
do, Paul Rose, standard ..... $1.50@1.60
Honey Dew standard crate ..... $1.00@1.25
Casabas, lb. ..... ½@1c
Watermelons, lb ..... ¾@1c

POULTRY.

Receipts in the poultry market are not so good today nor have they been good all week, but the tone of the market is better. Broilers, friers and hens are all reported to be selling well at today's quotations. Ducks also selling well. Turkeys are very scarce, in good demand with prices firm.

Broilers, 1 to 1½ lbs. 31c
do, 1½ to 1¾ lbs. 34c
Friers, 2 to 3 lbs. 32c
Hens ..... 25@32c
Roosters (soft bone), 3 lbs. and up 38c
Ducks ..... 17@20c
Turkeys ..... 40@44c
Geese 25c

BEANS.

This market is still very quiet and there has been nothing moving during the past week. The new crop is being harvested, but no sales are being made. Prices remain unchanged. We quote from growers.

Limas per cwt $10.00
Large white, per cwt ..... $5.25@5.50
Small white, per cwt ..... $5.25@5.50

FRUITS.

The fruit market today is much the same condition as it was a week ago. All efforts to keep prices up are meeting with a good demand. Prices are generally steady; a few lots have changed, sell for some less, very few lots. Receipts of anything are a little off from a week ago.

Plums, Santa Rosa, lb. ..... 8@9c
do, Satsuma ..... 7@10c
do, Black Diamond, lb. ..... 8@10c
do, Burbank, lb. ..... 5@6c
Nectarines, lb. ..... 7@8c
Peaches, Freestones, lb. ..... 5@6c
do, Clings, lb. ..... 5@7c
Figs, lb. ..... 7@12c
Cantaloupes, lb. ..... 4@5c
Grapes, Malaga, lb. ..... 6@7
do, Muscat, lb. ..... 5@6
do, Hamburg, lb. ..... 6@7
Tokays lb. ..... 7@8
Apples:
do, Skinner's Seedlings, packed box ..... $2.00@2.50
do, Gravensteins, packed box $2.00@2.50
do, Bellflowers, 4 tier ..... 1.60@1.75
Pears, lb. ..... 1@9c

VEGETABLES.

The vegetable market is fairly well supplied today. All fresh stuff is in good demand. White onions are higher but sale is slow. Yellow onions dull and lower. Receipts in potatoes quite heavy during last week and they are not selling readily, though lower. Lettuce is dull and quoted lower and what is coming in is of poor quality. Cucumbers and summer squash steady and selling fairly well. Tomatoes coming in freely and good demand for them. Good receipts in string beans. They are lower and in fair demand today.

Potatoes, local, cwt. ..... $2.00@2.25
do, Northern, cwt. ..... $2.75@3.00
Onions Stockton, white, cwt. ..... $2.00@2.25
do, yellow, cwt. ..... $1.50@1.75
do, local, crate ..... 60@75c
Lettuce, crate ..... $1.00@1.25
Rhubarb, per 30-lb. box ..... 80@1.00
Peas, lb. ..... 12@16c
Carrots, bunches ..... 30@35c
Summer Squash, local, lug ..... 50c@1.00
String Beans green lb. ..... 9@10c
do, wax, lb. ..... 9@10c
do, Kentucky, lb. ..... 10@12c
Cucumbers, lug ..... 50@$1.00
Tomatoes, home-grown, No. 1, lug 50@60c
do, No. 2 ..... 25@35c
Bell Peppers, lb. ..... 3@4c
do, Chile lb. ..... 4@5c

SPECIAL DECIDUOUS REPORT.

Sacramento, Sept. 15, 1920.

Notwithstanding the fact that grapes are leaving the State at the rate of 250 to 300 carloads daily, the Eastern markets are bearing up under the burden remarkably well. There are a few plums and pears moving, but not enough to effect the tree fruit market.

A mixed car of plums and pears from Placerville sold in New York September 13. Grand Dukes, 2.87½ per crate; Gros prunes, $3.12½. Bartlett Pears $6.28 to $7.50 per box; car grossed $3,576.00. A mixed car from Newcastle: Cling peaches, $3.37½ per 21-pound box; Zinfandel grapes, $2.25 per crate. A carload of Lodi Tokays grossed in New York Sacramento county, grossed $4,200 crates, selling from $3.75 to $4.15, sold in Baltimore. A carload of odi Tokays grossed in New York $2,652. A Clotho car of Malagas sold in New York for $2,798. Carload of Malagas from Hooper sold in Cleveland grossed $2,564. Carload of Malagas sold in Philadelphia grossed $2,233. Chicago grossed $3,386 on car Florin Tokays.

SPECIAL CITRUS REPORT.

Los Angeles, Sept. 14, 1920.

It is not to be expected that the orange market would show any decided strength at this stage of marketing the remaining Valencia crop, as the fruit is not of that quality it was but a few weeks ago; however, the market is holding up remarkably well under those conditions.

New York.—Valencias hogher on good stock, prices ranging from $5.40 to $10.00 per box. One car, practically rotton, sold at $1.44. Few other cars, in poor condition, sold below $4 per box. Lemon market unchanged—$3@$3.75.

Boston.—Valencias, $3@$8.00, mostly $5@$6.50. Lemon market easier, $2.35@3.00.

Philadelphia.—Valencias in better demand, selling at $3.85@7.50. Few cars sold below $5.00.

Sales Dates.

Sept. 27th—McCarty-Shinn-Elliott, Poland-Chinas, Tulare.

Sept. 30th—Wm. Pierce, Shorthorns, Sutsun

Oct. 15th—J. W. Benoit, Holsteins, Modesto.

Oct. 19-21—Rosamines Ranch, Holsteins, Durocs, Percherons, Riverside.

Oct. 20th — Kings County Poland-China Breeders' Consignment, Hanford.

Nov. 4th—Pacific Coast Hereford Breeders' Association, Herefords, Sacramento.

Nov. 5th—John H. Cazier & Co., Herefords, Sacramento

Nov. 6th—H. M. Barngrover, Herefords, Sacramento.

Infertile eggs will withstand marketing conditions much better than fertile eggs.

Special Livestock Market Report

San Francisco, Sept. 14, 1920.

CATTLE—Receipts in this market continued sufficient to meet demands, even to the extent of making for a slight decline in the price of topgrade steers.

Steers, No. 1, 1000-1200 lbs. ..... 9@9½c
do, 1200-1400 ..... 8½@9c
do, 2nd quality ..... 7@7½c
do, thin ..... 5½@6½c
Cows and Heifers, No. 1 ..... 7½@8c
do, 2nd quality ..... 6@7c
do, thin ..... 3@4c
Bulls and Stags, good ..... 4@5c
do fair ..... 3@3½c
Calves lightweight ..... 10@10½c
do, medium ..... 8@9c
do, heavy ..... 7@8c

SHEEP—Continued arrival of good quality lambs throughout the week counteracted the slight advance in price of last week and the market, though holding a level, showed inclination to weaken with little more encouragement.

Lambs, milk 9c
do, yearling 7¾c
Sheep, wethers ..... 7@7½c
do, ewes ..... 5½@6c

HOGS—Though topgrade pork is held firm, incoming shipments of other grades were sufficient to cause declines of from ½ to 1c, with indications that receipts would continue ample.

Hard, fat, grain-fed, 100-150 lbs 15c
do, 150-225 lbs. 16c
do, 225-300 lbs. 15½c
do, 300-400 lbs. 14c

Los Angeles, Sept. , 1920...

CATTE—Offerings of beef cattle all during the past week were very good, but the market was weak with only a fair demand, cows as well as steers being offered more freely. Prices show no changes from a week ago.

Per cwt. f. o. b., Los Angeles:

Beef steers, 1000@1100 lbs. .. $8.50@10.00
Prime cows and heifers ..... $8.00@8.50
Good cows and heifers ..... $7.00@7.50
Canners ..... $4.50@5.00

HOGS—This market is steady, with only a fair demand reported from the fresh meat trade. Prices are steady and unchanged from last week. Receipts are only fair.

Per cwt. f. o. b. Los Angeles.

Heavy, average 275@350 lbs. $12.00@12.50
do, 225@275 lbs ..... $14.00@14.50
Light ..... $15.50@16.50

Rough docked 20 lbs. piggy sows 40 lbs. and stags, 40 per cent.

SHEEP.—A good many lambs continue coming from Nevada. There is a fair demand for lambs, because they are of good quality, and an equally fair demand for ewes and wethers. Prices are steady with no change reported today.

Prime wethers ..... $6.00@7.00
Yearlings ..... $6.00@7.00
Prime ewes ..... $5.00@6.00
Lambs ..... $8.00@10.00

Portland, Ore., Sept. 14, 1920.

CATTLE —Slow; no receipts. Quotations unchanged.

HOGS—Steady; no receipts. Quotations unchanged.

SHEEP — Steady; receipts 1105. Prime lambs, $6.50@10.50; culls, $6@8.50; ewes, $2.25@6.25; yearlings, $6.50@7.75; wethers, $6@6.75.

EASTERN LIVESTOCK.

Chicago, Sept. 14, 1920.

CATTLE.—Receipts, 12,000. Choice steers strong to 25c higher; top strong, $18.25; bulk, good and choice, $16@18; medium and common grades, slow, steady; good cows, $9.50@12.75; steady; medium grades weak, $6.50@8.50; canners and cutters, $4.25@6; bologna bulls, strong, $6@7c; choice veal calves, $17@18; 25c to 50c higher; grassy kinds steady; feeders steady to 25c higher; range cattle of plain quality and steady, $9@12.

HOGS.—Receipts, 17,000; mostly 25c to 35c higher than yesterday's average; closing with 10c to 15c of the advance lost on packing grades; top, $17.30; bulk, light and butchers, $16.50@17.25; bulk packing sows, $15.25@15.65; pigs, 25c to 50c higher; bulk, desirable kinds, $15.25@16.

SHEEP — Receipts, 17,000; native lambs mostly 50c higher; one choice deck, $14.25; bulk, $13.25@13.75; fat western lambs, 25c higher; good Idaho, $14.25; sheep strong to 25c higher; some yearlings up more; top ewes, $7; yearlings, $10.50; feeders strong.

MARKET COMMENT.

California Almond Growers Set Price.

T. C. Tucker, manager of the California Almond Growers' Exchange, states that even though the cost of production of the 1920 crop of almonds was the highest known, and is approximately 33 1-3 per cent greater than 1919, the California Almond Growers' Exchange, a non-profit, co-operative association of some 2,800 almond growers, has, through their representatives, announced the opening prices on new almond crop 1920 California almonds, now effective, as follows: Nonpareil, 25 cents; I. X. L., 25 cents; Ne Plus, 24 cents; Drake, 17 cents; Languedoc, 17 cents; Hardshell, 12 cents. These prices are f. o. b. Exchange California warehouses and carry a cash discount of 1 per cent. Mr. Tucker says that on the basis of these prices the almond growers are actually producing the nuts in 1920 at a loss, taking into consideration the high cost of labor and material that have prevailed and the shortage of crop, which is estimated at 62 per cent normal.

Vegetable Market Dull.

We sauntered through fruit and vegetable row today to find the entire section chuck-ablock with every variety of tree and vine, especially watermelons and tomatoes. It looked as though there were enough of the latter to supply the Pacific Coast. They were cheap on the "street," but, O, my! what a difference when placed before you—four transparent slices clinging to a leaf of pale lettuce, 15 cents—more service. The bean market is strong, because of scarcity of supply. Celery very weak; market well stocked. Fruit prices, as a rule, steady, although peaches in good supply; stock above the average. Grapes plentiful; market steady, as the demand for good stock is about equal to the supply.

Onions in Poor Demand.

While there is a light movement of onions, 12 to 18 cars per week, throughout the State, the price remains ruinously low. Demand poor, movement slow, market dull. Stockton, Yellow, sacked, $1.50@1.75; Whites, $2.25@2.50; Brown, mostly $1.65@1.85. It seems strange that prices on onions should remain so low as the daily shipments from all onion producing points throughout the United States are 70 to 85 cars, which would not give a smell around, to say nothing of taste, yet the producer gets nothing. Something wrong somewhere. When we kick on the high prices they tell us its service we are paying for and not the goods.

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AGENTS — Mason sold 18 Sprayers and Autowashers one Saturday; profits, $2.50 each. Square deal. Particulars free. Rusler Company, Johnstown, Ohio.

TO LEASE ON SHARES—Ninety-acre orchard—Apples, Bartlett Pears—in Paradise Irrigation District. Address Dr. C. A. Oliver, Box 942, Chico, Calif.

WANTED — Salesman capable of earning $250 to $350 a month selling groceries wholesale to farmers (commission). Read "Harry's New Job," page 396.

IN THE HEART OF CALIFORNIA. 560 acres in Sacramento Co., 18 miles from Capital. This is level, deep, red, with some high well drained adobe. No shallow bedrock soil. Has been used for grain and general farming by present owner for 40 years. Will grow any kind of fruit, nuts or grapes and the best of alfalfa with little leveling. Water 16 ft. from surface. This land will stand the acid test. Finely located for subdivision. Price $100 per acre. Eben B. Owen, Elk Grove, Sacramento Co., Cal.

FOR SALE—46 A. alfalfa ranch, good as any in State. Part cash, balance 5 years. Ranch will pay out in five years as dairy. Will sell 60 to 75 tons alfalfa hay with ranch. You must see this place to appreciate it. Full set buildings on ranch. If interested, call or write John Salaberry, Chowchilla, Cal.

FOR RENT — 5000 acre, good stock range in Monterey county. Well fenced. Plenty water. Good buildings. References required. 2429 Martinez Ave., Berkeley, Cal.

MISCELLANEOUS.

CORN HARVESTER—One man, one horse, one row, self-gathering; equals corn binder. Sold direct to farmers for 23 years. Only $28, with fodder binder; shipped by express to every State. Free catalog showing pictures of harvester. Process Corn Harvester Co., Salina, Kansas.

FOR SALE—Upper Sacramento Valley, 300 to 800 acres of our grain ranch, especially suited to almonds, olives, figs, grapes. Also other deciduous or citrus fruits. Water easily developed or Iron Canyon coming. A snap for quick sale, $50.00 per A. Good oil prospects. Box 472, Red Bluff, Calif.

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1 Cunningham Pulverizer, 6 ft. 24 in. diam.
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1 Set Stump-jump Harrows.
6 Ridging and Furrowing Plows.
10 Four-foot Disc Harrows.
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WANTED—Small tractor outfit in exchange for equity of $2,000 in unimproved land close in to Sacramento. Box 2160, care Pacific Rural Press.

WANTED—Tractor outfit in exchange for 20 acres of land near Sacramento, value $1,250. Box 2150, care Pacific Rural Press.

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Fiftieth Year

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SPADRA (Los Angeles County) CALIFORNIA

AGRICULTURAL NOTES.

Six thousand sacks of barley are being held in the Gridley warehouses.

Thirteen carloads of potatoes were imported from Canada one day last week. California potatoes are moving to Arizona and Texas.

There is now on foot the organization of an irrigation district in Kern county embracing about 90,000 acres in the Inyo-Kern valley.

Our imports of raw sugar from Cuba in 1919 totalled 5,488,711,032 pounds, valued at $290,732,477, or approximately 5 cents per pound.

Plans for reorganization of Consolidated irrigation district in Fresno county, embracing about 160,000 acres are now being formulated.

Cotton yield has been hurt by storms in the Blythe and Coachella districts, and by heavy dropping of the middle crop in the Imperial valley.

Vossler Brothers of the Porterville district report that intercrop blackeye beans are producing an enormous crop in the Woodville district.

The large acreage of purple vetch sown in Humboldt county this year for seed is now being harvested and favorable yields are being obtained.

Demonstrations of sunflowers for silage have given good results in Yuba county. One demonstrator reports a yield of considerably over 20 tons per acre.

High temperature during the latter part of August held back the setting of the beans in the Sacramento and San Joaquin valleys where the crop is planted late.

Experiments have been made by the use of sulphur on wheat lands in Ventura county which show an increased yield of 15 to 20 per cent, and with a better quality of grain.

Bunnyip wheat, a new introduction into Monterey county, gave a yield of 17½ sacks per acre, as compared with 10 sacks per acre for Propo White Australian and Early Baart.

A proposition to put in a plant for cooking and dehydrating sweet potatoes at Tulare came near realization this summer, and may be developed before another crop is ready.

Special reports to the Bureau of Crop Estimates indicate potato acreage in Oregon to be about 95 per cent of last year's; but condition is much better, and yield may be 50 per cent larger.

L. W. Bardsley of the Tulare district has 20 acres of cotton on which the bolls are bursting. He believes it will yield 1¼ bales per acre. Half of his acreage is Durango and half Egyptian.

Livermore valley has only 4,000 tons of grain hay warehoused as against 15,000 tons last year. A dealer claims he is paying from $20 for wild oat hay up to $25 for wheat hay delivered at the cars.

Alfalfa growers around Corning this year sold second cutting alfalfa for $25 in the field. They are now selling the fourth cutting, which is better hay,, for only $26 baled and loaded on cars at Corning.

Standards for 1920 barley as adopted by the San Francisco Chamber of Commerce Committee on Grain are 40 pounds per bushel for No. 1 bright feed, 44 pounds for standard A, 46 pounds for No. 1 brewing, and 47 pounds for choice brewing.

Egyptian corn planted by H. O. Perry of Stanislaus county after Mariot barley was harvested was ready to cut by the middle of September, when that planted after common barley was just well headed out. Mariot matured that much earlier in the spring.

California, as evidenced at the State Fair, is becoming quite a factor in corn production. It would be well to know that the high yielding qualities of purebred corn can be maintained at their high level of productiveness by careful seed selection. The ears should be selected in the field from large, healthy stocks. Weak or sick stalks pass on these characteristics to their offspring.

Ripe, sound cantaloupes are being sold at 50 cents per large crate at Ripon.

It is reported that some of the San Joaquin valley barley contracts made at $3 and $3.10 are being repudiated by the buyers.

There are about 2,500 acres of cotton adjacent to Tulare, and all looking fine, according to J. I. Sheets of the Tulare Board of Trade.

The Athlone bulk grain elevator in Merced county is serving its purpose of storing the crop grown by the owners, Messrs. Hayes and Cauley.

Sugar beet harvest is now in full swing. The condition of the crop is about 87 per cent of normal as compared with 69 per cent a year ago.

Early Baart wheat this year went 14 to 20 sacks to the acre as against 9 to 12 sacks of White Australian or Bluestem, in the vicinity of Paicines.

The Madera County Fair will be held at Chowchilla, October 7, 8 and 9. The consolidation with Merced county could not be effected this season.

The third cutting of alfalfa on one sulphur demonstration in Tehama county showed an increased yield of 1,600 pounds per acre in favor of the sulphur plots.

Information comes from the general offices of the Sutter Basin Company at Sacramento that the entire basin is to be opened to settlers. The basin contains upward of 54,000 acres.

Irrigation continues to be a very active question in Mendocino county. Preliminary surveys are being made in a number of small valleys for the purpose of securing data showing the water resources.

The cotton growers of the Corcoran district of Kings county have organized a local cotton growers' association to provide for cotton ginning and to solve other cotton handling and marketing problems.

Tests with Tennessee winter barley in Monterey county have shown marked result. Twenty-seven sacks per acre were obtained on soil which had previously yielded less than half that amount of common barley.

A study of crop conditions in the coast ranges between Los Angeles and San Francisco now shows that wheat does better than barley on the north and east slopes of hills bordering the south and west sides of valleys.

Unirrigated beans didn't make vine-growth or pods enough while irrigated beans have made vines and pods, but few beans. The harvest is earlier than usual in coast counties, according to the U. S. Bureau of Crop Estimates.

After the first year of service, the Crop Production Department of the California Vegetable Union has moved its headquarters from Los Angeles to Sacramento. This change is due to the rapidly increasing vegetable business in the north.

The U. S. sweet potato crop is about 2,000,000 bushels less than last year. This may comfort some California growers when the price slump hits them this season. California production is estimated at 1,162,000 bushels as against 1,096,000 last year.

By a vote of 129 to 8 the $550,000 Byron irrigation project has been carried. This is expected to result in a new development era for that section. It means the subdivision of thousands of acres into small tracts on this sale, under easy terms to new settlers.

A scheme to keep the ground cool and moist has been discovered by several of the large citrus growers of the Porterville district. It is accomplished by planting six to eight rows of cantaloupes between the trees. It is claimed that such practice showed splendid results by cooling the ground and giving moisture to the trees.

HORTICULTURAL JOTTINGS.

W. F. Henry of Hollister this year obtained 27½ tons of Hemiskirk apricots from 40 trees 26 years old.

Atwater and Livingston are in the midst of grape shipments, ten to fifteen cars daily from each point.

One of the first ranches in Sutter county to pick and ship Thompson Seedless grapes was that of Tom Stafford.

A man from Wyoming came to Fresno last week intending to buy wine grapes at $60 per ton; but he went back without any.

The Stanislaus County Board of Trade has issued 5,000 booklets showing the wonders of the county in 61 well-illustrated pages.

The Turlock raisin crop is estimated at 2,000,000 pounds this season, which is handled by the Raisin Growers' Association of Fresno.

Cabazon, Riverside county, has develope into quite an almond producing section. This season's harvest has been heavy. Harvesting is practically over.

About two-thirds of the south San Joaquin wine grapes had been picked by the middle of September. They were sold at $45 to $145 per ton, and no signs of refusing delivery.

L. J. Burger of Terra Bella, Tulare county, harvested 70 tons of Phillips Cling peaches from 10 acres, for which he received $8,000, or $800 per acre. The trees are four years old.

The Turlock plant of the California Peach Growers, Inc., is handling 30 tons of peaches daily. They are graded and classified and sent to Fresno for final processing, boxing and packing.

Approximately 100 cars of cantaloupes were shipped from Tipton-Porterville-Lindsay this season. Last season only 15 cars were shipped. Prices have been uniformly satisfactory.

Prof. R. H. Taylor of the California Department of Agriculture, with William Gould of Yolo county and H. S. Maddox were the judges at the "Sixth Almond and Colusa County Fair."

Fresno County Horticultural Commissioner F. P. Roullard and Mr. Garretson have been making special surveys and studies of insect pests in that county, especially those afflicting citrus trees.

It is estimated that there will be more than 600 cars of grapes, mostly wine varieties, shipped to Eastern markets this season from Cucamonga and Verdamont districts of San Bernardino county this year.

Those wishing to stand the examination for Deputy Horticultural Commissioner of San Luis Obispo county will have a chance to do so in the near future, date to be announced later. For further information write to H. E. Alley, County Horticultural Commissioner, San Luis Obispo county.

Fred P. Roullard, horticultural commissioner of Fresno County, has served due notice on the grape growers and shippers of Fresno County that grapes intended for "manufacturing purposes," commonly construed to mean wine grapes, must have the same sugar content as the table grapes, or 17 per cent sugar.

At the annual meeting of the American Public Health Association in San Francisco a proposal was made for a million dollar appropriation to be applied in ground-squirrel eradication. One speaker said, in view of the importance of the ground-squirrel as a source of plague, that the appropriation should be ten mililon dollars.

A rancher just north of Modesto has a few Smyrna fig trees which he has pruned and caprified; but he lives in a state of constant perturbation because it is so easy to get help for the harvest and so hard to realize on the fruit. The trees overhang a county road.

California shipped 46,757 carloads of citrus fruits, valued at $81,000,000, for the season of 1920.

According to Preston McKinney, Secretary of the Canners' League of California, the 1920 season's pack of asparagus amounted to 1,024,813 cases.

Manteca is fast coming to the front as a grape producer. The local express agent reports fifteen cars having been shipped this season to eastern cities by express.

Grape growers near Tres Pinos find that hand dusting machines save about half the time necessary to dust by hand, and also a large per cent of the sulphur.

George W. Bisbee of Newcastle, who has been first vice-president of the Pioneer Fruit Co. for a number of years, has succeeded Chas. B. Bills as president and active manager of the company.

Fruit men in the South Side District, near Hollister, are preparing to plant rye with Melilotus Indica for this year's cover crop. In past years this has made an excellent winter-growing crop and improved stand by March.

More competition for the American fruit grower. The latest invasion is from the shores of the Antipodes in the shape of 1080 boxes of Sultana raisins, which arrived on the steamer Marama from Australia a few days ago. This shipment, according to P. J. Duffy, local importer, is the first to be sent from Australia and will not be the last, as the Australians are planning to invade the American markets with their products.

The California Fruit Exchange recently sent an inspector East to look into the matter of condition of fruit on arrival. According to statements, he has reported to the Exchange that a great deal of the Placer county fruit is arriving in the auction markets poorly packed and in bad condition. Placer county packers and shippers say that this state of affairs is the result of poor icing by the railroad company during the progress of the trip East, over which a rigid investigation is being made.

Preparations are being made to press out "some cider" that is supposedly for vinegar, etc. The "etcetera" is supposed to cover any liquid into which the sweet cider turns between the time it is pressed and when it reaches the unpalatable vinegar stage. Of course, it is illegal to make hard cider; but a farmer can't be blamed if his sweet cider gets hard while turning to vinegar. The apple crop this year promises to furnish more material for the cider mill than in previous seasons.

DISHONEST TARE WEIGHTS EXPOSED.

Last year a prominent fruit shipper of Fresno county made between $4,000 and $5,000 velvet by deducting 8 pounds per box as the tare weight on boxes in which fruit was delivered to him, and which had been found by County Sealer of Weights and Measures F. B. Johnson to weigh but 7¼ pounds average. He was prosecuted and convicted; but this lesson was hoped to be effective, so his bond as a public weighmaster was not forfeited. However, he has repeated the offense this season, and Mr. Johnson has given him until September 22 to announce that he will repay to his victims all that he has stolen from them by the excessive tare during the two seasons. If he refuses or cannot do so, his bond will be declared forfeited, and his outfit cannot weigh anything more for commercial purposes. Already the publicity given his misdeeds has about put him out of business, and he recently gave up his offices in the Holland building at Fresno.

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EDITORIAL

MORE FIFTY-FIFTY EDITORIALS!

OUR new plan of allowing readers to fill one-half of the editorial space seems to be working well. It looks as though we would have to grab suickly to get our half of the space, but we are up to that all right. One over-enthusiastic reader sent us words enough to fill the whole three columns, cursing us and the whole country and declaring himself for a proletarian revolution. We are not inviting that sort of thing; we are offering our readers American liberty, not Bolshevistic license; neither we nor the patrons of this journal will stand for that. We are out for true American points of view; we welcome new ones which belong to that category and new ways of expressing old ones.

As nearly as we can figure out, we have written 2,920 pages like this since we began editing this journal and have slung together more words in doing it than Mr. Webster needed to assemble to furnish forth his latest philological orgy. We began when readers who are now in the grandparent class were boys and girls, thinking of marrying each other. It is fair to presume, therefore, that they are tolerably familiar with our style and would like a little of the spice of life before they shuffle it off. We have found a way in which we can all have it together: you take half and we will fill the rest!

DUTY TO HELP IN SMALL FARMING.

To the Editor: I read the editorials of your paper to ascertain your economic policies, which I consider of great importance for, unless you can help us devise some plan to reduce high rent and interest your paper can be of little value to the small farmer who hopes to keep his boys on the farm. While 20 acres make a beautiful home they will make three or four homes. A few years ago acres and acres of fine fruit rotted on the ground while many acres of melons and sweet potatoes went the same way. High prices have increased production, and they have also raised the cost of land and rents. If you would be of real help to the people who really do the farming you must help us solve these questions.—Farmer's Wife, Turlock.

Yes, we recognize the obligation and are always trying to discharge it by giving the latest and best knowledge we can find about handling plants and animals to get the best results and to protect them from the evils which always beset them. We are always trying to help the small farmer to get what he needs to buy or to borrow at the best rates possible, by co-operating with his neighbors and to sell what he produces at the best obtainable prices, also by co-operation. But we know no way to make it sure that a man shall make a living off a small farm nor a large one. It can be made no more sure than that a barber can make a living from one chair and doing all the scraping himself, or by having half a dozen chairs and hiring scrapers for them. Both farming and barbering are matters of business and cannot be determined by editorial theories any more than the business of a newspaper can be determined by the editorials which illuminate it. Every editor in the world would starve if he had to eat his own "copy," and that is where he is worse off than the farmer, who is the only primary producer in the world who can digest his own produce. Farming is a business which requires people to keep busy during all the daylight hours and more; with their own hands if the farm is small; with directing hired hands if the farm is large. As a rule, on a small farm a man has to put in all the time needed to give his products the highest possible selling-value to include compensation for his time, or, if he grows things including less labor-value, he has to sell part of his time to others to match up the cost of living and raising his family. We do not believe in the promises made of great returns from small farms. They are true in single instances; they are apt to deceive when used in generalizations. Small pieces of land make nice homes, as you suggest, but a husky man and his sons will have to rustle on the outside—either for wages or by contracting, tractoring, etc., on the lands of others, to insure the enjoyment of such a home. It is only once in a while that a family can get all it should have from a small piece of land, and it is done by growing about all they eat and by turning all their time and products, which would be waste, into high-priced cured fruits, garden sass, eggs, milk, etc., which require continuous labor, and they have to keep humping themselves all right. A single perishable crop, which is liable to accidents of all kinds, is not a safe recourse for a small farmer unless he uses the savings bank to equalize good and bad years. We are sorry that "editorial economics" can only help in this matter by suggestions which each must translate for himself into the terms of his own work. Thre is no royal road to success on a farm, and there is no radical road either. The only formula which has worked in the past is: work, save and own. It is the only formula which will work in the future, but there is a lot which farmers can do to promote and protect themselves and each other in the application of it.

FARM LOAN ASSOCIATIONS HELD APART.

To the Editor: I am pleased by the editorial in the September 4th issue of the Pacific Rural Press in which you refer to the work our Board is doing in reference to the Federal Farm Loan situation. We find that the Federal Farm Loan Board's policy has been to discourage a getting together of various associations in different sections of the country. A number of secretaries write that they have tried to secure the lists of the associations in their states so that they could be in a position to counsel together and work concertedly in reference to their common interests. They have been discouraged in doing this and have been unable to get the lists of names of the other associations. One secretary in the State of Washington writes that in order to get in touch with his fellow officers he ran a booth at his own expense at the State Fair for several years and in this way made the acquaintance of a number of the borrowers in other sections of the state. This has led to a voluntary state association, which has been able to accomplish some good results. A circular has been sent out by the Board carefully worded, but raising the doubt in the minds of the association as to whether they have the legal right to belong to a National Union of Farm Loan Associations. Of course there is no question that they have this right any more than there is a question that the state and national banks have the right, which they exercise, to belong to the American Bankers' Association.—C. A. Lyman, Sec. National Board of Farm Organizations, Washington, D. C.

They surely have as good a right to get together and they will get together. We have no inside knowledge of the working of the Loan Associations and their relations to the operations of the Federal Land Banks to which the law makes them auxiliary. It is possible that these Banks might go faster and more smoothly by a more direct route. If so, it is the duty of Congress to make such changes in the law as five years' experience shows to be desirable in working methods, but it is not tolerable to think of casting out the co-operative principle which was embodied in the law, viz.: to act with borrowers collectively and to make them consciously act together in passing upon valuations, security, judgment of personal character and business soundness of their associate borrowers. We acknowledge that such actions may be difficult and bothersome in central administration, but the principle involved in the law underlies the whole proposition of farmers' co-operation to do their own business and determine their own affairs. Farmers are reasonable people and better in understanding of business principles, which govern their success than any other group of producers understands its own economic problems and to divorce them from self-determination and relegating to some other group the doing of business for them is returning to the mistaken notion of farmers' abilities and farmers' rights, which has generated most of the class-privilege in this country. The fundamental principles of the farm loan act are two: first, farmers consciously act together in sound and fair financing of farming; second, bond buyers recognize the advantage of placing their money directly under the collective security of American farmers and American farming—than which there is no industrial security superior. The farm loan act was passed to put in action these two related principles. The Farm Loan Board and the Federal Land Banks are merely flumes through which capital, the life-fluid of farming, can out-flow and return with least possible friction and leakage. Possibly the present intake and outflow are not most convenient from the point of view of financial administration, but that is the least important point of view in the whole horizon of the matter!

QUALIFYING IN ENGLISH.

To the Editor: It looks to me as if the Japanese question is going to receive serious attention at the hands of our law makers. I believe that while settling this serious question it will be well to investigate the fairer skinned immigrants who are now flocking to our shores from southern Europe. I believe that it would be a good thing to bar out any man or woman who is unable to speak a certain number of English words. In all probability 500 words would be a sufficient number. In this state alone we have tens of thousands of foreigners that to date have made no attempt to get acquainted with our language. They make poor farmers. All branches of farming today call for more brains, more intelligent thinking than formerly. A farmer, in order to succeed today, must be a reader. He must subscribe for farming papers. He must co-operate with his neighbor in buying and selling and in fighting pests of all kinds. The man that cannot speak our language cannot do this. I was in the office of our horticultural commissioner one day. Men and women came in to see him about spraying. In the majority of cases he would be through with them in a couple of minutes. Along came a "no speaka de englis," and it took fully twenty minutes to get rid of him. Such people are a nuisance in any walk of life. The only remedy that I can think of is to bar them out.—C. B., Santa Rosa.

Your views may be a requirement to work toward but we doubt if it would be desirable for immediate adoption. We seem to need just now more men who can handle cows than vocabularies, and if an immigrant belongs to the white race and comes from a foreign rural community, knowing how to do farming things and desiring to do them for the purpose of getting ahead by good work, thrift and good behavior, and is willing that others should do the same, we would admit him on his oath that he desires to become an American and give him a reasonable time to acquire intelligible talking in English to fit himself for citizenship. If he is made to understand that only by meeting such a requirement will he be allowed to remain in this country, we believe he will hustle to qualify himself through fear of deportation. We need many farm-workers from places where it is impossible to learn English, and it is vastly safer for our public welfare and more serviceable to sound development to admit immigrants who are willing to work and behave themselves in any language than to welcome those who come, not to work but to keep others from working, even if they can propagate social disorder and economic fallacies in Johnsonian speech. But we will admit that if an immigrant comes with no desire and intent to qualify himself for speech in the language of the country, it is prima facie evidence that he is not fit to be an American.

FARM SPIRIT STILL LEADS!

To the Editor: Although I am working in a shipyard and may never farm again, I like your paper, including editorials, well enough to keep it coming. —L. C., Los Angeles.

It is well: for (passing the compliment and thanking you for it) the farm spirit will help you to build a better ship and to live a better life. The

breath and freedom of thought which the open country engenders, the patriotism which it inspires and the fairness of man to man which rural experience inculcates—all justify the claim in Cowper's line:

"God made the country and man made the town!"

Work on then; do not repine, for you will be farming again—when your "ship comes in." It is not an easy life, but there is none better on the earth!

QUERIES AND REPLIES

By the Editor.

Inquirers Must Give Full Name and Address
Answered Questions also on other pages.

Pasturing Alfalfa.

To the Editor: What do you think about pasturing alfalfa fields by cattle at this time of the year, and later when the rainy season sets in. I came here lately from Utah and there we are very careful about running cattle in alfalfa lands used for raising hay. I have purchased a farm which has 20 acres of alfalfa one-half killed out, and I have just been told that the field has been pastured late in fall, after the last crop of hay was harvested. Please give information in regard to the damage it might cause.—J. A. S., Merced.

Everything you learned about alfalfa meadows in Utah, or about timothy meadows in the East is true in California, and that is that too close pasturing, and especially pasturing a heavy soil when too wet, will seriously injure the stand of clover or grass. It is perhaps true that all pasturing of perennial hay plants is more or less bad for the stand and the yield of hay, but the degree of injury in some cases may be negligible and in other cases may be more than compensated for by the value and advantage of the bite which the stock gets when other feed is not to be had on the place and too expensive to buy profitably. It seems to be a common opinion that pasturing alfalfa after the hay-cutting is over can be done to advantage—providing the field is only lightly pastured and not gnawed down into the earth, and providing also that the surface is too dry to be puddled by tramping. In accordance with this opinion most all alfalfa acreage in California is pastured and no doubt much of it is over-pastured or pastured when the soil is wet and the stand seriously injured thereby. Often, no doubt, the injury is excused by the manuring which the field gets, but this is no compensation for the injury done by over-pasturing or pasturing when the stock puddles the surface.

A Seedling Fig.

To the Editor: I send some twigs and fruit from a very large fig tree, which is about 40 years old. As nearly as I can find out it has never produced any larger or better fruit than the ones I send. The tree has never had any care or pruning. What can be done with it?—W. O. S., Athlone.

The fig is of the edible class, but it is naturally too small to be of any account. Figs of half an inch to one inch in diameter, even though they do show proper pulp, are not worth consideration. It is not likely that any treatment of the tree or the soil will produce any satisfactory enlargement of the fruit, for the leaves show that the tree is in a fairly thrifty condition and is probably producing as good fruit as it is naturally capable of. It is likely that the tree is a seedling. If it is not worth keeping as it is, for shade or ornament, it may be grafted over to some good variety.

A New Muir Seedling.

To the Editor: I am sending you today my latest. I call it an Improved Muir. It is a cross between a Muir and a Strawberry, and has a much better flavor than the old Muir, is much juicier, hangs on the tree better, and in fact is much better in every way in my belief. What do you think of it. I think there is a small fortune in it for some one who will introduce it. Some of the first I picked two weeks ago have ripened up a bit since, but are apparently in as good shape as when picked. The sample I send was picked fresh, so it wouldn't lose any of its rich flavor.—J. W. R., Sebastopol.

Unfortunately we did not see the peach until the fourth day after the date of your letter, and it was clearly over-ripe so the flavor test is not satisfactory, for it did not appear to us much more highly flavored than the old Muir, though it was clearly more juicy, and that scores at least an eating point, though possibly not for canning or drying—for which the old Muir is especially strong. In absence of red colors, perfect freedom of fit, etc., it holds Muir points. We cannot see any trace of strawberry ancestry in it. There have been several improved Muirs announced in the San Joaquin especially for a little difference in time of ripening, but they have never attracted much attention. You should observe time of ripening, character of bearing, thrift of tree, etc., for several years before decision of superiority is demonstrated.

Branch-Failure of Fruit Trees.

To the Editor: Beyond doubt it has been called to your attention that there is considerable amount of plum die-back throughout the various counties of California. I have some of it and I have had examination by experts in soils, irrigation and fruit trees and their explanations are not satisfactory. I have found no hardpan within five feet of the surface. There is some alkali but not in sufficient quantity to fully explain the trouble. The trees will show vigor until suddenly one of the scaffold branches wilts and dies out, followed by possibly others or possibly no more dying. The trees show very little gum exudation. If you have any explanation or advice to give, it will certainly be appreciated.—F. A. L., Sacramento.

You are on the trail of a very old trouble of fruit trees, and you must not be discouraged if you do not solve it even with the help of a whole platoon of tree-doctors. Our observation is that the apricot is most subject to such trouble as you describe, and the plum next, with the cherry following. The pioneer fruit growers observed it and the mystery of it led them to call it "palsy" or "paralysis"—fancying an analogy with "strokes" to human organisms which they could not understand. Of course, the names which they adopted explained nothing, but satisfied their cravings. All that is really known about the trouble is that the cause or causes have not been demonstrated and that the proper treatment is to remove such branches as soon as they show a tendency to go yellow or to wilt, and thus rid the tree of it. It is no more unreasonable that a tree should die without known cause than that a man should, and that is happening all the time.

Scabby Potatoes.

To the Editor: This year's crop of potatoes are full of scab. What is the cause of it? And how can it be cured or prevented?—J. S., Elk.

Scab is primarily a "skin disease" of the potato, caused by the fungus oospora scabies—from its analogy to the itch or mange of animals—which, however, is caused by an insect and not by a fungus. Secondarily, the fungus penetrates more deeply into the tuber, causing cracking and decay. The disease may attack the tuber from the soil, in which the germs may remain alive for several years. In most cases, however, it follows the planting of scabby seed potatoes. To prevent this, soak the seed before cutting for 1½ hours in a solution of 1-1000 corrosive sublimate (1 ounce to 8 gallons of water), or two hours in formaldehyde, 1 pound to 30 gallons of water. Use a wooden vessel for the sublimate and remember that you are handling a virulent poison.

Prunes Lacking Moisture.

To the Editor: I am sending some French prune leaves and twigs with some disease. The trees are four years old and were not sprayed last spring. About half of the trees in the orchard are affected. Please tell me what it is and if lime-sulphur spray will remedy it; if not, what will?—O. G., Santa Margarita.

The leaves are losing color and in some cases browning around the edges with irregular extensions inward. The twigs are showing shriveled bark and in some cases dying back from the tips. There is no sign of specific pest or disease present. The trees are suffering severely for lack of soil moisture, or something else which makes the roots unable to carry the tops. No spraying is required.

Transplanting Mammoth Berries.

To the Editor: I have some Mammoth blackberry vines that I will have to move. When would be the proper time to transplant them and how should I handle the vines? Would you separate the roots, etc.?—F. W. M., El Monte.

Transplant after the leaves fall whenever the ground is deeply moistened by winter rains. Cut out now all the canes which have fruited while you can easily distinguish them. When you transplant, select one or more of the best canes which grew this summer, cutting them back to about two feet, and removing entirely all the other new growth. Some plants may have grown so that you can divide by cutting so as to get good canes and roots connected, but the Mammoth is not a running root plant like the old-fashioned blackberries, and you will find mostly single crowns not suitable for division.

Yellow-Neck Caterpillar.

To the Editor: I send a caterpillar that has pestered my 5-year-old prune trees for the past two seasons, taking every leaf. Kindly tell what it is, and advise.—L. E. G., Lawrence.

It is the "yellow-neck" caterpillar, closely related to the "red-hump" caterpillar; does about the same kind of work, lives in the same way in colonies, and is killed by spraying the foliage as soon as the pests are seen with lead-arsenate, as used for other leaf-eating insects. On small trees the egg-masses can be seen on the leaves early in the summer and handpicked, but on larger trees spraying is necessary. The insect pupates in the ground near the base of the tree and can be reduced by handhoeing or close cultivation. The parent is a brownish moth spreading nearly two inches. The caterpillars have swift defoliating ability and should be headed off or poisoned as soon as seen.

Moving Seed Potatoes.

To the Editor: Will irrigated potatoes grown in the Delta district do to plant in sandy loam soil of Monterey county without irrigation? I wish to plant the latter part of December or first of January as the frost does not effect us.—M. L. R., Watsonville.

For all we know they will be all right if well-matured, but it is usually better to get good seed, inured to the conditions prevailing in the same district where you propose to make the crop. The fact of non-irrigation would not count for much in a winter crop, for we all hope you will have plenty of rain this winter; for a non-irrigated summer crop on sandy soil it might make more difference. In your present instance it is more important that the seed is well matured, and we should wish to prove that by starting the eyes in a warm, half-shaded place.

Pollinating Yellow Egg Plums.

To the Editor: What plum would you advise for pollinating the Yellow Egg? Give second choice if any.—H. G. T., Sacramento.

It has not been demonstrated that the Yellow Egg needs cross-pollination. Systematic trial has not continued long enough to determine the fact either way. Experiments so far, at the University Farm, seem to show that all plums of European origin (domestica) will serve each other when such service is necessary—therefore, plant whichever plums of this class you like or can sell the best, and be sure there are bees enough to do the rest.

Bamboo or Reed

To the Editor: Please advise me where I can get bamboo trees for a windbeak.—A. K., Fairfield.

We cannot be sure whether you wish a true bamboo or a reed which is often called "bamboo," and is considerably used as a summer windbreak, chiefly on the San Joaquin valley. It is killed to the ground by the frost, but comes from the roots again in the spring. The true bamboos are more hardy and hold green in light freezing. Root clumps of bamboo usually cost about twice as much as "reed" clumps. Any general nurseryman can supply or get them for you.

CALIFORNIA WEATHER RECORD

The following rainfall and temperature record is furnished the Pacific Rural Press by the United States Department of Agriculture Weather Bureau at San Francisco for the week ending September 20, 1920.

Station—	Rainfall Past Week	Rainfall Seasonal To Date	Rainfall Normal To Date	Temperature Highest	Temperature Lowest
Eureka	.01	1.68	.75	72	56
Red Bluff	.00	.31	.33	94	62
Sacramento	.01	.01	.17	94	66
San Francisco	T	.00	.06	82	58
San Jose	.00	.00	.20	90	56
Fresno	.00	.14	.00	98	70
San Luis Obispo	.00	.00	.20	90	56
Los Angeles	T	.00	.00	88	64
San Diego	T	.00	.00	78	65
Winnemucca	.00	.66	.48	84	52
Reno	.00	.48	.56	90	60
Tonopah	.01	.95	.97	86	60

Horticultural Conditions Justify Optimism

Written for Pacific Rural Press by W. S. Killingsworth.

"The country is going to hell," a favorite expression of a friend of the writer. After having passed his allotment of three score years and ten, he recently severed his connections with all earthly affairs. He migrated to California, in "early days." On his arrival, as told the writer on many occasions, he was penniless. However, when he cashed his last check his potential wealth had climbed into seven figures many times over. It was our privilege as well as pleasure to know him well—socially, politically and financialy. In our many business dealings we learned his likes and dislikes, his habits and expressions, the foregoing being his favorite, regardless of time or place, when economic questions, whether great or small, were injected into conversation. While it was our custom to hold in high esteem his ability as a financier, and respect his judgment on matters appertaining to the financial aspect of the future, we reserved the right to disagree with his pessimistic ideas on many questions.

Faith in the Future.

More than twenty years have elapsed since our attention was called to this favorite expression; however, though strange its may seem, the country still prospers and the world "do move." We merely refer to this in passing as an illustration of what the pessimist and iconoclast of today would have us conscientiously believe. It is admitted, however, that prosperity's pendulum has swung far beyond the point one dared consider without fear and trembling, but, with all that, we still have faith in the future and are contributing our physical, moral and mental support that such may continue. Who is there that could lose faith in what the future supposedly holds in store for the agricultural and horticultural interests of this State, when they think of the recent past and then turn and witness what is taking place in the last "lap" of the last "heat" of the 1920 agricultural-horticultural race. Deciduous fruits marketed in their fresh state, during the seasons of 1919-20, have enriched the producers of California by millions of dollars, to be closely followed by record prices, fixed so by the various marketing institutions, for their many varieties of the dried product.

Not hearsay, or the culmination of a speculative dream, but information from reliable sources, stimulates our belief that the wave of prosperity we are now riding, will roll on undisturbed, there being no visible undertow of financial depression we may fear, for a time at least. The country is prosperous. There is a growing sureness that there are better days aheads. There are no soup houses, free lodgings nor bread lines. Every one who wants a job is at work drawing the highest wages known to employer and employee since the beginning of time. We are all aware that when those conditions exist the seal of the pay envelope is willingly and quickly broken, and the contents thereof soon finds its way into circulation.

Recalls Former Days.

Our prediction is further prompted by a triumphant march of prosperity we remember witnessing and participating in during the early nineties of the past century. At the time the writer was in the employ of a large fruit auction concern in one of the Atlantic seaboard cities. The season we have in mind was short on many varieties of fruit. As a natural consequence prices were high; however, such was of little consequence to the liberal spender and provider. Those were the good old days of what was so commonly spoken of, in connection with the "full dinner pail," when the siren sounded from every plant in the manufacturing districts of this great nation, when every laboring man packed his full dinner pail and lived like a king. Nothing was too good for him; the best was all he could see on the shelf or on the well-decorated fruit stand—price cut no figure. With but few exceptions, the home was blessed with a bunch of healthy frolicking youngsters, who could happily store beneath their jumpers a box of cherries, peaches, pears, or a crate of grapes at one "sitting," while the poor little emaciated tot of the banker-capitalist was barred that delightful privilege. Thus we see that the bulk and basis of consumption was cared for by those who cherished the thought that money was made to spend. The same conditions that existed then exist now—if anything, a little more so; therefore it is an erroneous idea to foster the thought that the free soup house or bread line will have any place in the line of march "general prosperity" has decreed will be ours.

National Political Angles.

Of course we recognize and at the same time appreciate the fact that the unexpected always has the right of way. Many things could happen to stem the tide. We are now in the midst of a presidential campaign, always looked upon as a season of depression, not that it really is, but made so for political and financial purposes, that have never failed to disturb the political and financial equilibrium of our nation every four years. However, from our limited knowledge of what the two great parties are contending to settle in the minds of the masses, the difference is of so little consequence that, whichver wins, it is not going to prevent the rank and file from spending their earnings, even though a temporary depression among the "money changers" might be brought about, for political purposes only. This nation is too big, and its interests are too vital, to tolerate special privileges. However, such is done, and California has been made to suffer in the form of food stuffs that are crowding our productions to the wall. The lemon industry of the state is hanging by a thread, suffering the evil effects of a low tariff, cheap production, a minimum rate of transportation, and a deplorable state of a tottering foreign exchange. With all that, we have abiding faith that there will be an adjustment, and furthermore that there will be a blocking of any effort to create an industrial and financial unrest.

It was our privilege during the recent State Fair to meet fruit growers from all parts of California, who were enthused over the financial results of the present season's production. While there was a lack of tonnage, the increase in price in many instances made up the difference. We learned that there would be a large increase in acreage of both tree and vine, of such varieties most suited to the localities for which they are intended. We learned from many of the nurserymen that never before in the history of their nursery career had orders come in so thick and fast. As a matter of fact, the major portion of the standard varieties have long since been booked. Many growers, in order to get just what they want have ordered nursery stock from nurseries of other states. While that has been practiced to some extent in the past, we are very much of the opinion that better results will be obtained where stock is grown as near the locality in which it is intended to be permanently planted, on account of a similarity of soil and climatic conditions, and not on account of the treatment a grower would receive in dealing with an outside nursery.

In Former Years.

In years past it was our privilege to deal with Oregon nurseries, and our treatment as to the quality of stock purchased was the very best, but we cannot refrain from repeating that, whenever it is possible to do so, a California orchard should be planted with California nursery stock. Now, with this determination on the part of the growers to enter more extensively into the production of fruits, such does not indicate a lack of faith in the future of the industry, but, on the other hand, confidence, as the orchardists of the state are co-operating in every line in order that such lines may be stabilized and standardized for the purpose of marketing their fruits to the very best advantage.

A further evidence of California's horticultural prosperity, is the inincrasing popularity of co-operation, in all varieties of fruit, whether it be tree or vine, canned, dried or handled in its fresh state. The co-operative organizations throughout the state, of which there are many, have so increased their membership that improvements of many kinds will be made before the opening of another season. These improvements will deal largely with the matter of increasing storage capacity, enlarging their packing facilities, installing new and improved machinery, and arranging to care for many by-products that are fast being brought to the attention of the consuming public. These co-operative associations, without a single exception, have been the means of increasing the value of their respective products, by improvements in production, in handling and in marketing.

Educational Campaigns.

This they have accomplished by an educational system worked out along the lines most conducive to the advancement and popularity of their particular production.

The layman must not become misled by erroneous reports that are known to have at times gained circulation, whereby these co-operative organizations have, singly and collectively, been misrepresented as to their true worth, the purpose for which they were organized and the services they have rendered State-wide horticultural industries, some of which are now enjoying the blessings of co-operation that were at one time on the verge of bankruptcy. Every member of any one of the co-operative organizations is on the same basis, whether he be a ton or a hundred ton pro producer.

STATE FAIR GRADUATED FROM "PUMPKIN CLASS."

President Geo. C. Roeding, in an address before the Los Angeles, San Francisco and Oakland committees on Saturday, September 12, said: "The California State Fair has graduated out of the 'Pumpkin class' into an exposition of even more than state-wide importance. Considerable amount of space has already been sold for 1921. The one big outstanding feature is that the people of California who have visited this year's fair have pledged their support, and their assistance towards securing permanent buildings and other improvements wherein this great annual exposition may be properly housed in the future. Plans are now being laid to be presented to the legislature in January, asking for an appropriation for the purpose of securing permanent buildings for the 1921 State Fair. In the fair, as it has been given this year, we have demonstrated that the people of the state of California appreciate the fact that this is a fair of, for and by the people.

Leave it to the Newcastle fruit packers and shippers to handle their fruit to the best advantage. Their was a call for a car of pears intended for export shipment and to get them to the Atlantic seaboard in the best of condition, the United Fruit Company shipped the car by passenger refrigerator express. Next!

Better Fruit

The time to think about getting better fruit is when you first put in your trees—not later.

You Can Never Get First-Class Fruit from Second-Class Trees.

And you can't get first-class trees from a nurseryman who doesn't know his business. Anybody can grow trees for selling — but not "anybody" can sell the kind of trees that will grow—and produce—and pay a profit to the man who sets them out. Why not get your trees from nurserymen who have a reputation to sustain?

Elmer Bros, Nursery

The nursery that helped to make Santa Clara Valley Famous

76 S. Market, SAN JOSE, CAL.

FRUIT TREES

—AND—

ORNAMENTALS

—FOR—

1921 PLANTING

Write for our New Price List.

THERE will be a decided shortage of Fruit Trees again this year. We therefore advise our customers to place their orders as soon as possible in order that the stock may be reserved for them before the supply is exhausted.

We wish to call particular attention to our Improved French Prune and the New Double X Prune.

CALIFORNIA NURSERY COMPANY

NILES, CALIFORNIA

RHUBARB Wagner's GIANT

PLANT NOW—September, October and November are the best months to plant. Growers who planted last July and August have already harvested over 15 tons per acre, netting $1,000 eleven months from planting. For further information, write J. B. WAGNER, Rhubarb Specialist, 1550 East Villa St., Pasadena, Cal.

Mariout Barley for Sale

GOOD, CLEAN SEED
GROWN IN SAN DIEGO COUNTY
FROM DAVIS SEED

LEWIS J. UTT :: Pala, California

Who Shall Regulate the Prices of Farm Products?

Written for Pacific Rural Press by R. E. Hodges.

Ranchers in various parts of the State have told Pacific Rural Press representatives that they want prices of farm products to be regulated by law. They want to be assured of costs of production plus reasonable profits.

Cost of production plus a reasonable profit is the magic slogan which is permitting great increases in the charges imposed by practically all public utilities in California and all railroads in America. With sight regard for the waste and inefficiency which may be seen in many of those utilities without a microscope, their actual costs of operation are made the basis for periodic increases in rates. If a utility chooses to pay certain of its officers exorbitant salaries, those salaries necessarily go in with other costs of production and the public pays them. It is necessarily true, for the Railroad Commission cannot be expert enough in all lines of public utility business to say, "This is all that this man's services are worth, and this much only will we allow you on your costs of operation." And so we go on paying higher and ever higher costs of production and operation of public utilities. It is becoming an obsession and is spreading to other lines. It was recognized by the Government during the war in paying costs plus a certain percentage for profit to shipbuilding and other concerns. Cost plus a profit determines prices fixed by manufacturers' and merchants. Little by little a cost plus reasonable profit policy for producers is being recognized by consumers as a just and necessary policy required to keep their wants supplied. Little by little the producers of farm products are wakening to their rights in this matter. In a few instances they are demanding and getting their rights by means of co-operative organization.

What Are Farming Costs?

But what are the costs of production? A primary reason why the "cost plus" policy is so hard to apply to farm products is the lack of definite figures showing the details of actual costs. That is the fault of those who suffer most, and it can be remedied by simple bookkeeping.

But even where definite figures have been compiled, notably in the cases of beans and milk, the costs per hundredweight vary through an absurdly wide margin. This also is largely the fault of those who suffer most; and it also can be remedied by greater efficiency in productive operations.

Until these remedies are applied the suffering will continue, for who has the nerve to say that the public should pay costs of production which have to be guessed at? And who would say that the most efficient producers should be guaranteed a profit above their wasteful costs of production? To do so would bring exorbitant prices, reduced consumption, and kill the markets.

Average Costs Arbitrarily Set.

If some fair and capable body should arbitrarily set a certain figure as the average cost of producing a certain crop and then say that the sales price for that crop should be a certain percentage above that figure, it would discourage inefficient producers or else whip them into greater efficiency; and it would reward efficient producers by giving them greater profits than the average producer would receive.

Let Politicians Set Farm Prices?

But who is competent to set such an average price? Only a growers' organization which understands not only the hours of labor and the capital invested, but also the supreme risks involved and the frequency with which weather, pests, etc., bring losses to the average producer. Certainly we do not want politicians to determine prices for farm products, nor is anyone else except a producers' organization capable.

Farm Prices and Utility Rates.

If such a project could be carried out, it would still be different from our policy of permitting public utilities to charge such rates as will return them all costs of operation plus a reasonable profit. With public utilities a monopoly of markets is granted in return for enforcement of rate regulation. The figures on cost of production then become a matter of the individual operator's reasonable or unreasonable, expenses. In case of farm production, no monopoly of market can be given to any individual or group of them, nor can the price be made different for each individual on the basis of his costs of production. So of necessity, any regulation of the prices of agricultural products on the basis of average cost plus a profit must place a premium on industry and ingenuity while at the same time our public utility policy is placing a premium on moderate or immoderate inefficiency.

Under present conditions, farmers are entitled by every right and precedent to average costs of production plus reasonable profits. But they are not getting them in any general way, and consumers' leagues have catfits whenever some of the producers raise prices to the level required to get it.

Farmers Can Fix Own Prices.

The same farmers who want prices of farm products regulated have also been asked to what farm organizations they belong. In most cases they belong to none at all. We well remember the protests of American farmers at the price-fixing activities of politicians on wheat and sugar. Shall we entrust price fixing on all our products to these or other politicians and then kick about it? Or shall we suggest to the dissatisfied ones that they give their unlimited encouragement to any bona fide co-operative organization designed to control prices on the crops they raise, assuring a reasonable profit above average costs of production as determined fairly and capably from season to season.

CONSOLIDATED AUTOMATIVE EXHIBIT NEXT YEAR.

The motor truck and trailer exhibit at the State Fair this year was not much, but it will rival the tractor and implement display next year. Secretary Kellogg of the Auto Trades Association, with headquarters in Sacramento, with full approval of the Association Executive Committee, has written a letter to the State Fair directors stating that a committee of nine, consisting of three representatives for automobile interests, three for motor trucks and trailers, and three for accessories, will co-operate with the State Fair director in charge of that department to make a grand consolidated exhibit in 1921 worthy of the great industries they represent. A special department in this consolidated automotive exhibit will feature instruction of operators of trucks and automobiles. More and more is it being realized that successful future selling depends on intelligent operation of machines already sold.

California fruit shippers never do things by halves. The latest big thing to be pulled off was when E. Y. Foley, the single-handed Leviathan of the California fruit industry, shipped a solid train load of thirty-two carloads of Muscat grapes to Pittsburg. Some shipment, some nerve, and Foley has it, as was conclusively demonstrated when he took on as a side issue 149 carloads of California raisins—a small transaction of something like $2,000,000.

Authentic reports place the Oregon and Washington prune crop for this season at 80,000,000 pounds, as compared with the estimated California yield of about 175,000,000 pounds.

Strength, Lightness, Easy Pulling

Like the cross-country runner, Reliance Trailers are stripped of every ounce of unnecessary weight. Your truck pulls the **load,** not the trailer. Wrought steel construction throughout, fashioned by a design that eliminates all need of heavy castings and reinforcing parts, results in giving Reliance Trailers rugged strength plus remarkable lightness of weight.

TRUCK by TRAILER

Patented steering device insures perfect tracking at all times. Rotating pull-rod takes up the twists between truck and trailer—relieves frame and steering parts from strain and stress. Reliance Trailers are built to **last.** Made in various models, both two-wheel and four-wheel, of all capacities from 1 to 10 tons. If interested in trailers be sure and write for our catalog and name of our nearest dealer.

RELIANCE TRAILER & TRUCK CO., INC.
1648 Howard St., San Francisco

Reliance HEAVY DUTY TRAILERS

The Trailer with Red Wheels.

Our Service Meets Your Needs

Railsback Service on Allwork Kerosene Tractors has just been extended to Northern California and Nevada by our recent entry into this territory as Allwork distributors. This service is an invaluable aid to farmers in realizing to the fullest extent on their tractor investment—a fact supported by the enviable reputation we have earned in Southern California.

Allwork Kerosene Tractor

The Allwork Kerosene Tractor meets every demand—economy, strength, simplicity. Many owners never have need of repairs, while the Allwork fuel — KEROSENE — delivers more power at less expense, without a special carburetor.

KILLEFER Implements

In Los Angeles county we distribute the Killefer line of implements, made-to-order for use on California farms. A complete stock of needed implements of this well known line always ready for delivery.

OLIVER Implements

Another interesting note is that we are now distributors of the celebrated Oliver Chilled Plow Works line—including all the implements that have made the Oliver name famous throughout the world.

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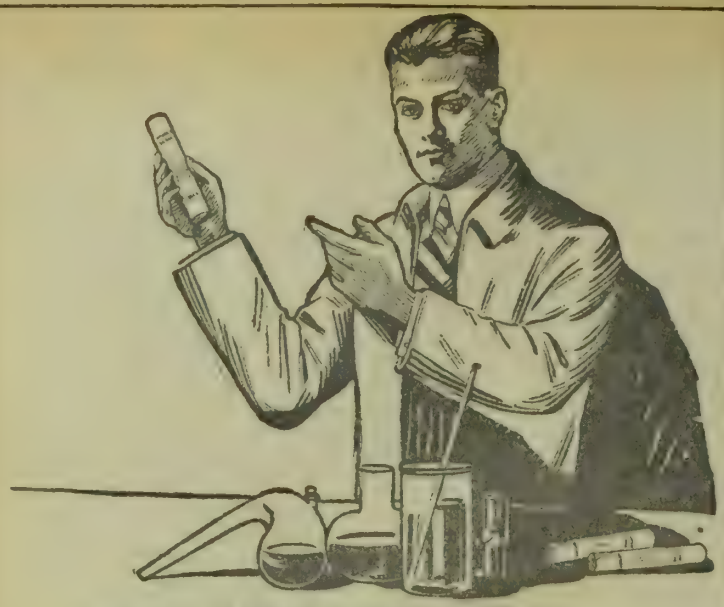

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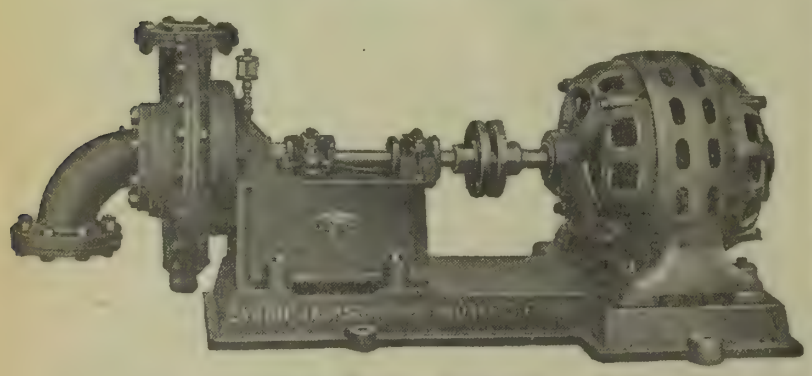

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A limited quantity unsold. One-year stock on Japan root.
Prices right.
You will be satisfied with our stock.
Parsons' Nursery
Nevada City, California

Timely Work in the Orchard

(Written for Pacific Rural Press by W. S. Killingsworth.)

Have You Ordered Nursery Stock?

In former issues of the Pacific Rural Press we have called attention to the scarcity of nursery stock. We have carefully investigated conditions to find that they are even more serious than we had contemplated. Many of the nurseries throughout the state have booked orders practically to the limit of their supply of leading varieties. Other nurseries have only limited quantities of any variety left from which to select number one stock; therefore, it would be well for those who have not placed their orders to do so at once, else they may fail to get their requirements of varieties wanted. It may be interesting to know that the scarcity of nursery stock is due to several unavoidable reasons: (1) The nurserymen have been unable to secure certain varieties of stock that are annually imported; therefore, they have had to make the best of the situation by propagating such stock; (2) the high price and scarcity of efficient labor, in the matter of budding has seriously handicapped all nurseries; (3) For many years there was a great quantiy of nursery stock that went unsold, entailing heavy losses to all nurserymen throughout the state, hence a reduction in propagation resulted, but now that there has been a revival of orchard and vineyard activities the nurserymen are straining a point to supply the demand. It is gratifying to note the interest now taken in the propagation and production of nursery stock. There was a time that the laxity in such resulted in disapppointments which at times proved costly. However, the nursery business is now standardized to the extent that there are but few mistakes made in comparison with former times.

Handling Dried Pears.

The successful drying of Bartlett pears is an art to be acquired by study and practice. It has been said that any ordinary ranch hand can make a good dried prune or peach, which, to a certain extent, is true, provided, however, he has ordinary horse sense, but it is different when it comes to drying Bartlett pears; they must be handled just so, or not at all. In our day in the fruit game we produced some of the most perfect dried pears that ever left a tray. Our teaching came from what is more commonly known as a "blanket man," who had served his time on the dry yards of Lake county, where the finest dried pears known are produced. His method was to allow the pears to ripen well before cutting. They were then placed in the sulphur house and sulphured for 36 to 40 hours; then placed on the dry yard and allowed to remain exposed to the rays of the sun for 36 hours. Then the trays were stacked either in the yard, under a convenient shed, or in the cutting shed. The trays were so stacked that the air could circulate and were allowed to remain stacked until the pears were dry, regardless of the length of time it took. The trays were gone over at intervals and the dried portion of the fruit taken off and placed in lug boxes—not in bins or sacks. When the fruit was handled in this manner, it came through with that transparent light straw color. The edges were not curled up and turned red, which will happen if exposed to the heat any length of time. Dried pears should never be put in sacks or in bins of any quantity; if they are they will invariably run together and make a mass of worthless junk. Experience taught us that and we are passing it along.

Watch the Dry Yard.

Fall is here, therefore, we may expect a heavy downpour at any time; as a matter of fact, the weather bureau has already sent out warning to the effect that a storm may be expected at almost any time. With such due notice all orchardists should be working over time to get their dried fruits on the trays, as they certainly don't want a return engagement of 1918, when millions of dollars' worth of prunes were a total loss. We are now experiencing ideal drying weather—days are clear and hot and the nights are warm. Barring a little dew they are perfect, as it is well known that hot nights with a certain amount of moisture in the atmosphere makes the best quality of dried fruit. It takes but a short while for prunes or peaches to dry sufficient that they may be "doubled up" on trays. This should be done as soon as possible that the emptied trays may be used again. Should weather be threatening, fruit that has had exposure to the sun should be stacked, as it will continue to dry where air is allowed to pass between the trays. Prunes that are worth from $200 to $300 per ton are too valuable to take a chance, especially with the present high cost of labor, to be taken care of any way, even though there is a loss of crop from rain damage. Trays containing peaches may also be stacked as they will dry just as well, and make a better grade of fruit not to remain too long in the hot sun. It of course takes longer, but one is sure of not losing the fruit. Let this be a warning to those who have forgotten that it ever rains in California.

Effective Spraying for Citrus Scale.

The Gray Citrus scale—Coccus citricola—which is attacking grapefruit, lemon and orange trees in Tulare county, is now being successfully handled by F. R. Brann, deputy horticultural commissioner of Tulare county, on the L. S. White orchard at Lindsay. Mr. Brann states that 20 trees badly infested with the Gray Citrus scale were sprayed with Olene, after which 98 leaves were examined, and these were found to be 22.183 scale, and of this number 1644 were found to be still alive. Neither fruit nor foliage had any appearance of being damaged by the spray. This pest was first discovered at Claremont, Cal., and has gradually worked its way to many of the citrus-producing sections of the State. It attacks the leaves and petioles. However, the twigs appear to be preferred by this scale, and the older the tree the more noticeable the scale where they prevail. New area is being invaded, therefore no time should be lost in ridding an orchard of it. Fumigation was resorted to in the beginning, but spraying with oil emulsion and commercial oil sprays are now proving successful.

Handling Dried Figs.

Many sections of the State are now in the midst of fig drying. Just a word on that subject: finish the job as soon as possible, as every one who has had any experience with figs knows full well that if rain damaged in the least, it is all off. All the warm sunshine will assist but little in overcoming the damage done by souring from moisture, especially if the fruit remains on the damp ground any length of time after it becomes wet. A concrete example of such came to our attention in September, 1918, when we saw fully 25 tons a rotten mass in one orchard in Solano county. A strenuous effort was made to save the best of them, but to no avail. Figs at this stage of the game should be picked up immediately after dropping. In the case of the California black the trees are generally so large that it is impossible to pick the fruit, consequently it must drop. With the white varieties, where labor is plentiful, they may be picked from the tree and not wait for them to drop. However, no time should be lost in caring for the crop on ground or on tree.

Sanger has organized a citrus association with the following board of directors: O. J. Hudson, J. A. Kirkman, J. G. Moody and E. L. Wymer. The organization will affiliate with the Central California Citrus Exchange of Lindsay

STATE ACTS IN ALIEN LAND OWNERSHIP.

(Written for Pacific Rural Press.)

At last the legal department of the State of California has awakened to the urgent demands of its citizens in their protest against Japanese land ownership. The State of California, through Attorney-General Webb, has filed two suits in the superior court of Tulare county against the Bank and Trust Company of Central California, of Fresno, Elba Land Company and H. Sumida, et al., to escheat to the state one of the finest vineyards and orchards in the San Joaquin Valley, involving more than 1500 acres of land located seven miles south of Visalia on the state highway, valued at more than half a million dollars, and realty holdings in the city of Visalia with an estimated value of $35,000.

A Japanese trick, a subterfuge, ownership by proxy, by fair means or foul, are these transactions being made, with the hope that from fear of international complications they will be allowed to pass unnoticed. The minor child is the go-between, the property being held in trust, as the state in its complaint claims that these holdings are held by the Fresno bank in trust for the minor children of H. Sumida, a Japanese merchant and vineyardist of Fowler. But the "nigger in the woodpile" is, the property is in reaity held in trust for H. Sumida personally, that he is in personal occupation of it and enjoying the profits therefrom. The state is asking immediate possession of both the land and crops through the appointment of a receiver. Some one is apparently flush, as it is said that $50,000 is known to have been paid on the property, the exact amount of the transaction not being known. However, the state will claim escheat of the entire interest held for the Japanese.

PRUNES ON RIVER BENCH LAND.

Conclusive proof of which kind of root stock is best adapted for prunes on the light sandy loams of river bottoms is shown on three ranches near the junction of the Tres Pinos and San Benito Creeks south of Hollister.

On the ranch of T. G. Hester can be found splendid illustrations of what both French and sugar prunes will do on almond, peach, apricot and Myrobolan stock for such soils. Thirty-year-old trees on almond stock have a spread of 20 feet, a height of 14 feet, and had a crop of 300 pounds. The same trees on Myrobolan stock have a spread and height of 10 feet and a crop of only 75 pounds. The apricot stock produced trees slightly smaller and with a still smaller crop. Peach stock has proven worst of all. Trees on this have partly died out and are most susceptible to lack of moisture and black knot. No trees in this orchard have had irrigation. The contrast here is striking, for each class of stock was planted hapharzardly through the orchard.

The ranch of P. L. Swanson shows this same contrast no less markedly. Blocks of these different root stocks were planted separately on this place. The orchard of Leonard Bros. serves also as an excellent example.

This kind of problem is being studied by the Nurserymen's Bud Selection Association, with the idea of prescribing only those varieties best adapted to certain conditions and localities. Also with the idea of putting out nursery stock, which must be true to name. Every prospective planter will do well to investigate what kind of root stock is best adapted to his place as well as what variety of the fruit he intends to use.

P. J. Duffy, a local importer, states that California apples are now selling in Australia at $6.50 per box, while Australians can sell their apples in America for les than half that figure. That being the case, Australia had better come to America and take a few lessons in the art of apple culture.

A Much Roomier Roadster

Seating *three* instead of two

It is easy for you to know how much more your money brings when you buy a New Mitchell. You can appreciate quickly the over-values. Throughout there is evidence of a generous policy.

Roominess, for instance, means that Mitchell is not compelled to skimp. We design and build our own bodies. So we can afford to put into Mitchells the money that would otherwise have to be paid as outside builders' profits. The entire car is Mitchell-built, not assembled.

A car of lasting service

Another example is Timken Thrust Bearings on *all* four wheels, not on two. The braced frame, the extra-long cantilever springs with shock-absorbing rebound leaves, the drop forgings instead of stamped steel or castings, steering knuckles with castor bearings — all prove added values.

Examine the New Mitchell models. Prices are as follows: *six* passenger Touring Car, $1750; *three* passenger Roadster, $1750; *six* passenger Sedan, $2900; and *four* passenger Coupe, $2800. F. o. b. Racine, Wis.

See if you can find any car at the price, *or more*, that offers so much for your money.

MITCHELL MOTORS COMPANY, INC., RACINE, WISCONSIN

EVAPORATOR

Seeing is Believing

Chapman's Common Sense Evaporator is now in full operation. Two at Santa Rosa and two at Modesto, turning out fifty tons prunes and grapes per day each. Investigate now while all the driers should be running.

F. C. CHAPMAN
Modesto, Cal.

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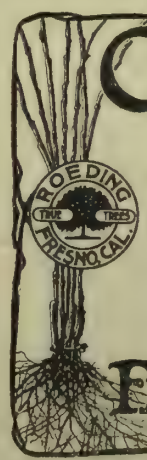

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Produce big crops the first year. Small Fruit prices are high and sure to continue. Order your plants from us now for Fall and Spring delivery, because plants will be scarce later.

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Sebastopol, California

CRESOLITE
makes
STUMPS HUMP
Money back if it don't.
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Specify Germain's 99 35/100 % pure!

CERTIFICATE OF QUALITY
MELILOTUS INDICA
Purity 99.35% Germination over 92%
Found free from the following noxious weed seeds: Dodder, Star Thistle, Thistles (Circuim spp., Carduus spp., Cnicus spp.) Morning Glory, Johnson Grass, Hoary Cress and Ribwort
GERMAIN SEED & PLANT CO.
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Look for this tag on every bag! It is your protection against seeds of poor quality and low germination. Germain's Melilotus Indica seed is recleaned, pedigreed and specially treated for highest per cent of germination.

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Buy the Thresher built especially for the man who wants a machine for his own crops. You do not have to thresh with the Wade "by the day" to make it pay for itself and a good profit besides.

Built for Western Conditions

The Wade Thresher is manufactured by R. M. Wade & Company, Portland, the oldest agricultural implement house in the West. It is especially designed to meet Western conditions.

Plenty of Separation Surface

The Wade has plenty of separation surface and strong, well-controlled air current. Doesn't crack the kernels. Built of best materials throughout. Threshes beans, peas, China peas, lentils, Soy beans, vetch, or other legumes. Capacity 20 to 35 bushels per hour.

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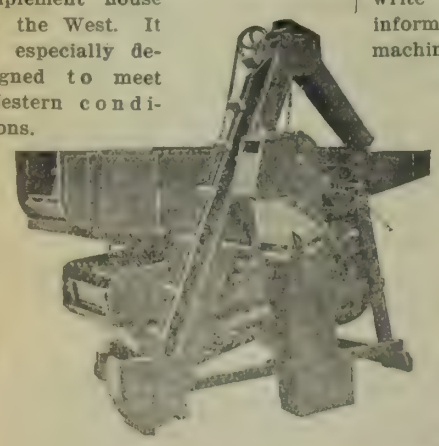
If your dealer hasn't the Wade write us for literature and full information on this wonderful machine. Use the coupon.



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STOCKTON, CALIFORNIA

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Gentlemen: Please send me descriptive literature and full information on the Wade Pea and Bean Thresher, without obligation on my part.
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Here and There in the Fruit Business

Tree Fruits Practically Moved.

We learned from the Fruit Building in Sacramento that the tree fruit shipments from the State are practically over; however, there are a few plums going from the foothill district. The crop of winter pears, grown mostly in the Santa Clara district, is about all the remaining tree fruit to be moved. There are such varieties as quinces and persimmons that will be shipped in carload lots wherever they are grown in any quantity, in less than carload lots they will be shipped by local freight or express to points for consolidation. There are sufficient grapes to utilize all the refrigerator cars that can be brought into service. The Consolidated Chamber of Commerce of Sacramento, at the request of the Chamber of Commerce of the United States, has issued an appeal to the shippers of the State to avoid any delay in loading. They make the statement that the freight traffic has increased so rapidly in the country during the past few years that it has completely outgrown the carrying capacity of the railroads. As a reuslt it is now necessary for the railroads to devise a practical plan for increasing their transportation service and this can be done by the co-operation of the shippers and receivers in not delaying cars any longer than it is absolutely necessary. The shippers and receivers must rely on making a maximum use of existing facilities and equipment, with the co-operation of all of the other interests concerned.

Serious Car Shortage.

We learn from the Fruit Building in Sacramento that there is at the present time a very serious car shortage. This trouble has come about not so much from a lack of cars, but from a lack of motive power to return the cars from the East as soon as they are unloaded. Then to add "insult to injury," fire in one of the Tehachapi tunnels has put a stop to traffic over the Southern Pacific and Santa Fe lines over that route. Both companies use the line from Bakersfield to Mojave. All Santa Fe refrigerator cars are either being brought into the deciduous district of the State by the Southern Pacific and Western Pacific via Sacramento. The Southern Pacific is also delivering Santa Fe cars to points along the Coast Line. Now, with the natural shortage to be assisted by this uncalled for disturbance over and through the Tehachapi, we were told that the shortage amounted to fully 60 per cent of the number of orders placed by fruit shippers for cars for immediate use. At the present time this shortage means a very serious loss to the grape shippers of the State, and the loss would be incalculable should we have rain followed by cloudy weather; however, it's no use to cross the bridge until we reach it. Everything is being done by everybody to relieve the situation.

Export Apple Outlook.

With the inauguration of the all-water transportation service from Seattle to Europe, and considering the report that England is nearly without apples, due to an unfavorable season, California Grade A and B, as well as the canned and dried fruit interests should awaken to the possibilities. However, it should be taken into consideration that New Zealand and possibly Australia will be firm competitors for this business; and it is understood at this time that an arbitrary tax will be placed upon foreign apples in favor of the home-grown English product. But such should not lessen the ardor of the California apple growers in fighting for the business.

Quick Action by Pear Association.

The California Pear Growers' Association made their first delivery to the canneries on July 17. On September 21 they had received from the canneries and paid out to their growers $1,090,000. We would suggest that that is going some. President Frank T. Swett is very much elated over the ease and rapidity with which the business of the association has been transacted this year. The canneries are satisfied with their treatment, for in all cases where there was a question of deficiency in quality and it was necessary to resort to an adjustment, such was made without discord. Never before have the growers gotten such prices with so little trouble, all of which is largely due the diplomacy and business acumen of President Swett.

Kearney Vineyard a State Asset.

The Kearney property of Fresno county has proven to be a splendid asset to the University of California. Figures just compiled by the Comptroller show that the net earnings of the vineyard alone during the past year were slightly over $123,000. This property, which contains 5,400 acres of highly cultivated land, was a bequest of Theodore Kearney in 1910, and in accordance with the terms of this will, earnings are devoted to the benefit of the College of Agriculture. Quite an acreage was planted to cotton this year, but the majority of this property is planted to various tree and vine fruits.

The Valley Fruit Growers of Fresno state that for the first time in years there has been no anxiety on account of labor shortage, although prices for picking were less uniform than in previous years. Growers who used good judgment by placing orders a few days ahead derived a distinct advantage over the growers who depended on hiring fruit workers outside of Fresno.

Bartlett Pears Breaking Record.

Never before in the history of the Bartlett pear industry have such prices been obtained as at the present time. Shipments consist entirely of "Mountain" Bartletts, from Colfax, Placerville, Newcastle and Tehachipe. A carload of Bartletts from Placerville sold in New York September 20th grossed $3,197.00, ranging in price from $4.50 to $7.20 per box of 48 pounds net. Another car grossed $3,592.00, ranging in price from $5.38 to $7.67 per box.

The Alviso cannery in Santa Clara county is canning pears from Washington State.

Sulphur

It has been proven and so recommended by the University of California that if you sulphur your grape vines and orchards 6 times they will not be affected by MILDEW or RED SPIDERS.

ANCHOR Brand Velvet Flowers of Sulphur, also EAGLE Brand, and Fleur de Soufre, packed in double sacks, are the fluffiest and PUREST sulphurs that money can buy; the best for vineyards; the best for bleaching purposes, LEAVING NO ASH.

VENTILATED Sublimed Sulphur — Impalpable Powder, 100% pure, in double sacks, for Dry Dusting and making Paste Sulphurs.

For LIME-SULPHUR SOLUTION, use our DIAMOND "S" BRAND REFINED FLOUR SULPHUR. We can furnish you this sulphur at such a low price that it would pay you to mix your own solution and net you a profit equal to the amount paid out for labor in spraying your orchard, even if you pay your men $5 per day for making the solution and applying same.

To create additional available plant food, and prevent smut in grain, drill into the soil 110 pounds per acre of TORO BRAND SPECIALLY PREPARED AGRICULTURAL SULPHUR or our DIAMOND "S" BRAND REFINED POWDERED SULPHUR. This soil treatment has increased various crops up to 500 per cent. Send for Circulars Nos. 6, 7 and 8.

Also PREPARED DRY DUSTING MATERIALS, Tobacco Dust, Dusting Sulphur Mixtures, etc.

Carried in stock and mixed to order.

SAN FRANCISCO SULPHUR CO.,
624 California St., San Francisco, Cal.

We are equipped to make immediate shipments. Send for Price-list and Samples.

Ask us for prices for Carbon Bisulphate, the surest remedy for destroying ground squirrels.

RAISIN ASSN. NOT GUILTY.

(Written for Pacific Rural Press.)

It would appear that the much-talked-of violation of the Sherman anti-trust act by the California Associated Raisin Company was merely a "tempest in a teapot"; in other words, some one went off "half-cocked," as it has developed that the government does not regard as material to its prosecution the question of whether growers of the California Associated Raisin Company were coerced into joining the association or signed their acreage willingly.

J. R. O'Connor, United States district attorney of Los Angeles, was in Fresno last week for the purpose of gathering, as he said, "certain stipulations of facts" in anticipation of the injunction suit to come up in Los Angeles against the association. O'Conner expressed surprise at the campaign being conducted by the Associated growers, in which members are signing affidavits to the effect that they were not coerced into joining the association, but joined willingly. According to the district attorney, the government does not consider this as a material feature of the case. As a matter of fact O'Conner went so far as to make the statement that "the raisin association, from the campaign being conducted for affidavits of non-coercion, seems to be relying strongly on the growers not having been coerced.

From the standpoint of the government, we regard that as a very immaterial point. If the Associated Raisin Company is a monopoly, it is immaterial to the government whether the growers were coerced or did it voluntarily.

I am surprised to see the amount of preparation that is being made to controvert this point, which from a legal standpoint is not material. "If all the growers unite in the control of the raisin industry, and do so control such industry in interstate commerce, it is only the grower who was forced into the contract with the organization who has a right not to be guilty under the law. Those who voluntarily signed their acreage and entered the association would be guilty."

When W. A. Sutherland, attorney for the raisin association, was told of the surprise expressed by the government's attorney. He said: "On our part, we can say that we were equally surprised that the government should have made this matter of coercion the burden of its complaint. And we are more surprised that Mr. O'Conner now admits that this charge, which occupies the greater part of the complaint is of no importance whatever. Whether material or not, the charge so strenuously and voluminously urged has furnished a wonderful incentive for the raisin growers to rally to the support of the company, and they are responding nobly and convincingly."

The old story—"It's the wounded bird that flutters." The walking delegate is out with the customary hammer in an effort to destroy the usefulness of an organization which has brought order out of chaos and prosperity out of bankruptcy. One does not have to consult many almanacs leading back to the time when the raisin industry was as dead as human slavery. Raisins were so cheap that they lost their flavor and but for the timely efforts of those who had faith in the industry and capital sufficient to carry the load until there was a change for the better, the vineyards of the great San Joaquin valley would be but a memory.

C. C. TEAGUE ELECTED PRESIDENT

Charles C. Teague has been elected president of the California Fruit Growers' Exchange, to succeed P. J. Dreher. For over twenty years Mr. Teague has been closely allied with the citrus industry of California, and has been a leader in lemon advancement during that time.

Mr. Teague is also president of the Walnut Growers' Association, the Agricultural Legislative Committee and the Lemoneira Company of Santa Paula.

See The Owen Before You Decide

Learn why the Owen costs but one-third as much to operate as other units—why it gives you illumination at less per candle-power than kerosene lamps

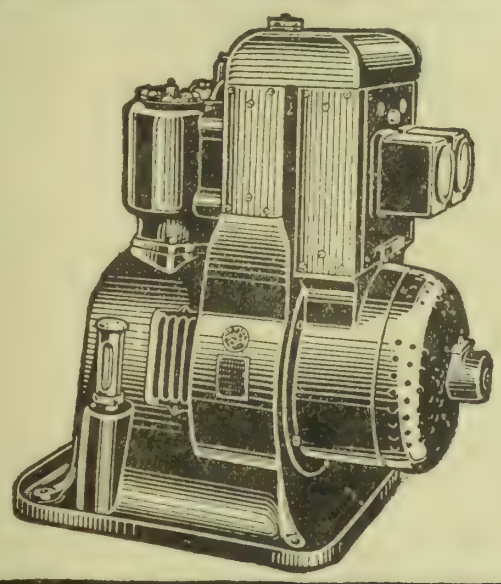
THE Owen Light & Power Plant is the final type. It has dozens of betterments offered by no other unit. It costs one-third as much to operate as any other unit. It brings you illumination at less than the cost of kerosene lamps.

Note these perfections—superiorities absolutely exclusive in the Owen:

It is fully automatic—starts and stops itself. The batteries are guarded by a patented control. Your engine starts automatically when the batteries are partially discharged. When they are fully charged, then it stops automatically. When you require more current than the batteries should care for, the engine automatically starts.

Even more important than the convenience to you, this automatic control means a tremendous saving. It multiplies many times the life of your batteries. It overcomes costly replacements.

The Owen has a bigger capacity. It will light 1 to 100 lamps without a flicker. It will run electric motors up to one horsepower.



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It has an improved engine. Silent, with a non-leak valve. It always retains its compression. Grinding and scraping carbon are ended with this engine.

These are but a very few of the dozens of betterments. We cannot describe them all here. All the features of this amazing invention are in our free booklet. A post card will bring it to you by return mail. Write today and read it carefully before you decide upon a light and power plant.

Dealers: This Is Your Opportunity

The Owen is your opportunity. Once farmers know the Owen, they will buy no other. In it are combined every looked for feature. Many that farmers never dreamed of are offered in this perfected plant. For the Owen is the final type.

There are a few choice territories still open. They won't be open long. So if you are interested we urge you to write us at once. As a progressive business man you surely want to know the facts. To get them incurs no obligation. So write today.

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HOW ABOUT YOUR SPRAY OUTFIT?

In this day and time no fruit ranch is complete without an up-to-date spray outfit. If there is a fruit ranch without such let us beseech the owner to get busy in the matter of selection of the best spray outfit that money will buy. It will then be cheap in the end. There is no law compelling the purchase of a spray outfit, but there is a law compelling the orchardist to offer no fruits for sale but such as are "virtually free from insect and fungous pests, etc." From the many arrests and convictions that have been made during the present season the orchardist who does not conform to the letter of the law will have to explain his shortcomings to the court, as Director Hecke and his corps of assistants throughout the State are determined to lead every violator onto the carpet. So take our advice and get busy in the matter of an up-to-date spray outfit.

Mariout Barley

HIGHEST QUALITY GOOD CLEAN SEED FROM TESTED, HEAVY YIELDING STOCK.

H. G. STEVENSON, JR. WINTERS, CAL.

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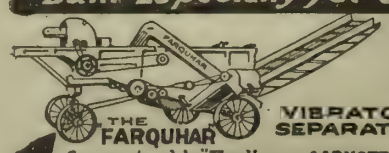

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All Repair Parts Carried

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Guaranteed by "The House of ARNOTT"
Ask The Grower Who Owns One
Write for Folder, Specifications, Prices Etc.

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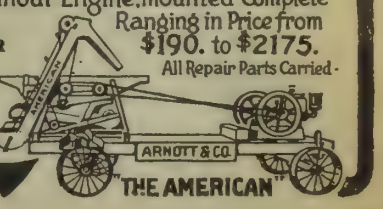
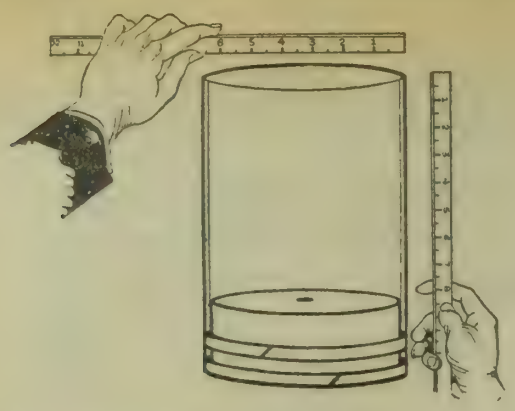


"THE AMERICAN"



Stroke, 8½ Inches

Bore, 6½ Inches

Compare these with stroke and bore of the most powerful truck engines

Gas engine power is indicated by bore and stroke. In the Best Tracklayer engine, bore and stroke are fully 50 per cent greater than those of the most powerful motor truck engine.

The Best is built for power. The engine is manufactured in our own plant to exactly suit Best Tracklayer design. Power galore for the toughest job of plowing, harvesting or hauling with ample reserve for the unexpected, the Best has proved itself a marvel for heavy-duty work. This tireless, unfailing "pull" starts with the engine. But Best Tracklayer design gets the power to the drawbar with least loss. Best Tracklayer turns 60 per cent of its engine power into pull. This is the result of long years of tractor-building experience.

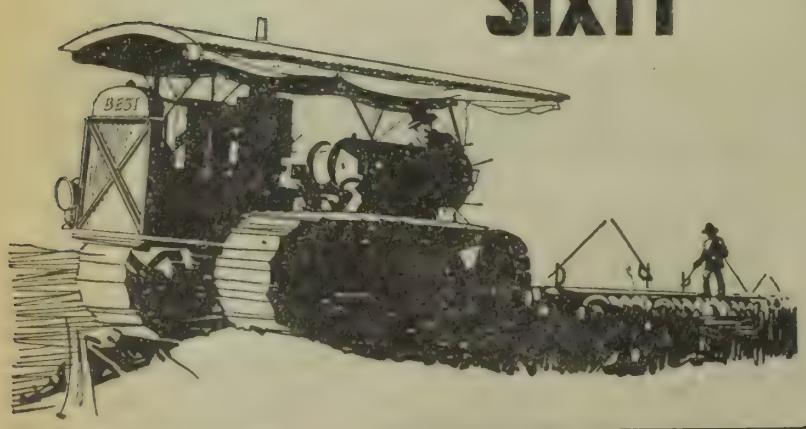
Best Tracklayer reputation for dependability, long life and low operating cost is due not only to its remarkable engine, but to other famous features, such as manganese steel track, with greaseless, non-friction "rocker-joints"—three-point suspension—working parts housed—no belts or chains—36 Hyatt and Timken bearings—full oscillation and independently operated tracks—correct design worked out through years of experience—scientific selection of materials—high grade workmanship, If interested in tractors, send for our complete catalog.

C. L. Best Gas Traction Co.

SAN LEANDRO CALIFORNIA

60 H. P. at Pulley
35 H. P. at Drawbar

BEST TRACKLAYER SIXTY



Agricultural and Mechanical Queries

Buckhorn Thrives in San Joaquin.

Our article regarding imported alfalfa seed last season was challenged partly on the ground that the buckhorn seed, which characterized most of it, "will not thrive in the San Joaquin Valley or in any other sandy district. Its home is in moist, heavy soil, and such conditions are not found in those parts of California that are noted for alfalfa fields." With this in mind, we were recently interested in looking up some fields near Modesto in which buckhorn infestations are manifest. One field planted with imported seed in 1916 was plowed up two years later and has been dry-farmed to grain since then. Buckhorn requires moisture and is therefore absent from this field; but a great deal of it has gone to seed this season on the ditch banks of the field just below it, which received water through the imported alfalfa when it was growing in the first field. We guess that seed was carried in the water; for buckhorn is certainly thriving on that San Joaquin Valley ditch bank. We walked out among the alfalfa irrigated from that ditch and found buckhorn thriving and seeding several rods distant. Another alfalfa field we noted in which buckhorn was thicker than alfalfa and was seeding thriftily. Whether this was from imported or home-grown seed we could not tell; but the buckhorn was certainly thriving, chiefly in the checks and only a little in the ditch. It showed plain evidence of having been washed into the ditch from the field when the latter was drained after irrigation. The buckhorn was thicker close to the gates within the ditches than at a greater distance away. These observations do not prove that buckhorn drives out alfalfa, though it looks that way. They do prove that buckhorn thrives in the San Joaquin valley; and the farmer who introduces it in alfalfa seed may soon wish he had paid twice as much for clean seed instead. Readers will remember that we have pointed out the resemblance of buckhorn seed to ordinary date seed, though of course in very much smaller size.

Proposed Highway Bond Interest.

What will the extra 1½ per cent asked for on the State Highway bonds amount to before the bonds are paid for and how is it to be collected?—L. Z. S., Sonoma county.

If the proposed constitutional amendment shall be approved by the people next November, something like $37,000,000 worth of bonds will be issued from time to time as the money is needed and at rates of interest not over 6 per cent to be determined at time of issuance, by a State Highway Finance Board, composed of the Governor, State Controller, State Treasurer, Chairman of the State Board of Control, and Chaiman of the State Highway Commission. The rate will depend on bond market conditions. All interest money will be paid exclusively by the State, whose revenues are chiefly derived from corporation taxes, the money to pay which is taken from the people by the corporations. Since the bonds under the proposed amendment will be issued as needed and no interest will be payable until they are issued and the dates of maturity will vary, it is impossible to state exactly how much the interest will be. But the original $40,000,000 were to bear interest from November, 1919, until their maturity, which was to be in lots of $1,000,000 payable each year, beginning 1926 and ending in 1965. This would have involved payment of $1,800,000 interest per year until 1926, and a little less each year thereafter, all to be paid to holders of the bonds.

Nurse Crop Damaged Alfalfa.

A nurse crop damaged 25 acres of alfalfa drilled last March in Monterey county by W. E. Goodspeed. The soil washes, so barley was broadcasted over the alfalfa seed to hold the soil during irrigation, while the alfalfa would be getting started. Then furrows were run 26 inches apart across the field and were used for irrigation after the crop came up. The nurse horn seed, which characterize most of crop held the soil and made a good water and caused a poor stand.

Cannery-Tomato Market Ruinous.

Tomato growers and contracting canners alike are getting stuck this season. In the upper Santa Clara district a heavy acreage was contracted around $21 per ton; but the canners are buying uncontracted tomatoes as low as $10 and even $8 per ton. Some of the contractors are backing down, refusing to take the fruit at contract prices. All canners are pretty particular what they accept. In the south San Joaquin district, Ed Powers is authority for the statement that most of the tomatoes were contracted at $17.50 and the rest are bringing growers about $12 per ton. Fortunately or otherwise, there is only half the acreage here that was planted last year. A carry-over of last season's canned tomatoes plus a big 1920 crop in the east, are given as reasons for an almost complete stagnation in the market for canned tomatoes. The writer recently bought a box of tomatoes in San Francisco. The commission man claimed he had bought them on contract at $1 per box and had paid the freight to San Francisco, yet these prime, uniformly big, smooth, packed Stone tomatoes were sold for 90 cents. It will be remembered that the Merced growers averaged over $2 per 30-pound lug box for their shipping tomatoes this season.

THE MISKIN SCRAPER

IS THE BEST SCRAPER ON EARTH

And We Can Prove It. **Write for Circulars.**

The above is a cut of the Famous Miskin Scraper, which in operation, easy draft, greater capacity, and better work, has many advantages over common Fresno and wheel scrapers now on market. Made in 2-horse, 3-horse, and 4-horse sizes. The four-horse size can be operated by small tractors from the tractor seat, by tractor driver.

SEND FOR DESCRIPTIVE CIRCULARS WITH PRICES. WE PAY THE FREIGHT.

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Saves You $50 on Your Drag Saw

Big increase in my factory enables me to make lowest cash offer on a Drag Log Saw. Lever Control to Start or Stop Saw while engine runs. Arm Swing and Force Feed for fast cutting. Powerful 4-cycle engine with speed regulator, 5-ft. saw blade. Complete, ready to operate. $125 F. O. B. Kansas City. $6.80 extra from Pittsburgh, Pa.

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Buy NOW!

While You Can SAVE $50

Get My Special Prices now being made on Stationary and Portable Engines—in sizes 2, 3, 4, 6, 8, 12, 16 22 and 30 H-P. Also, Power Cut-Off Saws for sawing cord wood and pole wood. This $125 Offer on WITTE Drag Log Saws is for immediate acceptance. Don't wait if you want to get in on this big advertising offer. You know **If it's a WITTE,** it's all right. Quick shipment, have your banker wire order, or mail order today and Save $50. Address your nearest shipping point.

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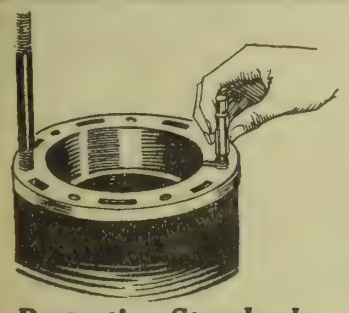
2865 Oakland Ave., KANSAS CITY, MO. — 2865 Empire Bldg., PITTSBURGH, PA.



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The spirit of accuracy pervades the whole Holt plant. No step in manufacture is regarded as unimportant. Every advance of a part toward completion is checked by gauges and these in turn by standards true to within a 100,000th of an inch. Send for "Accuracy"—an absorbing story of the extreme care exercised in guarding the good name of Holt products.

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CATERPILLAR
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Thousands of Happy Housewives in

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are helping their husbands to prosper—are glad they encourged them to go where they could make a home of their own—save paying rent and reduce cost of living—where they could reach prosperity and independence by **buying on easy terms**

Fertile Land at $15 to $30 an Acre

—land similar to that which through many years has **yielded from 20 to 45 bushels of wheat to the acre.** Hundreds of farmers in Western Canada have raised crops in a single season worth more than the whole cost of their land. With such crops come prosperity, independence, good homes, and all the comforts and conveniences which make for happy living.

Farm Gardens—Poultry—Dairying

are sources of income second only to grain growing and stock raising. Good climate, good neighbors, churches, schools, rural telephone, etc., give you the opportunities of a new land with the conveniences of old settled districts.

For illustrated literature, maps, description of farm opportunities in Manitoba, Saskatchewan, and Alberta, reduced railway rates, etc., write Department of Immigration, Ottawa, Can., or

GILBERT ROCHE,
8-5 First St., Sheldon Block,
San Francisco, Cal.
Canadian Government Agent.

WHY SUCH A HAY MARKET?

What about the grain hay market? Does the quotation of $17 to $20 for barley hay mean baled and delivered to San Francisco? If so, we might as well give it away. I understood that the California grain hay crop was short with no holdover. Is it unreasonable to expect $20 to $25 per ton in the stack?—C. M. B., Tulare county.

Our quotations on hay are the figures at which baled hay is sold from the car in San Francisco to jobbers. so it means to producers that much less freight and commission. So long a country prices depend on San Francisco prices, the producers are at the mercy of every whiff of wind, most of which in San Francisco blow toward the mire. We pointed this out in a leading article in the issue of June 26. The low hay market in this city is partly due to replacement of horses by motortrucks. It is partly due to cessation of Government export orders. It is largely due to the propaganda of dealers who prophesy lower prices soon. Nobody buys on a falling market any more than he must, and sellers forcing their product beat down the prices. We still believe in the prophesy made in our issue of February 21 that this season's hay will sell high. Conditions have not changed in any striking way, though a considerably increased acreage of grain hay was made in California as compared with 1919. All kinds of hay have an interaction on the market and the shortage of alfalfa more than counterbalances the increased tonnage of grain hay. The September 1 crop report of the U. S. Bureau of Crop Estimates shows a total hay production in California for 1920 of 4,440,000 tons. This is 23,000 tons less than in 1919; and it will be remembered that there was practically no holdover at the beginning of this season. The crop report for the U. S. indicates a total tonnage in 1920 of 106,451,000 tons, which is 2,215,000 tons less than last year. Thus from the standpoints of crop shortage, we might well expect prices as great as those of a year ago, except for the general drop in prices of feed and foodstuffs. Under prevailing conditions, if we can free ourselves of the baneful influence of city markets and quit letting the tail wag the dog, it seems reasonable to expect the prices you refer to for local consumption.

THE GRAIN MARKET.

What is the matter with the grain market.—B. M. C., Tulare county.

We have long been prophesying the inevitable fall in prices for barley. Wheat is not quoted so much lower than the upper mark, even though at this season an overwhelming supply is being offered and buyers are not required to go after it. Total production of barley in California is estimated at 29,425,000 bushels, which is 575,000 bushels less than final estimates last year. The U. S. crop of barley, however, is estimated at 194,858,000 bushels, which is 29,000,000 bushels more than in 1919. This may help account for the $2.25 per cental figures recently quoted on the San Francisco Grain Exchange for December delivery. Latest estimates on the wheat crop for the United States indicate 770,000,000 bushels, which is 171,000,000 less than the 1919 crop. A factor in the dull grain market is the fact that it takes so many more units of foreign money than in normal times to equal a dollar of American money that it costs foreigners too much for them to buy as large quantities of our grain as usual. Another factor is the corn crop, which is this year in the United States estimated at 3,131,000,000 bushels as against 2,917,000,000 bushels last year. The oats crop of the United States is also nearly 200,000,000 bushels greater than in 1919. Each kind of grain has more or less reaction on markets for all other kinds.

Sheep are reported as coming out of the hills in Northern California a month earlier than usual.

FAGEOL

WALKING TRACTOR

Fageol owners are our best salesmen. Wherever the Tractor is introduced, the owner becomes immediately enthusiastic and spreads the news of its unusual performance and dependability, and his neighbors soon fall into line.

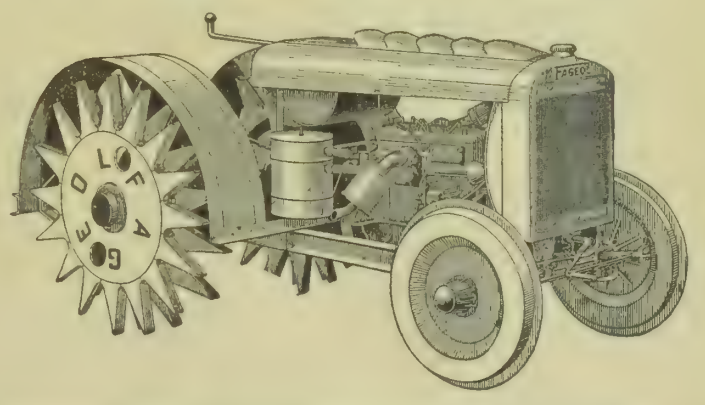
If he wants more horsepower, he invariably orders another Fageol. Repeat orders are coming to us in ever increasing volume.

Exclusive Fageol Features
Increase their operating range
Reduce their operating cost

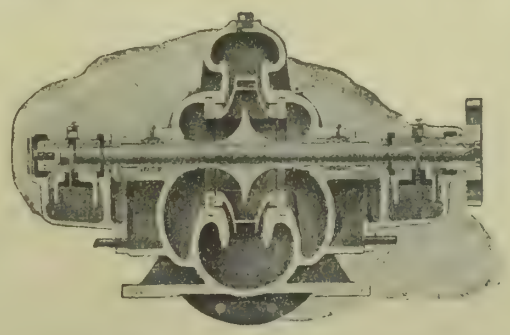
See your local dealer immediately. He has a new plan that will make delivery when you want it certain

Butler-Veitch
INCORPORATED
Sales Organization—Fageol Products

24th and Harrison Streets, Oakland — 1230 Market Street, San Francisco



DE LAVAL IRRIGATION PUMPS



High Efficiency Saves Power

Above is pictured a cross section of the De Laval double suction single stage pump.

Notice the smooth, easy passage for the water. This produces high efficiency, and therefore saves power. Note the double suction principle and labyrinth rings.

The pump case of the De Laval is split horizontally. This feature permits of inspection without destroying pipe connections.

This is one of a series of advertisements explaining the different parts of the De Laval Irrigation Pump.

Write us and learn what can be saved with High Efficiency Pumps.

HERZOG ELECTRIC & ENGINEERING CO.

179 STEUART STREET, SAN FRANCISCO

service

IN THE LAST ANALYSIS, the true value of a belt lies in the service it gives.

The fact that the Test Special Belt is becoming more and more the preference wherever belts are needed, is indisputable proof of its matchless service.

"Test Special" is guaranteed to give better service than any other rubber belt used under same conditions.

See your Dealer.

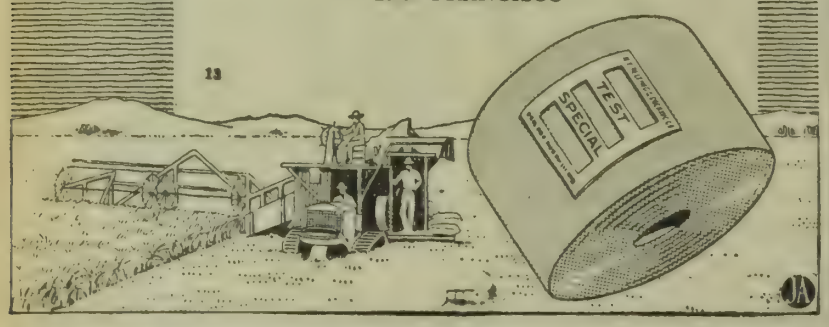
Any Dealer anywhere can buy "Test Special."

WRITE TODAY, giving the R.P.M. and diameter of the driving pulley,—also driven pulley and distance between centers of same; also give the rated horsepower of your motor or engine, and name kind of machinery you are operating. We will reply immediately, giving you our recommendation as to the kind of belt to use.

WRITE TODAY

NEW YORK BELTING & PACKING CO.

519 MISSION STREET
SAN FRANCISCO



SEED WHEATS AND BARLEYS

From Farmer to Farmer

BUNYIP, BAYAH and DART IMPERIAL SEED WHEATS

Hard White Australians; California acclimated; best milling; higher price for products

MARIOUT and BELDI SEED BARLEYS

Large yields; quick growth; early maturity; more drouth resistant than other varieties known to us.

There is in California a very limited quantity of choice wheat and barley seed of these varieties. All our seed grown on new soils, one irrigation only. All water from deep wells; no Bermuda, Johnson or Morning Glory. Orders booked as received, shipments following consecutively.

We also have limited quantities Early Baart, Sonora, Diener's Hybrid-Baart and Diener's Hybrid Sonora Seed Wheats. This is our first year with last two varieties and data not yet sufficient to permit our making definite conclusions or recommendations. Both tiller well, permitting light planting, and neither shatters so badly as Sonora.

In our judgment Bunyip, Bayah and Dart Imperial wheats and Mariout and Beldi barleys yield more or less soil moisture and shatter less in wind than any grains we have grown.

We are also now booking cotton seed orders for late fall and winter delivery. Pure strains, Durango and Mebane, grown by us in selected, hand-rogued fields. We do our own ginning, carefully avoiding seed mixing.

We invite trial of our seeds for results with less moisture.

Write for prices, stating quantity desired.

BOSTON LAND COMPANY

Post-office, Telegraph, Express and Freight Address:
WESTHAVEN, FRESNO COUNTY, CALIFORNIA.

Mariout Seed Barley

PURE UNIVERSITY FARM STOCK.

Clean, heavy, free from noxious weeds and smut.

Carload lots or less. Sample on request.

F. P. WRAY

DAVIS, CALIFORNIA

Significant Agricultural Pointers

West Side Irrigation District.

A crop census of the West Side Irrigation district surrounding Tracy in San Joaquin county was recently completed by Secretary J. C. Chrisman. Though water has been available only a year, it shows already 1,345 acres alfalfa, 812 acres gyp and milo corn, 118 acres sudan grass, 60 acres beans, 86 of intercropped orchard, 15 of truck crops, and 9,424 acres of grain land. There are 11,860 acres in the district. No double cropping is practiced. Water is pumped from Delta channels by a plant with 120 second-feet capacity. The irrigated barley yielded 20 to 40 sacks per acre, while dry land barley around the district made practically nothing this year. Though the power shortage has reduced their irrigation to one-third of what would be used at this season, if electricity were available for the pumps, the alfalfa and gyp in this territory look thrifty enough.

Michigan Grain Farmers Organize.

Michigan farmers are forming a State grain elevator exchange to market the grain crops of local co-operative elevators on a brokerage basis. The local elevators contract to do business in grain and beans through their own Exchange only. The State organization is designed to become a unit of the mid-western co-operative grain marketing organization now being planned by a committee of seventeen authorized at a grain meeting last July. Members of midwestern co-operative organizations have been studying our California associations for the purpose of incorporating our experience in their organization. A back seat has been taken by the grain growers of California, the State acknowledged by our eastern friend to be the leader in co-operative marketing of most other farm products.

State Settlement Unit Opened.

Applications for farms on the second unit of the State Land Settlement at Delhi in northern Merced county will be received until noon October 11. The farms on unit No. 2 will be allotted October 15. These include 2832 acres. Unit No. 1, including 1191 acres, was opened last May. Unit No. 3, including 1540 acres, will be opened for settlement next January. Every farm is irrigated with both gravity and pump water distributed through underground concrete pipe. The first payment is 5 per cent of the cost of the farm. Remaining payments may extend over a period of 36½ years with interest at 5 per cent. Supt. Walter Packard at Delhi is receiving applications.

Mariout Barley Surprised Rancher.

When R. H. Frazer of Stanislaus county cut his Mariout barley from 100 pounds of seed sown last February on 1.59 acres, there was such a little stack of it that he hardly hoped for 30 sacks. It threshed out 45½ sacks, a yield per acre equal to that of Beldi sown in January on better soil. The Beldi had grown shoulder high to a short man and the stacked grain in the straw made an imposing stack. Next year Mr. Frazer's barley will be all Mariout. It will be planted earlier and thicker, for it does not stool so well as common varieties. Mr. Frazer estimated its average stooling at three to five straws per plant. The straw is stiff so it may be irrigated whenever desirable; while Beldi lodges if irrigated late.

Lower Price on Sunflowers.

Twelve hundred to 1400 acres of sunflowers are growing this year in the Manteca district, according to E. Powers. Last year most of the seed went to the Middle West, yielding 8 or 9 cents to the growers; but a five-cent price is forecasted for this year by Mr. Powers, because the Middle West has a big crop of its own and our seed will have to go mostly to the millers for chicken feed mixtures. There is no market for sunflower seed for their soil.

RELIEF FOR TOMATO GROWERS.

When it became apparent that the tomato growers of Santa Clara Valley were facing serious losses from a lack of financial aid in the matter of harvesting and canning their tomatoes, the Canners' League set to work to check such losses by appointing a committee to arrange for the canning of the tomatoes from 1500 acres that are now on the verge of rotting in the field. This committee, consisting of Victor N. Greco, Geo. N. Herbert and H. Devenpeck, have secured the free use of Greco canning plant, together with operating, managing and distributing organizations, the only stipulation being that the growers' finance and pay the actual cost of canning their product. The tomato canning situation seems to be in a state of chaos. With a big hold over from last year's pack and the government throwing a large quantity back on the market below cost, the banks are unwilling to finance the canneries. The high freight rates are also against California canned tomatoes, and a more serious trouble is in the daily wage scale, the California cannery employees receive 57½ to 85 cents per hour, while the employees in eastern tomato canneries receive 30 cents—some differential.

Some Stanislaus county wine grapes are being dried.

A Portable Power Plant

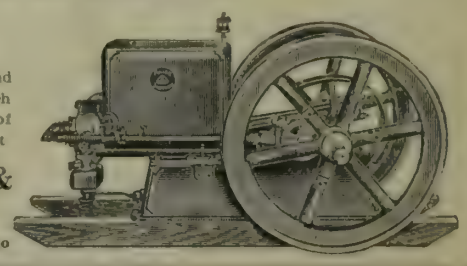
The Fuller and Johnson Farm Pump Engine is an independent power plant that can be used for many purposes besides pumping. It will run separator, churn, fanning mill, corn sheller, feed grinder, washing machine, sprayer, or other light machinery. Can be attached to any pump without extra fittings. Delivers 270 to 2500 gallons of water per hour. Simple and economical to operate. Ask for catalog.

BUY A KEROSENE ENGINE!

The rising cost of gasoline makes no difference to the owners of Fuller & Johnson Stationary Kerosene Engines. We can supply these engines in all sizes—3 H.P. to 25 H.P. Model "H" gasoline engines from 1½ H.P. to 5 H.P.

CATALOG FREE

Write today for catalog, and mention type of engine in which you are interested. Name of nearest dealer sent upon request.



PACIFIC PUMP & SUPPLY CO.

851A Folsom St., San Francisco

San Joaquin County Fair a Big Success

It was a real and very successful agricultural fair. We can't cover it but just touch the high spots.

It was there—splendid stock—from champion bulls to deodorized skunks. Yes, sir, the county boasts a farm where skunks, robbed of their perfume factories, are grown for their fur.

The new barns, now there is something to brag about—and copy after. They have concrete floors, hollow tile walls, are perfectly lighted and ventilated, and are models of convenience. Purebred stock is increasing so fast that they are going to need more of them and they are so located that more may easily be added. And they need a club-house for stock men.

There were creditable displays of several breeds of hogs, including the Eastern Tamworths displayed at the State Fair. Poland-Chinas predominated, however, for San Joaquin is a Poland-China county.

The beef display was a little shy, Shorthorns only being in evidence, but there were some fine specimens of this breed, two herds of the beef type and one of the milking strain being shown.

Holsteins led the dairy cows in number with the Jerseys a close second, the Guernseys being represented by one fine herd. Anyone who looked over the really fine display of outstanding dairy stock assembled at just this one county fair must have been impressed by the tremendous strides the industry is taking in the interior valleys, and too much credit cannot be given the men of grit and vision who are leading the advance.

the junior championship.

Power on the Farm.

A splendid display of farm machinery and implements it was for a county fair. Stockton has the edge over other counties in this regard for she makes the stuff and can put on an exhibit worthy of a state fair without calling for outside help.

The auto show—that's power on the farm also—was, in the opinion of a novice, as good and nearly as large as the one at Sacramento and drew much intelligent interest—a line on the spirit of this farm age.

Horticulture and Agriculture.

Probably some other counties could equal the fine showing made here, but we will wager two bits that none of them have excelled it—or will. It wasn't just a jumble of big pumpkins, tall corn stalks and red apples. Each community in the county had its own booth and there was mighty keen and god-natured rivalry. This scheme of community competition brought out all that was best in all of them, and the result was a display that sent the observer away with a greater realization than he had ever before had that San Joaquin is one of the wonder counties of this wonder state.

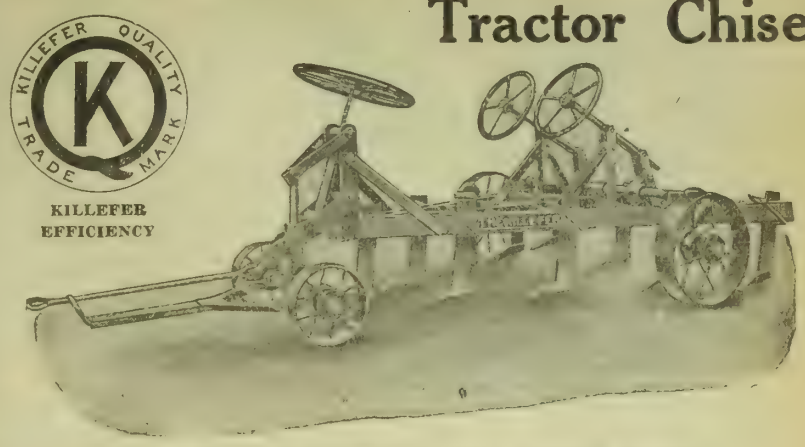
Regarding the Tulare Live Stock Show

(Written for Pacific Rural Press by R. E. Hodges.)

Tulare county has a right to be proud of the concentrated exhibit of its resources at Tulare, September 14 to 18, inclusive. There was scarce an inch of waste exhibit space; and while the writer was there, no part of aisle or roadway space was unoccupied. The greatest significance of this livestock show was the loyal spirit displayed by local visitors and exhibitors alike. Practically the entire show was composed of local exhibits. The only feature that marred the scene was the sight of the visitors lining with gold the pockets of dissolute operators of gambling machines from outside the county, not only sending their money away, but imbibing lessons in the disappointing expectation of getting something for nothing. We can't say that livestock was the principal feature of the show, though it lined two sides and occupied five or six double sheds near the middle. A splendid machinery exhibit, including tractors and all farm implements, was notable for the variety of milking machines, silage cutters, pumps, etc. The automobile show room was packed with models of a dozen makes. The department in which local communities displayed their resources was remarkably representative, complete and artistic. The woman's department was fairly packed with women and their handiwork. A baby clinic was popular. The poultry exhibit included stock of four or five light-weight breeds, the same number of heavy breeds, two breeds of turkeys, three of ducks, and two of rabbits. The horse exhibit comprised Belgians, Percherons, Coach horses, Shetland ponies, Thoroughbreds and Jacks. The beef cattle consisted of a splendid herd of a dozen Herefords. Milking Shorthorns of local ownership were there. A fine local herd of two dozen Jerseys stood practically alone in that breed. An outside herd of sixteen Ayrshires represented the Scotch breed of dairy cattle. But in Holsteins, for which the county is among the pre-eminent, there was a grand show of about 80 animals from at least a dozen local herds. The Southdown and Corriedale sheep were from outside, and no other breeds were shown. Duroc and Poland-China swine were the entire hog show except one herd of Hampshires and one of tremendous Berkshires. Durocs were far the most numerous and represented probably twice as many local breeders as the Poland-Chinas, part of which were from the outside. The former were labeled, "Tulare County Durocs."

As a fruit-producing and shipping point, Auburn, Placer county, is coming to the front at an amazing rate. We remember but only a short while ago that it was only an occasional carload of mixed fruits was shipped to Eastern markets. But we now learn from Manager E. S. Culver, of the Auburn Fruit Exchange, that Auburn has done a record business this season. Already 178 carloads of mixed fruit have been shipped by the Exchange. The season's total will probably reach 190 cars.

8-Feet Extra Heavy Tractor Chisel



Now is the time to commence deep chiseling and subsoiling. Do it in time to prepare the ground thoroughly to receive the benefit of the winter rains. Break away from the old habit or mistaken idea of scratching the ground and expecting to harvest a crop.

Plow pan, although frequently referred to as mechanical hard pan, should not be confused with natural hard pan. However, so far as crop production is concerned, the effects of plow sole and hard pan are the same. Both must be destroyed before proper cultivation can be had, and the only difference in the two that will be considered here is in the method required for their destruction.

Plow sole offers less resistance to the available methods of breaking it up than hard pan, and, with the tractor and tool of sufficient strength now available for tractor use, it can be broken up and subdued, bringing the land back to the point where a full yield may be expected.

Plow sole offers less resistance to tillage implements than does hard pan; both are in many cases impervious to horse teams and ordinary plows, and in some instances are difficult of handling with tractors and modern implements. Yet before a full yield may be expected this condition must be subdued, and to date the only satisfactory means is by use of the chisel or subsoiler.

Send for Catalog and Prices.

The Killefer Manufacturing Co.

2209-21 SANTA FE AVE., Box 156, Arcade Station P. O., LOS ANGELES, CAL.

Your Soil Needs Humus and Nitrogen Bacteria

Melilotus Indica Supplies Both

Now is the time to plant it. Buy only seed that has a quality test tag on every sack. It protects you against seed of low germination.

Buy from your local dealer or from

Aggeler & Musser Seed Co.

Look for the Tag LOS ANGELES, CAL.

Implement Improvements at State Fair

(Written for Pacific Rural Press.)

Implement improvements were among the striking features of the Power on the Farm exhibit at the 1920 State Fair. The writer was unable to go into detail with all implement exhibitors, but a great many improvements were noted. One of the most important of these is the four-row furrow planter invented by Williams Bros. of Los Angeles county, for use on their ranch, and manufactured by the Killefer Manufacturing Co. By its use, Williams Bros. raised 18 tons of sugar beets per acre on part of the same field which raised only eight tons from the same lot of seed because it was planted in the usual way. The new planter throws up ridges, rolls them hard and flat, leaving a furrow between them, and plants any kind of seed from onions to beets and peas, close to both edges of each ridge. There is no changing of plates for various kinds of seed, yet the planting is positive and results in perfect stands. The beets planted by Messrs. Williams produced a 100 per cent stand on the flattened ridges and only a 25 per cent stand on their common planting. The ridges warm up sooner and greatly aid germination at a cold season of the year. They also leave the seedlings ready to be irrigated without flooding them. Regulation for various sized seeds is obtained by revolving one bronze sleeve within another at the bottom of each seed hopper. Slight movement enlarges or closes diamond-shaped holes through the sleeves and thence to the ground. The machine needs a tractor to pull it. Four rows are planted at once, though a two-row machine also is manufactured. The leveler which flattens the ridges is adjustable for height. So are the rollers. Rows may be planted at varying distances apart. A four-row cultivator, whose wheels run in the furrows, can be adjusted to work right up to the seedling rows. Power-lift light and heavy orchard cultivators, a power-lift single-standard subsoiler, and a two-row tractor-drawn beet plow are other machines in the Killefer exhibit never previously shown.

Rice Cultivator Saves Levees.

An important cultivator was shown for the first time by J. M. Stone in connection with the Cambers scraper. It is to replace the scraper on its balancing frame. Mr. Stone has noted in his business in the rice country that machinery now used to work down a seedbed within the rice checks always tears down a part of the levee when crossing into the next check. His cultivator hangs from the front of a platform balanced across the axle between two wheels. A man rides the paltform and steps forward of the axle to put the cultivator into the ground, or steps back of it to raise them out. For use with a tractor, a weight replaces the man, and balance is governed by a lever and bar. When a check has been cultivated ready for seed, the cultivator shovels are balanced out of the ground and they ride over the levee without damaging it. One man stated that after ordinary harrows had finished, he had to spend several thousand dollars getting the levees shaped up again.

Tractor Mowing—Machines Numerous.

Mower attachments have attracted considerable study from tractor makers and users. Their economy lies in greater speed, more constant operation, and use of the tractors when they would otherwise not be in use. A new simple but ingenious mower attachment was shown on a Cletrac. The frame to support the sickle bar and control rods, etc., is bolted to the front end of the Cletrac frame. All controls are extended back to the driver's seat. The sickle is operated by chain drive from the tractor belt-wheel axle in front. The Fordson attachment is arranged for the sickle bar to extend from between the front and rear wheels. The two-wheel Allis-Chalmers and the Beeman Garden tractors have mower attachments which were not shown at the Fair for lack of space. The 2-1¼ horsepower Merry Garden tractor showed a 30-inch mower attachment. The Oliver Chilled Plow Works exhibit contained a short-tongued mower for attachment to tractors. The Pacific Implement Company also showed a mower fixed to use with tractors.

Other Implement Improvements.

The Golden Gate weed cutter is well known to our readers; but not so well known is a similar implement built by C. G. Sigurd for tractors. It has no wheels but is regulated for depth by sliding bars pivoted to its frame and worked by hand levers. It is built in two sections, cutting a total of about 12 feet width.

The Wade drag-saw frame this year is built like a wheelbarrow for more convenient movement. The wheel is locked with a short rod while the saw is at work, and a dog beside each handle holds its upper end secure on the log.

A self-adjusting hitch to work with the power lift-device on Oliver plows for Fordson Tractors prevents any change in the line of pull on the drawbar as plows go into or come out of the ground.

A steel hay press, built to be hauled and operated by Case tractors, was a part of the J. I. Case T. M. Co. exhibit.

The Avery Company's new line of disk and moldboard plows and double disks made its public debut at the State Fair.

Threshing Machines Prominent.

Combined harvesters and stationary threshers made an imposing exhibit back of the tractor tent at the State Fair. A 20-foot sickle-bar on a Holt combine, two twelve-foot and a 25-foot sickle on Harris combines, and a Yellow Fellow stationary rice thresher were laid open for inspection. A Russell thresher, belt-driven by a Russell 30-60 tractor, attracted attention by its smooth noiseless running, until the Avery Yellow Fellow operated by an Avery 40-80 tractor began chewing up 1x8 pine boards and old bricks. That made noise enough to attract everybody; and the sight of bricks being chopped to pieces finer than walnuts made every fellow cringe, except the Yellow Fellow.

Brenneis tractor subsoils, chisels, and cultivators were featured in the Cletrac exhibit. The orchard cultivator is adjusted for depth, not only by a hand wheel, but also by convenient regulation of the pole in relation to the cultivator frame.

The Madewell hand-power prune dips were exhibited for the first time though a few were sold for use last year and more were placed in 1920.

Do You Know—

STANDARD PRACTICE

The use of Timken Tapered Roller Bearings at points of hard service in the great majority of leading tractors—and in power-driven farm machinery—is proof of leadership established on the tapered principle of design, quality of manufacture, performance, and service to the automotive industry.

that the same fundamental principles of design apply to all tractors whether of wheel, four-wheel drive, or tracklayer type?

that Timken Tapered Roller Bearings play the same part in all types, carrying radial load, thrust load, and all possible combinations of the two, and that their tasks are fundamentally the same wherever they serve?

that Timken easy take-up, compactness, and ability to outlast the tractor, figure prominently in determining the choice of Timkens for the hard jobs?

THE TIMKEN ROLLER BEARING COMPANY
CANTON, OHIO
Plants manufacturing complete bearings at
Canton, O.; Columbus, O.; Birmingham, Eng.; Paris, France
General Offices, Steel, Rolling, and Tube Mills, Canton, Ohio

The "Allwork II" Tractor, made by the Electric Wheel Company, Quincy, Illinois, is equipped with Timken Tapered Roller Bearings at points of hard service.

TIMKEN
TAPERED ROLLER BEARINGS

REAL EDUCATIONAL PUMP EXHIBIT.

A splendid really educational pump exhibit of extraordinary scope was staged at the State Fair by the Herzog Electric and Engineering Company. Three direct-connected De Laval centrifugal pumps figured to be of 70 to 75 per cent efficiency were fitted to pull water through one large suction pipe and deliver it through another pipe into a weir box, where it was measured and turned back into the sump. The pumps were of 900, 1000, and 1400 gallons per minute capacity, and occasionally two were run at once. This flooded things too much, however. Attendants showed clearly every step in the testing of pumps for lift delivery, horsepower used, and efficiency, and supplied a pamphlet showing tables, charts and methods. A vacuum gauge gives a reading which is converted into feet lift of water by multiplying by 1.13. The total discharge head is determined by multiplying by 2.039, the reading of a pressure gauge located near the discharge flange of the pump. The sum of suction head, plus discharge head, with corrections on account of positions of the gauges, plus pipe friction, equals total head. Actual discharge was indicated by a weir and a chart for computing the flow into gallons per minute. Additional devices were provided to indicate the waterflow. One was the Herzog Flow Meter, which is a large vertical pipe connected with the weir box and carrying water at the same level. A float in the pipe worked a simple gear as it rose and fell, and the gear worked an indicator on a dial figured out to gallons per minute. Another more complicated device on the discharge pipe indicated the pressure and head.

Electric horsepower being used was indicated on a standard wattmeter. This reading was converted into ordinary horse-power by dividing the reading by 746. Actual horsepower, used in light water, was figured by multiplying the latter figure by a decimal which represents the efficiency of any particular size and kind of motor.

Other pump exhibits included most of the types and sizes of centrifugals and turbines now on the market, being run by tractor, by gas engines belt-connected and direct-connected, and by motors direct-connected. They included the American turbines and a Monarch centrifugal run by a Bates Steel Mule, Superior pumps of many sizes, and Bean turbine and centrifugal pumps, the latter run by a direct-connected Bean engine. Hardie, Bean, and Niagara spray pumps of all models were included in the pump tent.

POWER NOTES.

The Samson Tractor Co., a unit of the General Motors Corporation, is expecting to put up an assembling plant in Stockton next fall and winter. Heretofore all of the model M wheel type Samsons have been assembled at the factory back East. No Sieve-Grip models are being made, though a stock of parts is maintained to supply those already in the field.

The Lightfoot model Monarch Tractor has not been delivered to any extent on this coast, but the manufacturers are working on a 20-12 model, enough heavier than the Lightfoot to do a maximum of orchard work.

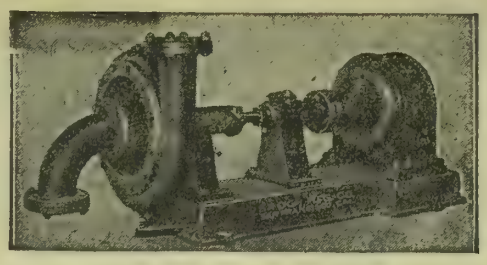
A pneumatic rubber cushion to take the shocks and vibrations of automobiles and motor trucks is the one being projected by the Seibel Air Springs Co. It is pumped up to any desired pressure in the same manner as a tire and it rests on a thimble-like projection from the axle. Similar cushions are made for tractor seats, motorcycle seats, etc. Superior response in the cushioning of all shocks is claimed.

"The smallest tractor made" was on exhibition here for the first time—the Merry Garden, weighing 250 pounds and developing 1¼ drawbar h. p, considerably smaller than the Beeman, Utilitor, and Oldsmar, which also were here. The Oldsmar is larger than the others but still in the garden or small orchard class. These small tractors have shown that there is a great field for them on ranches where one or two horses have previously done the work at more expense and less satisfactorily.

One inventor making the effort to provide a one-man tractor for all purposes, displayed the All-in-One machine on which the tractor frame is extended far enough to the rear to support various implements, including a two gang plow, just forward from the driver. It is intended, when desirable, to use the implements formerly drawn by horses.

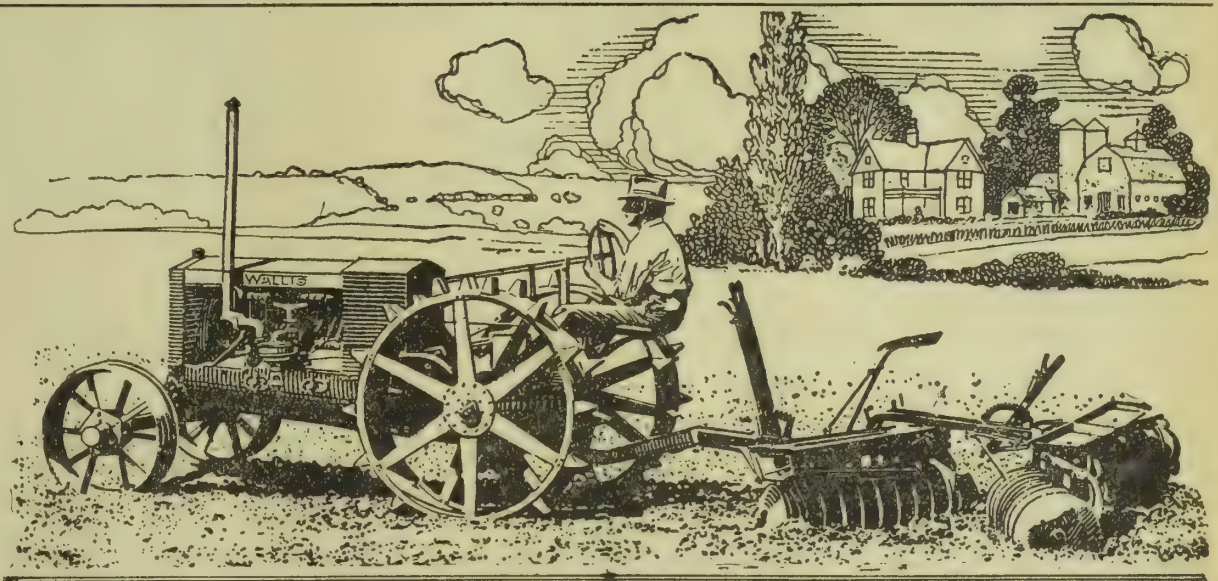
The Ideal power lawn mower operated by a two-horsepower engine mounted on a driving drum and cutting a 30-inch strip was another form of tractor of about the same power as the Merry Garden, but adapted for only the one purpose.

IRRIGATING PUMPS



Single Stage Motor Driven Pump

KROGH PUMPS absolutely hydraulically and automatically water balanced. No end thrust whatsoever.
Also DEEP WELL TURBINE PUMPS for bored wells 10-inch diameter and up.
Write for Bulletins
KROGH PUMP & MACHINERY CO. 149 Beale St., San Francisco, Cal.



Why the Wallis Means
Bigger, Better Crops

The features that have made Wallis—AMERICA'S FOREMOST TRACTOR—stand clear and convincing. It requires no great study to see why Wallis power means more acres per hour—whatever the field operation.

Examine that exclusive Wallis feature, the U-shaped frame, which combines great strength and rigidity with light weight. Watch the heavy duty valve-in-head motor as it performs hour after hour, at maximum load, without heating up or steaming. Inspect the vanadium steel gears, enclosed and running in a bath of oil.

Every feature of the Wallis spells great strength coupled with light weight. The Wallis has more drawbar horsepower per pound of weight than any other tractor on the market. That explains Wallis's record in demonstrations throughout the country.

Wallis power means more acres per hour—thousands of Wallis farmers have proved that. And more acres per hour means more dollars per acre.

Write us for information on how the Wallis is performing in your section. What Wallis is doing for your neighbors is the surest proof of what it will do for you.

J. I. Case Plow Works Company
Dept. A-476, Racine, Wisconsin

NOTICE: We want the public to know that the WALLIS TRACTOR is made by the J. I. CASE PLOW WORKS COMPANY of Racine, Wisconsin, and is NOT the product of any other company with "J. I. CASE" as part of its corporate name

WALLIS
—more acres per hour

EXPOSITION PARK
LOS ANGELES
OCT. 2 - 10 INC.

The Greatest Combination of Educational Live Stock Features and Program of Amusement Events Ever Held in Los Angeles in one single Show.

Blooded Stock — BEEF CATTLE, DAIRY CATTLE, SWINE, SHEEP, GOATS .:. :. : POULTRY, PIGEONS, RABBITS.

$50,000 Cash Prizes & Purses

EVERY MINUTE ATTRACTIONS TO EDUCATE - DIVERT - AMUSE

Equestrian Events—Big Horse Show—Rodeo—Running Race Classics—Kennel Show—Pet Stock Exhibits—Amateur Boxing—Fashion Parade—Trick Riding—Trick Roping—Relay, Hurdle and Chariot Races.. Famous Santa Catalina Island Marine Band.

SURPRISES GALORE

OPEN FROM 8 A. M. TO 8 P. M.

ADMISSION 50c

ALL ROADS DIRECT.

Hillcrest Stock Farm Shorthorns

WIN BOTH GRAND CHAMPIONSHIPS

IMPORTED SCOTTISH LORD

Grand Champion Bull

LITTLE SWEETHEART

Grand Champion Cow

Also won 7 firsts, 5 seconds, 2 thirds and 1 fourth.

BULLS FOR SALE IN SINGLES OR CARLOAD LOTS

Also Breeders of Shropshire and Merino Sheep

T. S. GLIDE, Prop. DAVIS, CALIF.

DIGESTER TANKAGE

Send for Sensible Folder on Feeding Hogs

WESTERN MEAT COMPANY

Animal Food Dept. 704 Townsend St., San Francisco

HAVE YOU SEEN THE

Grand Champion Duroc State Fair 1920

HERD SIRE CHOICE WONDER III { Mahaska Wonder { Great Wonder, Grand Lady 20th; Grand Lady 72nd { Grand Model, Rose

Write for yours from the most select herd in California.

Littermate (gilt) topped Ed Kern's Last Sale at $5600

V. F. DOLCINI, JUNE ACRES STOCK FARM, DAVIS, CALIF.

Horses.

A man who is a strong advocate of the tractor on the farm sends us this statement: "Many Fresno county vineyardists who sold their horses and bought tractors have found they need horses anyhow and can't afford to have both so are buying workstock again.

Live Notes About Live Stock Doings

Kings County Farm Bureaus have made. "Pork Day" mean something. Seventeen car loads of fat hogs were recently sold in one day.

Eastern demand for breeding ewes at the livestock centers is somewhat better and more are going out to farmers. Choice western lambs in Chicago only reached $14.25 last week.

The Ogden Livestock Show is the first show of the coming year having claimed the dates of January 6th to 8th for their second annual show and sale in the city at the mouth of Weber Canyon.

One hundred thousand dollars is the amount which the people of southern California in general and Los Angeles in particular are putting up to finance their coming livestock show, October 2 to 10, inclusive.

Geo. A. Stingle, owner of Lark Meadow Ranch, El Monte, has issued a typewritten catalogue and sales list of the Berkshires he wishes to dispose of. This is not a new idea, but one that is neglected by many breeders.

El Dorado county is trying out the plan used by the Durham State Land Settlement. Under lead of the Farm Bureau they are standardizing the hogs of the county. The Duroc-Jersey has been adopted as the El Dorado county hog.

Lena Perfection 2d, by Redeemer, a fine, typey Duroc sow owned by Sierra Vista Ranch at Perris recently farrowed eight very strong, active, heavy pigs by California's Great Sensation, their junior herd sire. The litter of eight weighed 24½ pounds one hour after farrowing; five sows and three boars..

Data compiled by State Market Director Daniels indicate that it has cost growers this year from $15.00 to $19.00 a ton to grow, harvest and bale alfalfa. Variations in cost are due to location, water rates and yield per acre.

Upward of 200 exhibitors have entered about 1,900 purebred animals for the Los Angeles Livestock Show, a gain of 40 per cent over last year. Entries in all departments, as published lists prove, are surprisingly heavy.

"Jim" Thorpe of Lockeford won the Stockton Record cup for the best Jersey herd at the Stockton Fair. It was no walk away either, for there were 57 head of choice Jerseys on exhibition from some of the best herds in the state.

W. J. Higdon of Tulare, who had entered his Holstein herd in the Los Angeles Livestock Show, has withdrawn them on account of being obliged to detour shipment via San Jose and the Coast route, owing to the tunnel blockade in the Tehachapi Pass.

Season press tickets have been received for the Dairy Cattle Congress and International Belgian Horse Show at Waterloo, Iowa, for the dates, September 27th to October 3rd, inclusive. This is coming to be an annual event of importance in these lines and they expect to stage a great show well worth visiting.

A communication from the Extension Department of the Holstein-Friesian Association of America calls attention to the fact that Tilly Alcartra is still champion butterfat producer of the world by yielding 380 lbs. more fat in 7 years than did Sophie 19th of Hood Farm.

Jersey Cattle Feature at Ferndale Fair

Sam H. Greene of the California Dairy Council, on his return from Humboldt county, reports Ferndale Fair a success, especially as an exhibit of the finest specimens of Jersey cattle. It was even a greater one than that at the State Fair. It is not only an indication but a demonstration that Humboldt county will not only become but is now a great Jersey distribution center.

Cattle of size, quality, conformation, and last and of greatest importance, performance, especially economic performance, were the kind of Jerseys shown.

Among the prominent and well known herds were those of J. W. Coppini, S. P. Kelley, Bonniksen Bros. and Gilbert Trigg of Ferndale, with Dr. H. G. Gross' herd from Eureka.

The feature that stood out above all others, according to Mr. Greene, was the exhibit of Calf Club stock. This showing consisted of 57 junior calves with the Jersey and Guernsey breeds predominating. First these heifers were judged as junior calves, afterwards being scored according to a standard adopted in which the feeding conditions, etc., were taken into consideration. To put the finishing touches to the contest the Fox News Company, a moving picture concern, took pictures of all the contestants to be shown in all parts of the United States.

The calves were placed by Prof. C. W. Rubel of the University of California.

Dairy Cattle for Sale

100 First Class High Grade Holstein Cows

All in milk or soon to freshen.

Young, sound and good producers.

20 Registered Heifers, 8 Registered Bulls

All of serviceable age. Everything tuberculin tested.

For further particulars, call or write

Baden Stock Farm

M. H. TICHENOR & CO., Sales Agents, Palo Alto

E. M. BROWN, Prop South San Francisco Near Highway

Is the Tide Turning for the Dairymen?

(Written for Pacific Rural Press by Ralph Newman.)

One of the best posted men in the state was asked the other day what he thought of the dairy situation. He replied: "It is easing off somewhat. If present prices can be maintained while present feed and labor costs remain as they are, the dairymen who have stuck to it ought to get by." And that appears to be the opinion of many others who ought to know. Maybe you haven't noticed it on your particular dairy. Maybe you are still numb from the shock of last spring, but cheer up anyway—the worst is probably over.

The Feed Situation.

He would be mighty wise (or foolish) who would make any dogmatic statement about what a day may bring forth in the feed line, but here are a few hopeful signs.

The fear of $40 alfalfa has lost its punch as a hobgoblin. It served a good purpose though while it did walk, for there has been and perhaps will be no speculation in alfalfa this year. The spread between producer and consumer is not unreasonable now and probably will not be. The State Market Director has it figured out that it has cost the producer from $16 to $19 a ton to produce alfalfa this year and get it ready for market. The dairyman can buy it for from $24 to $29 a ton, depending on quality. Stocks in growers' hands intended for marketing are larger than at this time a year ago for all the total production is less than that of last year. So, while there may be a healthy demand before the rains set in, the prospect is that prices will climb no higher.

Perhaps also the dairyman with a lot of young stock to winter and with feed to buy may get some comfort from the grain hay situation. "We are reliably informed" that at one shipping point where there are 10,000 tons of grain hay, 7,000 tons are classed as barley hay and that this proportion holds good over the state. Barley hay, in some sections, is offered at $15 a ton.

And whatever the barley growers may think about it, the dairyman who would like to buy and feed barley may begin to chirk up a bit. Barley is quoted, as this is written, in San Francisco at $2.20 and may be had in some sections at $2.00.

Now, if somebody will sneak into the beet-pulp corner and punch a hole in the bottom of the bin, we may be tempted to sing the doxology.

The Labor Situation.

Dairymen began to wonder how long it would be before they would have to wish the ranch on to the hired man and go to work for him. Eighty, ninety, a hundred a month and board. Then a hundred and ten and on up to a hundred and thirty a month and board, and three men to a job—one working, one going and another coming. Well, the worst is over. Several reliable employment agencies have said that the upward trend has stopped. One hundred dollars a month and board will now secure pretty good milkers. There doesn't seem to be any indication that the wage will drop much below this figure for the present at least, but there is some cheer in the assurance that it is not to go on climbing indefinitely.

Fewer Cows but Same Output.

For every dairyman who has increased his herd this year there are easily ten who have cut down. That means fewer cows to feed and milk, but it does not necessarily mean less milk to sell. Undoubtedly in some sections it does mean that many whole herds are gone for good (and there is one reason why the demand for alfalfa is not keener, if you want to know. But in many other instances it does not mean less milk. Under the lash of stern necessity many dairymen have culled very closely and have found, some to their surprise, that fewer but better cows fed better are filling just as many cans as were filled by the larger herd not so well cared for. If there is anything in Emerson's law of compensation, here is where it comes in.

As to Price.

As a dairyman I wish I knew what the future has in store. As a writer for other dairymen I have nothing at all to say beyond the comment that the advance in the price of milk on August 1st has stuck, and bids fair to stay stuck until the cost of production warrants a reduction—something not now in sight. So far as the naked eye can discover, the hullabaloo raised by certain misguided women about the "Bay" has not created a riffle and will not. So we end as we began: "The situation is easing off some."

JUDGING PROGRAM LOS ANGELES

Monday, October 4—9 a. m., judging Holstein and Guernsey cattle, Milk Goats. 10 a. m., Percheron Horses. 1.30 p. m., American Saddle Horses. 2 p. m., Aberdeen-Angus cattle; Tamworth and Yirkshire Swine 2 p. m., Horse Show.

Tuesday, October 5—9 a. m., judging Guernsey cattle, continued; carlots of fat cattle; Poultry. 9:30 a. m. Fat Steers. 10 a. m., Duroc-Jersey swine; Belgian horses; Shorthorn cattle. 1:30 p. m., Standard Bred horses. 2 p. m., Horse Show.

Wednesday, October 6—9 a. m. judging poultry continued; Hereford cattle and Poland-China hogs. 10 a. m., Shire horses. 1:30 p. m., Jersey cattle and Thoroughbred horses. 2 p. m Hrose Show. 3 p. m., Auction Polled Hereford cattle.

Thursday, October 7—9 a. m., judgign Berkshire hogs and Ayrshire cattle. 10 a. m., Clydesdale horses: Jacks and Jennets; California Cattlemen's Convention in Agricultural Building. 1.30 p. m., Arabian horses. 2 p. m., Horse Show. 3 p. m., Auction of Berkshire hogs.

Friday, October 8—10 a. m., judging Hampshire hogs; unfinished classes. 1 p. m. Pig Club stock. 2 p. m., Horse Show. 2:30 p. m., Auction of Pig Club hogs.

Saturday, October 9—10 a. m., judging sheep.

Sunday, October 10—1:30 p. m., judging Shetland ponies.

E. PETERPOSTEN

WILL SELL HIS ENTIRE HERD

Registered Holsteins

October 20, 1920

Mr. and Mrs. Peterposten are going back to Switzerland for an extended visit, and their very fine herd of Holsteins will be sold at public auction on the above date.

AN OPPORTUNITY TO BUY AT YOUR OWN PRICE

Good Producers and Representatives of the Good Blood Lines of the Breed.

Everyone who has seen Mr. Peterposten's cows has pronounced them especially good. They have been among the leaders in the Stanislaus Cow Testing Association for the last two years. This is saying a good deal in a county like Stanislaus. Here are some of the records the cows have made in the regular dairy herd milking twice a day.

14,951 pounds milk and 634 pounds butter by a 2-year-old.
14,417 pounds milk and 603 pounds butter by 3-year-old (in 9 mos.)
15,556 pounds milk in 10 mos. by a 3-year-old.

Official Records—In the last few months Mr. Peterposten has done some official testing. The results would surely indicate that Mr. Peterposten was not only a good dairyman, but that he had some very good cows. A 20-lb. three-year-old, a four-year-old that has milked continuously since her first freshening and at her last freshening made 508 lbs. milk and 17.1 lbs. butter in 7 days without any fitting (Mr. Peterposten says she is a 30lb. prospect if there is one in the state), another with little fitting made 536 lbs. milk and 28.77 lbs. of butter during the hottest days this season. Most of the 20 cows in the sale will have been officially tested before sale time.

GREAT SIRES—Such great sires as **Prince Gelsche Walker** (a daughter of his and sister to the $12,000 bull is in the sale), **Romeo Aaggie Acme of Riverside, Sir Skylark Ormsby Hengerveld,** and **Colantha Johanna Lad** are represented in this offering.

There are seven as beautiful heifers as you can find in any herd of its size anywhere; the balance of the offering is made up of young bulls and calves dropped in the last ninety days that are sired by **Ensign Wayne Colantha,** a thirty-one pound bull. The herd is in especially nice condition and you will be sure to appreciate them if you will attend the sale.

The sale will be held under the auspices of the

STANISLAUS COUNTY HOLSTEIN BREEDERS' ASSOCIATION

Catalogs ready October 1. Write at once for yours.
E. M. MORROW, Secretary, Modesto.

"Silent Alamo" Farm Light Plant
—furnishes electric light and power for the country home. Runs without vibration. Write for catalog.

"Duro" Water Systems
The all-round water system for the household. Furnishes water under pressure at small cost. Send for catalog.

"Universal" Milking Machines
—enable dairy farmers everywhere to add hours to the day for other duties. Write for catalog.

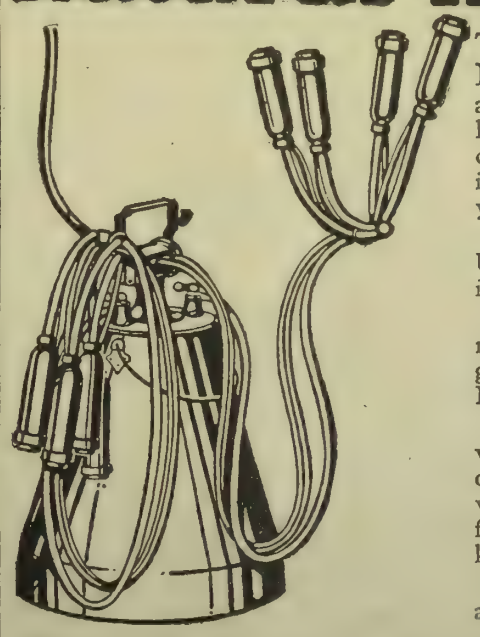
Pumps
Horizontal Centrifugal pumps, Vertical Centrifugal pumps, Direct-connected Centrifugal pumps. Write for catalog.

"Louden" Barn Equipment
Get 25 per cent more milk, save feed, and save labor, by making your cows comfortable with Louden Equipment. Write for catalog.

Gas & Oil Engines
We can furnish you with any kind of an engine in any size you require. Write for catalog.

Name_____
Address_____
Cut out this ad, sign your name, check the catalogs you want, and mail to us.

Universal natural milker



The Universal Natural Milker enables thousands of dairy farmers to add hours to the day for other duties—and to put extra profits into the bank. Why not you?

Two times a day, every day, Universal is on the job saving time.

Cows like its gentle alternating action and the farmer gets more milk. That means MORE PROFIT.

Milks two teats at a time, while gently massaging the other two as they refill. Universal rubber-lined teat cup fits any cow, and is easily kept clean.

This saving to you begins at a very small cost.

Write for the Universal Catalog: Learn about this simple, dependable, mechanical milker that enables one man to do the work of three—and do it better.

California Hydraulic Engineering & Supply Company

58 Fremont Street
San Francisco

420 E. Third St., Dept. A
Los Angeles

San Ramon Shropshires At 1920 State Fair

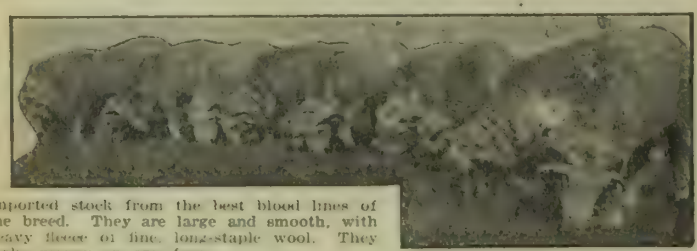
Were awarded every first prize except one. All second prizes. All awards for pens and flocks, Champion ewe, and Gold Medal.

FOR SALE—Ewes and rams of same breeding at reasonable prices. Also some purebred unregistered ewes and rams.

BISHOP BROS. Props.

SAN RAMON, Contra Costa Co., Calif.

KIMBLE RAMBOUILLETS



Imported stock from the best blood lines of the breed. They are large and smooth, with heavy fleece of fine, longestaple wool. They make money on any farm.

Rams, Yearlings, and older Breeding Ewes. Call or write for further particulars.
CHAS. A KIMBLE, Hanford, Calif. IMPORTER AND BREEDER

Build a Savings Bank in your Barnyard

When you build an Indiana Silo you build a Savings Bank in your barnyard. You can save 40% of corn fodder wastage, 10 to 25% on mill feed, barn space, labor and often field crops spoiled by rain.

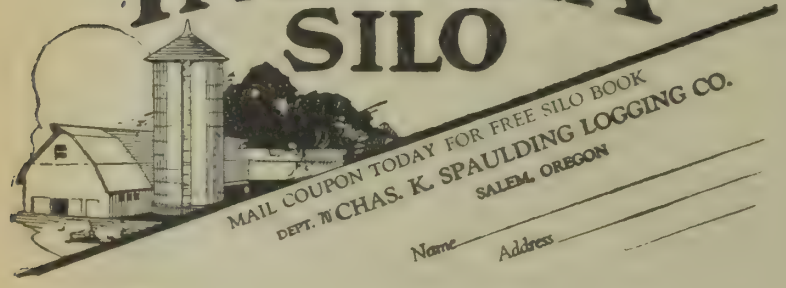
An Indiana Silo pays dividends in increased butterfat and beef production, more stock per acre and freedom from pasture worries.

Get the Indiana Silo Facts

If you feed ten head of stock you are paying for a silo whether you own one or not. Indiana Silos have been used for 22 years. Twenty thousand on Pacific Coast farms. Write today for free silo book. Learn the facts.

CHAS. K. SPAULDING LOGGING CO.
SALEM, OREGON

INDIANA SILO



August Meat and Livestock Situation

The Consumer's Standpoint.

The outstanding feature in the meat situation during August was the great difference in price between the different grades of meat and the differential between various cuts from the same grade.

For example, the difference between steer loins and cow loins ranged as high as 20 to 25 cents a pound. The differential between the best grade of fresh beef from steers and fresh beef from cows rached 8 to 10 cents a pound. The heavy demand for choice beef toward the end of the month sent the price of best live cattle to the highest point since last January. Similarly there has been a wide difference in the wholesale prices of various cuts from the same animal.

With a reduced hog supply, there has been a good demand for fresh pork, which is marketed from current production. The prices of smoked meats have been somewhat lower than during July.

Light hogs are still at a premium, since the people want chops from light loins. Loins weighing from fourteen to sixteen pounds have been selling at wholesale six to eight cents a pound cheaper than loins weighing from eight to ten pounds. Experienced pork men insist that chops from the heavier loins are just as good. Some even maintain that the heavier hog is more likely to be well finished.

Moreover, fresh pork shoulders, which are quite nutritious and palatable, have been selling very cheaply, as compared with loins (whence come pork chops) from the same animal. Bellies from heavy hogs have been selling at wholesale for less than the dressed carcass cost.

The belly, the bacon cut, is one of the choice cuts of the hog, but heavy bellies are at a disadvantage.

The spread between "choice" cuts and those which are less popular is quite wide in the case of both beef and pork.

The price of lard shows little change, the tone of the market being slightly better. September lard on August 30 last year was $27.67 per 100 pounds. On August 30 this year, September lard closed at $18.45.

September ribs closed on August 30, 1919, at $21.87; on August 30, 1920, at $15.05.

The Producer's Standpoint.

Two elements in the August situations are of particular interest to the livestock producer. One is the substantial spread between the price of live stock and the price of meat, this spread being caused in good part by the decreased value of hides and byproducts. The other is the better export demand for pork products during August.

It is customary at this season of the year to receive fair export orders from Europe, but the revival of these orders is especially gratifying at this time on account of recent conditions in the export trade. Many European countries have been buying only from hand to mouth, although stocks in some of these countries have been very low. Butter is quite scarce abroad, and there has been more demand for American fats as a consequence. There have been better inquiries and orders for lard and dry salt meats. On the whole, the export trade during August has been fair, particularly the trade with Scandiavia.

There has been more or less of a decline in the contract price of pork and lard. This is generally attributed to the lower prices of grains. The seasonal demand for all kinds of cash pork products has been good.

Producers undoubtedly must have noted the spread between live stock and meat prices on account of the decreased value of hides and by-products. These decreases, in the case of cattle, are equivalent to approximately $2.50 per hundredweight on the basis of live weights. For example the beef which the packer obtains by dressing range steers weighing 1150 to 1200 pounds alive and selling in the present market around $11 to $11.50 per hundredweight, costs him just as much as did the beef from similar animals for which he paid $13.50 to $14 per hundredweight a year ago. He pays less for the cattle but he also receives a great deal less for the hides and fats.

FRESNO COUNTY FAIR.

Fresno is now in readiness to handle the record-breaking crowd that is expected to attend the Fresno County Fair, beginning Monday, September 27. The Chamber of Commerce states that despite the materially increased accommodations provided through a remodeling and enlargment of the buildings, practically all the exhibit space for the Fresno districit fair has been snapped up. All stock barns and departments have been filled. This applies to practically every line of exhibits—the livestock, agricultural, and horticultural. A total of 393 stall have been provided in the live stock department, providing accommodations for approximately 700 animals.

P. M. Rasmussen declares that he will have an horticultural exhibit equal to the prize winner at Sacramento State Fair. Twenty large booths have been arranged and the space in all these have been signed up, the latest reservation being made by Anglo-American vineyard. The State Agricultural Society, the United States Forestry Service, and the Farm Bureau.

Smut as Stock Feed.—I have been feeding my milk goat rolled barley that has considerable smut in it, and she has fallen off in milk flow to quite an extent. What effect would the smut have on the milk flow?—L. C., Los Angeles.

Smut is a fungous growth destroying the substance of the kernels of grain. Experimental work has not fully determined the effect of this substance on animals. It is not harmful in small amounts although it is said to cause abortion sometimes. Grain of any kind containing an appreciable quantity of smut would be rather unpalatable, not as nutritious, and more or less undesirable, according to the amount of smut contained. Probably your goat does not like it.—Livestock Editor.

Four bulletins have just been received from the Indiana Experiment Station at Lafayette, dealing with phases of feeding farm animals that are valuable additions to the feeder's library.

BULLARD BROS., Woodland, Cal.

BREEDERS OF

RAMBOUILLET SHEEP

Have for immediate sale

50 Registered Yearling Ewes
50 Non-Registered Yearling Ewes

350 OTHER EWES

WRITE FOR PRICES AND PARTICULARS

Show in the South is Next Attraction

Fun, fast, furious and fine, with a week for the accumulation of wisdom and freedom from worries. Of course, we all want to go, most of us will go, and those who stay at home will regret it as soon as they realize what they have missed. Some in the northern part of the state will think, perhaps, they have seen everything at the State Fair, which seemingly left nothing to be desired, but remember that enough new herds and flocks, saddle horses and draft horses, goats and rabbits are entered to offer plenty of new candidates for first honors and make an entirely new show.

Beef Cattle.

The Hereford line-up will be a very strong one, including many of the herds shown at Sacramento with several from Arizona, Colorado and Iowa in addition.

The Shorthorn show has, in addition to the principal herds exhibited at the State Fair, a herd from Steamboat Springs, Colorado, and cattle from the Hillside Water Company at Bishop.

Jas. Marwick's herd of Aberdeen-Angus will find more competition than in Sacramento as Congdon & Battles of Yakima, Washington, and the Lilac Ranch, Escondido, will have their herds washed and combed ready for the eye of the judge when the marshal calls.

Dairy Cattle.

The Holstein-Friesian show will be a great one, composed largely of herds from the south, with W. J. Higdon from the north and Frank Reed Saunders coming over from Phoenix, Arizona, to compete with the California breeders.

The Jersey cattle exhibit will be composed of herds from California only and will be about equally distributed between northern and southern California. Grant A. Brown of El Monte, one of the leading southern herds, will fill all classes.

In the Ayrshire cattle exhibit, E. B. McFarland of San Mateo will have competition as A. McMinn of Litchfield, Ariz., has his herd of the Scotch dairy cattle entered.

The Guernsey exhibit will be much the same as that at Sacramento with Grapewild Farm, Hollow Hill and Brant Rancho competing.

Swine.

The swine exhibit will be an exceptionally good one, as all the well-known breeds will be well represented by herds from the north, south and east.

The Tamworths will be represented by the eastern breeders, who exhibited at the State Fair.

The "belted hog," the Hampshire, will be represented by six herds from southern California, the "home of the Hamp."

The Berkshire exhibit will include several of the well-known herds from the north and south and a strong pig club exhibit as well.

Northern California herds of Poland-Chinas will be represented by Bassett Bros. and W. L. Haag & Son of Hanford. These with six or more herds from the south will make a great showing of this popular breed. Pig club boys handling Polands will be in line for prizes.

One of the greatest exhibits of Duroc-Jerseys ever brought together at a Pacific Coast show will be staged at Los Angeles. Twenty-eight or more exhibitors, the finest red hogs in the world, will pass under the eye of the judge at this great show. A great majority of them are from southern California, although J. E. Thorp of Lockeford, J. P. Walker of Visalia and C. T. Thompson of Bishop will be there with their selected herds. A large pig club contingent will also show.

Horses.

Prominent owners and breeders of draft and light horses are to the fore with a great exhibit. More interest is manifest in the horse than for the past year or two, and it looks as though the horse was coming back.

Remember, this is the only exclusive livestock show in California this season, and it will be the last chance to see the best herds and flocks of the state and the southwest in competition.

Not only will it be a great livestock exhibition, but the amusement features will be strongly in evidence, and when you tire of looking at blue-ribbon stock there will be a plenty of entertainment features of the kind that are the most attractive.

To the Editor: I am sure that moles will eat sweet potatoes.—W. S. S., Walnut Creek.

Lambert's
HEALTH FOR CATTLE

Remedies for
COW CLEANING, BREEDING and ABORTION
Scouring Calves, Hog Cholera
An Insect Destroyer
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They are as much superior to other separators as other separators are to gravity setting systems.
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For Size, Bone and Quality
More is required of Horses than ever before hence the need of more size, weight and power. Large geldings never were higher. Shire Geldings usually top the market. Use Shires to raise larger and better horses.
For information on Shires, write W. G. Lynch, Secretary, The American Shire Horse Association, Tonica, Illinois.

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Bulls for sale from Register of Merit Cows. Write for information.
W. J. HACKETT,
CERES, CALIFORNIA

REGISTERED HOLSTEINS
Creamcup Herd offers service bulls and bull calves of 34-lb. breeding. Females offered for foundation stock. Tuberculin tested.
M. M. Holdridge, San Jose, Cal.
R. D. "A," Box 437,
Two miles out North First Street.

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LIVESTOCK AUCTIONEERS
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Registered Hog Sales a Specialty

MAMMOTH DISPERSAL SALE
ROSAMAINES RANCHO, Owned by A. J. & F. W. Stalder, RIVERSIDE, CALIFORNIA
OCTOBER 19-20-21 1920
Owing to the ill health of the managing owner, Mr. A. J. Stalder, this great Rancho will be sold at public auction and its splendid herds dispersed.
AT 9 A. M. SHARP ON TUESDAY, OCTOBER 19
we will open the dispersal with the sale of the Rancho in two parcels.
PARCEL NO 1—Contains 235 acres on which are situated the buildings. 100 acres in finest pasture in California, carrying regularly 100 to 150 head of cattle; 60 acres in fine stand of alfalfa; 40 acres in corn; improvements on this parcel cost over $200.00 per acre at normal costs; buildings in first-class condition, many practically new; all buildings electric lighted and sewered; two motor equipped pumping plants with abundant water.
TERMS ON THIS PARCEL—One-third cash, balance in six equal annual payments, interest at 7 per cent, 2 per cent discount for cash deferred payments.
PARCEL NO 2—Contains 397½ acres adjoining Parcel No. 1 on the north. All first-class vineyard, orchard, or alfalfa land, regularly in crop, and with an abundance of cheap water.
TERMS ON THIS PARCEL—One-half cash, balance in four equal annual payments, interest 7 per cent, 2 per cent discount for cash on deferred payments.
Immediately following sale of Rancho, on same day, we will sell
90 BIG RED GRADE SHORTHORN COWS
50 REGISTERED DUROC-JERSEY HOGS
18 REGISTERED PERCHERON MARES AND STALLIONS
1800 WHITE LEGHORN HENS AND PULLETS
A SMALL HERD OF GRADE DAIRY HEIFERS
ALL THE IMPLEMENTS AND EQUIPMENT
incuding an almost new 12-foot McCormick Combined Harvester; a No. 50 Typhoon ensilage cutter; eight farm wagons; plows, discs, beet drill, mowers, rakes, Osborn binder, harness, and many other items; also a complete acetylene lighting plant.
ON WEDNESDAY AND THURSDAY, OCTOBER 20-21
We will disperse the entire herd of registered Holsteins, numbering 150 head; only nine animals in the herd six years old or over; including 50 females with official records, 43 daughters of King Pontiac Netherland Segis 3d; both herd bulls, KING PONTIAC NETHERLAND SEGIS 3D, son of the twice 34-lb. cow, Gerben Abbekerk Maid, and SIR ORMSBY SKYLARK RAUWERD, a son of Sir Ormsby Skylark, out of a 34-lb. dam; every animal guaranteed a breeder; every animal tuberculin tested and sold subject to retest except as announced at sale.
Catalog free on request. Management
CALIFORNIA BREEDERS' SALES AND PEDIGREE CO.
C. L. HUGHES, Sales Manager, Sacramento, Calif.
Auctioneers—RHOADES & RHOADES, Los Angeles

DISPERSAL SALE
103 Registered Shorthorns 103
74 Females 29 Bulls
OWNED BY
WILLOTTA RANCH, William Pierce, SUISUN, CALIF.
Thursday, September 30, at Twelve O'clock Noon
For years this well known herd has been a dependable source of supply for good range bulls, and buyers will now have an opportuity to purchase the regular breeding, heavy milking, healthy females that constitute this good herd.
30 COWS WITH CALVES AT FOOT
These cows have been handled strictly under range conditions, and their condition on sale day, considered in connection with the splendid, well grown, vigorous calves at foot, will tell the story of how well they do on range feed. These females and the other 44 head of females in the sale afford a most timely opportunity for range men and established breeders to secure Shorthorn females that will prove most profitable investments.
29 HUSKY RED BULLS
These are the sort that have made Willotta Ranch so favorably known among rangemen of California. Strong, rugged fellows, with plenty of scale and bone, right at home on the range, and most of them ready for service this fall.
Every animal guaranteed to be a breeder; every animal over six months old tuberculin tested and individual certificate furnished to buyer.
WILLOTTA RANCH is 2 miles west of Fair-field-Suisun, on main State Highway between Davis and Benicia.
Sale Starts Promptly at Noon
Auctioneers:
COL. BEN A. RHOADES, Los Angeles — COL. GEO. W. BELL, Tulare
MANAGEMENT
CALIFORNIA BREEDERS' SALES AND PEDIGREE CO.
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YES, a Jersey milkpail has a lining of golden butterfat that means profit in any market. More returns from your feed investment. Learn about these new gold mines today. Our Information Bureau will give you Jersey facts about Dairy Profits, which you will find invaluable, whether you're interested in one cow or a hundred. Free. "The Profit Breed."
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The get of BIG LEADER demonstrates the superiority of our Berkshires at the State Fair.

Winnings

Grand Champion Boar—ESCALON BIG JOE
Grand Champion Sow—GRAPEWILD ROSE 6TH

10 Firsts, including Get of Sire (Big Leader) and Produce of Dam.
5 Seconds, 3 Thirds.

The winnings on the get of Big Leader demonstrates the results of BREEDING to TYPE. A larger, heavier-boned Berkshire was demanded and we obtained it by selection rather than by outcrossing.

Practically our Entire Winning consisted of the GET OF BIG LEADER, the largest son of Grand Leader 2nd, P. P. I. E. Grand Champion. Big Leader is thus responsible for THE MOST MODERN TYPE OF BERKSHIRES—a type combining extreme size and quality with smoothness.

See our exhibit at Los Angeles, October 4 to 11.

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BERKSHIRES
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25-Bred Sows and Bred Gilts-25
and
10 Young Gilts
from some of the best blood lines in the country—by
SOUTHWESTERN BERKSHIRE CONGRESS
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THURSDAY, OCTOBER 7th
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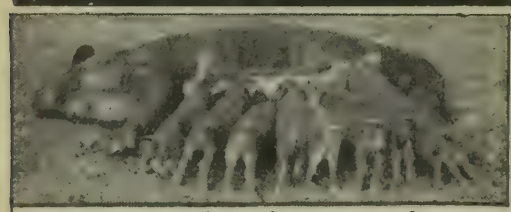

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Duroc-Jersey hogs have a tendency to put on great amounts of pork at an early age. They are easy-feeding animals, and raise large families. These hogs were introduced less than 50 years ago, and yet in 1918, 51% of all the hogs marketed in the country were "Duroc-Jerseys." They are uniformly red in color. Increase your profits by raising Duroc-Jersey hogs.

Write for "DUROC-JERSEY HOGS ARE PROLIFIC AND PROFITABLE"—sent free to hog-raisers by the largest swine record association in the world. Over 12,000 members.

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BRED SOWS
SOWS WITH LITTERS

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E. F. PETERSEN, Supt. Danville, Cal.
G. W. EMMONS, Owner, Oakland.

They are the large type and the best blood strains to be had anywhere.

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Lucy Orion's Model
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Prize of Tulare Belle
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and 50 others.

WEANLINGS—$15.00 EACH AT RANCH — A large number always on hand to choose from. Crates $2.50 each, refunded when returned prepaid in good condition.

MAIL ORDERS SOLICITED. SATISFACTION OR MONEY BACK.

GUASTI BERKSHIRES

Weaned pigs, both sexes, from sows that farrow large litters and raise them. Priced reasonable — they are money-makers.

ITALIAN VINEYARD COMPANY

ALEX. M. WILSON, Supt. Guasti, Calif.

Livestock and Dairy Notes

The Dairy.

The Santa Anita Rancho of Los Angeles county showed eighteen Holsteins at the Tulare County Fair.

J. E. Thorp of Lockeford will enter all his cows in the state dairy cow contest as soon as they freshen.

Between July 1st and September 1st, 40 new members were taken into the Los Angeles County Farm Bureau Cow Testing Association.

N. H. Locke Company of Lockeford have sold a Financial King and King's Valet bull to four dairymen of Plymouth.

The Boys' pig clubs, under the fostering care of the San Joaquin County Farm Bureau, made a very creditable showing at the Stockton Fair.

Sales of dairy products by the Northern California Milk Producers' Association for last month show a gain of 49 per cent over a year ago.

The Escalon Holstein Breeders' Club is ready to launch a calf club for that community. They will have the cooperation of the Farm Bureau.

The youngsters of Brown's Valley in Yuba county are forming a calf club with the help of the Farm Adviser. They have adopted Milking Shorthorns.

Another purebred calf club, a Farm Bureau—High School affair—has been launched at Galt with 15 charter members. The calves will be Jerseys and Holsteins.

R. F. Guerin, Holstein breeder of Tulare, has been off on a vacation, but expects to place a number of cows on semi-official test in the very near future.

It is estimated that the stolen and lost milk bottles in the city of Portland, Oregon, amounts to $50,000 annually. This is an "overhead" in all large cities that should be reduced to the minimum without delay.

In the registered Jersey classes at the Ferndale Fair, Sam Kelley had grand champion bull and J. W. Coppini grand champion cow. Wilson T. Elliott won first in the grade Jersey class on aged cow.

Bert Nixon of Yountville has sold the "Revada Farm" to J. A. McCarthy of San Francisco. This place is the home of the famous Guernsey herds of the state. This farm consists of 580 acres and the consideration is reported as $110,000.

The Escalon Holstein Breeders' Club made a fine showing at the San Joaquin County Fair, having a whole barn full of fine purebreds. There is a strong sentiment abroad in favor of expanding this club into a county association.

The Holmes Stock Farm of Modesto carried away the beautiful challenge cup given by the San Joaquin County Supervisors for the best herd of any breed shown at the County Fair. It was a real honor for there was strong competition.

A report on tuberculin testing in Del Norte County for the year 1920 has been received from State Veterinary Inspector, Dr. A. F. Hanna. It is gratifying to note that for the past three years not one animal tested was condemned for tuberculosis.

At Requa on the Klamath River a cheese factory is located which received practically all its milk supply from the dairymen in that vicinity. Since all the herds supplying milk for the cheese factory are tuberculin tested the by-products are fed with safety to calves and pigs.

A cow-testing association is being organized in Tulare county and practically enough cows have already been signed up. The aim is 1,000 cows at $2 each. Over three hundred were secured in the district southwest of Tipton, according to Mark L. Borror, a purebred Holstein breeder of that district.

Another Stanislaus County Holstein Breeders' Calf Club calf has been heard from. In a large open class of junior yearling calves at the Stockton Fair, the heifer owned by Manuel Azevedo, Jr., of Patterson, walked away with the blue ribbon. Manuel, a youngster in the fourth grade at school, knows a dairy heifer when he sees her. He is some dairyman.

J. W. Coppini of Ferndale, who breeds good Jerseys, some time ago purchased a purebred Jersey cow, paying $525 for her. His neighbors thought a heap more than they said. Anyway, the cow has produced 740 pounds of butterfat and a heifer calf the past year and will soon freshen. Mr. Coppini thinks the cow has already paid for herself.

Modesto Creamery Manager Mullens calls our attention to the September 16 report of the U. S. Bureau of Markets, where it is shown that butter scoring 92 was quoted in San Francisco at 64½ cents on the same day that the same quality of butter was quoted at 59 cents in New York. Cartons of butter scoring 92 to 94 were quoted that day in San Francisco at 68½-69½ cents.

The sixth annual convention of the California Agricultural Clubs will be held at Davis, October 14-16. There are about 300 prize winners from the various clubs of the State, and they are all expected to be there. The delegates will be housed in tents furnished by the State Adjutant General, and the plan now is to feed the youngsters from an army kitchen.

Sans Alois Brightness is the name of a young Jersey bull closely related to Financial Sensation, the $60,000 bull recently received by Harry H. Cook of the Jersey breeder of Ontario. He came by express from the Grandview Home Jersey Farm of Clarksville, Ohio, and will be exhibited along with others of Mr. Cook's herd at the Southern California Fair at Riverside.

A recent consignment of purebred Ayrshire cattle to the Hawaiian Islands consisted of 44 head of cows from 2 to 6 years of age. Forty head were for the Lihue Sugar Plantation, Lihue, Kauai, and the other four for Kileau Sugar Plantation Co. This shipment was from eastern farms and was assembled at Morris Plains, N. J., and forwarded from there to San Francisco by express.

Owing to the joint efforts of the California Dairy Council and progressive dairymen of Del Norte county, 10 registered dairy sires have been introduced among the dairy herds of that region a Farm Bureau organized and a $10,000 community clubhouse erected. This building contains woman's club rooms, offices of the Farm Bureau, a stage and ball room. All this has been accomplished the past year.

Lucky Farce is a 9-year-old Jersey cow that recently completed an excellent yearly record of 938.75 lbs. butterfat and 18,014 lbs. milk. She was the yearling champion of the breed with 635.7 lbs. fat and 14,260 lbs. milk. As a junior 3-year-old she produced 708.5 lbs. fat and 14,184.8 lbs. milk. Passing through the hands of seven different owners, she made her last record with A. W. Murphy, Chardon, O., as owner.

Sheep.

Indications in the east still point toward an improved wool market for next month.

The Hampshire advocate offers a prize of $50 to any regular pig club boy who shows a Hampshire pig in any of the open classes at the next International Livestock Exposition at Chicago.

The huge accumulation of lard in the packers' cellars in the east has commenced to show a reduction owing to stronger foreign buying. The average weight of hogs going to eastern markets is away above normal and the reduction of lard stocks consequently slower.

Beef.

Tom Briggs of Dixon has bought an Anxiety bred bull of Edward T. Morgan, Northan, Nevada.

Twenty-five purebred calves have been imported into Shasta county this year for members of the Farm Bureau Calf Clubs.

Romie C. Jacks showed his Imperial Herefords from Chualar at the Tulare Livestock Show. They include Bocaldo Beauty, the Senior and Grand Champion cow, also Ruth Domino, the Junior Champion heifer, with other prize winners at the State Fair this year.

Small ranchers in Glenn and Tehama counties are right now finding it impossible to get local livestock buyers to even look at their stuff—especially cattle. In one instance near Corning no bids as low as 5 cents per pound could be had on prime calves.

John Sibson, Buenos Ayres, Argentina, has accepted an invitation from the American Shorthorn Association to judge the breeding classes of the "reds, whites and roans" at the 1920 International Livestock Exposition at Chicago.

Tehama county grazing is growing scarcer for turkey flocks. Grain men are holding stubble fields at $5 per acre, so very little of this is being used. Growers here claim 65 cents per pound is a minimum selling price for producers this year.

The Bureau of Markets reports an increase of 25 per cent in the 1920 production of medium red clover seed, and an increase of 10 to 20 per cent in the current Alsike clover seed crop.

LIVESTOCK DIRECTORY.

Rate, 4c. per word. Cash must accompany all orders.

SWINE.

Duroc-Jerseys

DUROCS—BIG-TYPE—HIGHEST QUALITY—popular blood lines. Herd headed by Johnson's Defender, Jr., and Western Pathfinder. Bred sows and gilts and young boars for sale at moderate prices. Greenwood Farm, Witherow & Stafford, Live Oak, Cal.

BOYANNA BIG-TYPE DUROCS—Buy Durocs now. We offer bred and open sows, gilts, service boars and weanlings—all of excellent conformation and breeding. Write us and get get good ones. J. Boyd Harrold, Dixon, Cal.

TWO REGISTERED DUROC SOWS with litters 2 months old. One sired by Trailblazer, other by King's Col. De Luxe. Price, $200 each. Ida M. Frazee, Rt. 2, Fair Oaks, Cal.

BIG-TYPE DUROCS—Herd headed by California Orion King. Am offering excellent young boars at right prices. Inquiries invited. Harvey M. Berglund, Dixon, Calif.

LAMB'S DUROCS—Seven good sows with litters, weaned pigs and choice open gilts ready to breed. Priced right to close out the herd. Elmer Lamb, Ceres, Calif.

JACK LONDON RANCH, Glen Ellen.—Exceptionally good weanlings. Bred sows and gilts. One good yearling boar and one fall boar. Prices reasonable.

ROCSTEIN RANCH DUROCS headed by Lord's Orion Cherry King. Breeding stock for sale at all times. W. M. Way & Son, Rt. 1, Box 320, Modesto.

BARGAINS in bred sows and gilts. Pathfinder and Great Wonder I Am blood. Derryfield Farm. Capital National Bank Building, Sacramento, Cal.

DUROC-JERSEYS — Fine big-type gilts, tried sows and boars. Eastern and California bred. H. P. Slocum & Son, Willows, Calif.

DEC. AND MARCH DUROC BOARS—Pathfinder breeding. Sterling Smith, R. 2, San Diego.

WINSOR RANCH DUROCS—Young boars and some top gilts bred to WINSOR'S GIANT ORION—Morris C. Allen, Mgr., Bonita, Cal.

REGISTERED DUROCS — Choice gilts and weanlings, either sex. Breeding and satisfaction guaranteed. H. E. Boudier, Napa.

BIG-TYPE DUROCS — Gilts and boars of Winsor's Giant Orion breeding. Falfadale Farms, Perris, Calif.

FOR THE BEST in Durocs, write June Acres Stock Farm, Davis, Cal.

Poland-Chinas.

TOHOQUA POLAND-CHINAS — Big type. A good big tried sow to sell. Has farrowed two litters of ten pigs each. Bred for August farrow. Also a dandy young boar pig from the Grand Champion sow of Glenn Co. Fair. This stuff is good, fully guaranteed and priced to sell. Ferguson and McKaig, Orland, Cal.

ELDERSLEY AND SHADY BROOK Farms big-type Poland-Chinas that make money for the Feeder, the Farmer and the Breeder. Prices reasonable. J. H. Ware, Brown's Valley, Calif.

POLAND CHINAS — Service boars, brood sows. Young boars and gilts. Best quality at reasonable prices. Let me know your wants. Edward A. Hall, Rt. 1, Box 39, Watsonville, Cal.

BRED GILTS for sale. A few choice ones bred for fall farrow, to a good son of F'Big Jones, the Iowa 1920 Grand Champion. N. Hauck, Alton, Humboldt Co., Cal.

WAUKEEN HERD POLAND-CHINAS — Home of King's Big Bone Leader. A few service boars for sale. Les McCracken, Ripon.

LAKESIDE STOCK FARM—Large, smooth and big-boned Poland-Chinas. Geo. V. Beckman & Sons, Lodi, California.

REGISTERED POLAND-CHINA SWINE — Prize-winners. Finest stock in the State. Bassett Bros., Hanford, California.

BIG-TYPE POLAND-CHINAS—Good as the best. Always glad to show you. Houck & Lewis, Winton.

REG. BIG-TYPE POLAND-CHINAS—Service boars; weanling pigs. J. H. Cook, R. 4, Chico.

POLAND-CHINAS—Strictly large type. J. F. Lehman, Lodi, Cal

Berkshires.

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Orland, Calif.
HERD BOARS—STAR LEADER, Junior and Reserve Grand Champion of the World. The Grand Champion carload of barrows, over all breeds, at the San Francisco Live Stock Show, was sired by a son of Star Leader, NATOMAS BARON DUKE, grand champion of California. For sale, bred gilts, open gilts, young boars and weanling pigs. Write for booklet, prices and list of sows.

BRED GILTS.
Sired by Mayfield Rookwood 2d, a Grand Champion Boar, out of 600-700 lb. sows, and actually bred to "ACHIEVER," our English Blood Boar, the Sire that puts more bone and pork-making qualities into his pigs.
Priced reasonably and absolutely guaranteed.
Castleview Ranch, Santa Rosa, Calif.

BEST BERKSHIRE BOARS—Buy one and grow pigs that will mature quickly and make hogs that produce the largest percentage of salable meat. They carry the blood of the most noted individuals of the country. A few top females for sale also. Geo. A. Stingle, Lark Meadow Ranch, El Monte.

The only herd of English Berkshires in the West. Bigger, better, stronger litters. More pounds of meat for less feed. Weanling pig, $35. Satisfaction guaranteed or money refunded at once. Sandercock Land Co., 703 Market St., S. F. In charge Natomas Land Sales.

GRAPE WILD FARMS—Berkshires—Guernseys. Big-type Berkshire Boars of serviceable age, sired by Big Leader—greatest son of Grand Leader 2nd. Panama-Pacific Grand Champion. A. B. Humphrey, Prop., Escalon.

BERKSHIRE BOARS—Real herd sires. We are offering these at sacrifice prices to move them quickly. Write for description and price. R. J. Merrill & Son, Morgan Hill, Cal.

QUALITY BERKSHIRES — Young stock, both sexes. Geo. P. Upham, Martinez .

REAL GOOD BERKSHIRES — Cholera immune. Frank B. Anderson, Sacramento, Cal.

DAIRY CATTLE

Holsteins.

HOLSTEINS

THE LEWIS COMPANY

Registered Holstein Cattle
Bulls, Heifers and Calves
of Ormsby breeding
Tuberculin tested
Lewis Building, San Jose

EIGHT EXCELLENTLY BRED Registered Holstein cows for sale. Tuberculin tested. Just what you want. Terms liberal. Fine bull out of 24-lb. dam and sired by Segis Pontiac De Kol Burke is bred to these females. This bull also for sale. S. J. Strauss, P. O. Box 62. Phone 217, or call at 1016 Eye St., Modesto, Cal.

REGISTERED HOLSTEIN-FRIESIANS — Both sexes choice stock; tuberculin tested. Sunnybrook Ranch, H. H. Sisson, Mgr., Willits.

PALO ALTO STOCK FARM, Palo Alto, breeders of registered Holsteins. Heifers and service bulls. Reasonable prices.

REGISTERED HOLSTEINS—Young bulls for sale. Long distance A. R. O. backing. Lester A. Driver, Nicolaus, Calif

CREAMCUP HERD — Registered Holsteins. Pontiac bull calves. M. Holdridge, Rt. A, Box 437, San Jose.

REG. HOLSTEINS, both sexes. World's record backing. Kounias Reg. Stock Farms, Modesto, Cal.

REG. HOLSTEINS—A. W. Morris & Sons Corp., Importers and Breeders, Woodland, Cal.

F. H. STENZEL, SAN LORENZO—Breeder of Registered Holsteins. High test producers.

REGISTERED HOLSTEINS — Best blood lines of the breed. R. L. Holmes, Modesto, Cal.

CHOICE HOLSTEIN bulls for sale. No females. Millbrae Dairy, Millbrae, California

GOTSHALL & MAGRUDER — Breeders of registered Holstein-Friesians. Ripon, Calif.

EL DORADO HERD OF REG. HOLSTEINS—Alex. Whaley, Tulare, California.

Milking Shorthorns.

REGISTERED MILK AND BEEF SHORTHORNS, bulls and heifers for sale; catalogue free. Thomas Harrison, Santa Rosa Stock Farm, Santa Rosa, California.

INNISFAIL HERD MILKING SHORTHORNS—Young stock for sale; both sexes. Owned by Alexander & Kellogg Leased by J. D. Rowe & Son, Davis, Cal.

BREEDERS OF REGISTERED SHORTHORNS—Milk strain; choice young stock for sale. John Lynch Ranch, Box 321, Petaluma.

Jerseys.

WANTED—Six head high grade or registered Jersey cows on shares, or will buy on monthly payment. I have had dairy experience, have the equipment and will have the feed. I. E. Lobaugh, Newman, Cal.

SERVICE JERSEY BULL, bull calves Financial King blood, Chester White boars, prize winners. Best blood, type, production. N. H. Locke Co., Lockeford, Cal

JACK LONDON RANCH, Glen Ellen—Two fine Jersey bulls, one ready for service.

SUNSHINE FARM JERSEYS—"Production counts." E. E. Greenough, Merced, Cal.

Ayrshires.

PENOBSCOT FARM REG. AYRSHIRES—Choice individuals, all ages reasonable prices. Cool, El Dorado County, near Auburn. San Francisco office, 360 Fremont Street.

STEYBRAE AYRSHIRES — Registered; all ages. E. B. McFarland, 414 Claus Spreckels Building, San Francisco.

NORABEL FARM AYRSHIRES—Le Baron Estate Co., Valley Ford, Cal.

BEEF CATTLE.

SHORTHORNS—The foremost beef breed—Have a limited number of stock for sale, both sexes. If you wish to start a small herd I can probably supply your needs. T. T. Miller, Hollister, Cal.

ALAMO HERD REGISTERED HEREFORDS (founded by Governor Sparks). Herd and range bulls. Reasonable prices. W. D. Duke, Gazelle, Siskiyou county, California.

RANCHO SAN JULIAN SHORTHORNS—Purebred range bulls, unregistered, for sale. Estate Thos. B. Dibblee, Santa Barbara, or Lompoc, Calif. John Troup, Supt.

THE NEVADA HEREFORD RANCH—Jno. H. Cazier & Son Co., Prop., Wells, Nevada. Reg. Hereford cattle. Breeding stock for sale.

CARRUTHERS FARMS, Live Oak, California. Shorthorn cattle and Berkshire swine of quality and select breeding.

JACK LONDON RANCH, Glen Ellen—Shorthorn bull ready for service, and some good bull calves.

WM. BRIGGS & SON, Dixon, Cal. Breeders of Hereford cattle and Rambouillet sheep.

ABERDEEN-ANGUS cattle of quality and breeding. Lilac Ranch, Escondido, Cal.

SIMON NEWMAN CO., breeders of Registered Herefords, Newman, California.

HEREFORDS — Mission Hereford Farm, J. A. Bunting, Prop., Mission, San Jose, Cal.

REGISTERED HEREFORDS—H. H. Gable, Diamond G Ranch, Esparto, California.

GEORGE WATTERSON — Breeder Registered Herefords. Bishop, California.

REGISTERED SHORTHORNS — Fair Oaks Ranch, Willits, Calif.

SHEEP AND GOATS.

FOR SALE—Rambouillet rams and ewes—purebred; the very highest grade of large smooth body; heavy shearers; the wool and mutton type. Immediate delivery of individual or carload lots. You can find none better or of higher grade. Address Glenn, Cal. Location, 8 miles south Hamilton City, 1 mile west Ordbend. Windell Orchards Co.

F. A. MECHAM ESTATE, Petaluma, Cal.—Breeders and importers of Shropshire, Rambouillets and American Merinos, both sexes. Also Red Polled cattle. Take electric car at Petaluma or Santa Rosa for Live Oak Ranch.

BUY YOUR FOUNDATION STOCK from the world's record flock of non-shedding Angora goats. Prices reasonable. F. A. Pierce, Trinidad, Calif.

WRITE ME for early Rambouillet ram lambs ready for light use by Sept. 1. Also a few yearlings. Carl Lindheimer, Woodland.

HARRY L. HUSTON, Winters, Calif.—breeder and importer of Shropshire sheep Stud and range rams. Prices on application

DR. A. S. ALMEIDA, Dixon, Calif., Breeder and Importer of Registered Shropshire Sheep. Write me for prices on Reg. Ram Lambs.

J. R. BLOOM, Dixon, Calif.—Twenty-five years breeder of purebred Shropshire sheep. Rams for sale. Single or carload lots.

FOR SALE—850 one, two and three-year-old Merino ewes. J. A. Swall, Box 742, Bishop, Cal.

DORSETS—ROMNEYS—Dorset ram lambs for sale. John E. Marble, South Padasna.

SHEEP FOR SALE—1000 ewes. Will sell in lots to suit. Chas. G. Owens, Livermore.

HARVEY S. VAN VLEAR, Lodi, Breeder and importer of registered Hampshire sheep.

CALLA GROVE FARM, MANTECA, CAL.—Breeders and importers of Hampshire sheep.

KAUPKE BROS., WOODLAND, CALIF.—Breeders and importers of Hampshire sheep.

CHAS. KIMBLE—Breeder and importer of Rambouillets, Hanford, Calif.

BULLARD BROS., Woodland, Calif.—Breeders and importers of Rambouillet sheep.

MISCELLANEOUS.

BUTTE CITY RANCH
SHORTHORN CATTLE, SHROPSHIRE Sheep, Berkshire Hogs, Shetland Ponies, Bronze Turkeys, White Plymouth Rocks Stock for sale at all times. W. B. Dwyer and W. S. Guilford, Box P, Butte City, Glenn county, California.

BETTER SHORTHORNS

Among Shorthorn cattle breeders there has been a general effort to obtain still higher class bulls, the purpose being to produce still better Shorthorns. Already the results are in evidence and next year there will be a more marked improvement. Price hasn't been considered. The best this country affords and the best obtainable in the British Isles have been secured. Shorthorn men are getting ready for a world-wide demand which is in prospect.

Ask for Literature

AMERICAN SHORTHORN BREEDERS' ASSOCIATION
13 Dexter Park Ave. Chicago, Illinois

Facts in BLACK & WHITE

Eminent Specialists Endorse
HOLSTEIN COWS' MILK

The progressive physician will find our twenty-four page booklet, "Specialists' Evidence," replete with much valuable information on infant feeding. In the efforts of The Holstein-Friesian Association to extend the use of Holstein Cows' milk, we have had the hearty support of leading spicalists all over America, and we therefore are required to make no statements on our own authority. We merely give publicity to these medical opinions on the choice of milk in infant feeding. It is a highly valuable work, and you should have a copy to read and pass on to your local physician and your friends.

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"ORMSBY"

Means Quality and Production.
Get a young bull sired by King Korndyke Hengerveld Ormsby 7th
KOUNIAS REG. STOCK FARM
Waterford Road
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HOLMES STOCK FARM

Modesto
REGISTERED HOLSTEIN-FRESIANS
Prize-winners at all Shows.
Inspection invited and satisfaction guaranteed. Write for prices.
R. L. HOLMES, Prop.

BRIDGFORD HOLSTEIN CO.

Patterson
THE CHAMPION SHOW HERD
The herd of high records.
STOCK FOR SALE.
Visitors Welcome.

WALTER K. ADAMS,

Rte. 1, Box 245, Modesto
BREEDER OF REGISTERED HOLSTEINS AND POLAND-CHINAS

YOUNG REGISTERED BULLS

From High-Testing Dams
E. PETERPOSTIN
Route 1, Box 235, Hughson, Cal.
Dispersal Sale, October 20

H. E. CORNWELL

MODESTO - - - CALIFORNIA
Prescott Road, 1 mile from Highway
If you want to see some of the best Holsteins in the State, visit my herd.
YOUNG STOCK FOR SALE

R. H. DAVIS
REGISTERED HOLSTEINS

Route C. Box 196, Modesto, Cal.
Animals of both sexes for sale.
Herd tuberculin tested.

BULLS FOR SALE

From 1000-lb. sire and high-producing dams that carry same blood as Belle Faskie DeKol Witkop, the highest prize winner in the Holstein-Friesian Association of America last year.

FREEMAN (E. E.) & EDWARDS
Modesto, Calif.

McCarty-Shinn-Elliott
SALE OF
Big-Type POLAND-CHINAS

Tulare Monday September 27th

ALEX. D. McCARTY will sell:—

NEBRASKA GIRL, one of the best sows ever sold in the West; first prize futurity junior yearling sow, PERFECT BEAUTY; also two beautiful gilts out of Liberty Girl 2, Grand Champion sow at State Fair, 1920.

HUGH C. SHINN will sell:—

Two gilts of the great litter by THE CALIFORNIAN and out of Bridge's Bobbie that won 1st and 2d in class, 1st young herd, 1st Get of Sire and 1st Produce of Dam; 2 boar pigs and 2 gilts by THE PILOT, world's champion boar.

A. J. ELLIOTT will sell:

Two fall gilts by HERCULES, the largest fall gilts ever shown at Sacramento; 9 great gilts by THE CALIFORNIAN that are corkers; a herd boar prospect out of the first prize futurity litter sired by BIG GERSTDALE JONES.

All stock cholera immune.

All pedigrees delivered on day of sale.

For Catalogues Write H. C. Shinn, Tulare

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GEO. W. BELL, Tulare. **FRED GATEWOOD, Fresno.**

SIERRA VISTA RANCH DUROCS

Our Durocs will be exhibited at the

Southern California Fair

RIVERSIDE, OCTOBER 13 to 19

We Shall of Course Show

KING ORION, JR.

No boar on the Pacific Coast today can compare with the King, in his class, either in conformation or in honors won in 1919. By beating 6 State Fair Grand Champions he won second honors at the National Swine Show last year.

Look at a recent litter of his pigs which we shall exhibit in the next pen.

And observe closely the two eight-month boars we are showing sired by that grand true-to-type boar.

PATHFINDER'S LIKENESS

Bred or open sows and gilts of the best blood lines in Durocdom for sale at our ranch at prices that prove our assertion that our

Prices are Reasonable

PETER B. KYNE
OLIVER H. CASH

SIERRA VISTA RANCH
Perris, Calif.

JOHN TENNANT,
Herdsman

Livestock Queries and Replies

Feeding Pregnant Sows.—I have two brood sows that will farrow in a short time. What is the best grain to feed them? Should the feed be changed after the sows farrow? Should the pigs have different feed after weaning?—R. F. R., San Diego.

Sows should have pasture, alfalfa if possible, with grain feed enough of a laxative nature to keep them in a thrifty condition but not carrying that excessive layer of fat called "show shape." The pasture serves two purposes in that it supplies needed green feed and exercise. As farrowing time approaches cut down on the barley, which is better ground, and substitute wheat bran, shorts, roots or any laxative feed. Plenty of pure drinking water is also necessary. The grain feed in the form of slop is thought best by many. Some go to the extreme of giving a laxative medicine just previous to farrowing. Nothing but drinking water should be given for 24 hours previous to the critical period unless the animal seems hungry, when a thin warm slop of oatmeal or bran with a little middlings may be fed. After the pigs are born the ration for the sow should be scant for a few days and then gradually increased if the litter is large until the sow is on a full feed or all they will eat. Ground barley ,middlings, Suremilk, all are good, with a little bran or shorts with the first two to lighten them up somewhat. Little pigs should be encouraged to eat by having a thin slop of middlings and skim milk, butter milk or water in a shallow trough placed where pigs can get to it but older hogs cannot. Any of the grains, ground fine, will answer if the No. 1 middlings are not available. After weaning the pigs should have grain enough to keep them growing rapidly, supplemented with alfalfa pasture, beets or pumpkins. Do not attempt to raise hogs or keep brood sows on alfalfa pasture, roots or pumpkins alone, as it is impossible to do so.

Tubercular Cow.—Is it criminal, or is it permissible to sell a dairy cow for family use that has reacted to the tuberculin test? The case in point was a cow that was bought for the specific purpose of supplying milk for a baby. The cow later showed acute symptoms of tuberculosis and was found upon examination to have the tattoo marks of the veterinarian indicating she was a reactor.—A. S., Meridian.

The act of selling such an animal was not a crime. If the person knew the cow was diseased and sold her as a healthy animal he is liable for damages and the buyer can recover in a civil action if he can prove his case.—Livestock Ed.

Keeping Flies off the Cow.—Tell me something to put on my cow to keep the flies and mosquitos away.—W. D. L,. Palo Alto.

Many dopes will do it. Here are two:

Common laundry soap	1 pound
Water	4 gallons
Crude petroleum	1 gallon
Powdered naphthalin	4 ounces

Cut the soap into thin shavings and dissolve in water by the aid of heat; dissolve the naphthalin in the crude oil; mix the two solutions, put them into an old dasher churn or a keg, and mix thoroughly for fifteen minutes. The mixture should be applied once or twice a week with a brush. It must be stirred well before being used.

Jack Klein gives this: At the Adobe Stock Farm, near Los Angeles, a most effective fly-killer is prepared by mixing 1 pound of oil of miribain with 25 gallons of kerosene. This is shot directly onto the flies when they are quiet in the morning and evening, and knocks them stiff. Any kind of pump which produces a fine spray can be usd. This mixtur can be used directly on the animals in small quantities; but it is not wise to use it in the creamery, as there is danger of tainting the milk. Also it is better if care is taken not to spray the food of the animals.

Feed or Sell Alfalfa—We have 90 tons alfalfa in stack. It will cost $10 per ton to get it to market. Buyers are offering $18 at the nearest market. Would you advise selling at the above price or buying stock and feeding it? What kind of stock would you buy and how long should they be held? We will have some straw and alfalfa pasture but no concentrates. Cannot handle a dairy. When should be buy this stock.—M., Snelling.

Buying and feeding livestock for the market is always a gamble. The most experienced feeders get caught when the market is unsettled, as it is now. Unless cattle of just the right condition for a short feed could be purchased at very reasonable prices it would be better to sell the hay for what can be gotten for it. Feeding livestock for the California markets has not been a very profitable business if we are to judge by the amount of it that has been done in the past. Figuring the hay at $10 per ton at feeding point if good feeders could be purchased at 5 or 6 cents per pound, there is a chance of receiving somewhere about $18 per ton for the alfalfa by the feeding method.—Livestock Editor.

Acorn Hogs.—Where is a market for hogs raised entirely on acorns? We cannot raise grain enough to feed our hogs, but can raise them on acorns. What can we do about it?—Rancher.

Packers say acorns produce a poor quality of pork, therefore will not pay top prices for acorn-fed hogs. Either you will have to devise some way of raising barley or some other grain enough to finish feed your hogs for the last 6 or 8 weeks before selling, or you will have to ship them out as feeders to some point where they can be finished. Either selling them as feeders when they weigh about 125 pounds or finishing at some outside point. Now, so far it has been the assumption that acorn pork is inferior. European authorities claim it is good. Have you tried it yourself? If you think hams, bacon and sausage made from it are palatable, why not cure your own pork and sell the finished product? —Livestock Editor.

Caked Udder.—A good Jersey cow fresh one week has a badly caked, much-inflamed udder. We have tried many remedies, but so far with no improvement. What would you advise.—V. M., Dinuba.

If the cow is constipated give 1½ pounds Epsom salts. Then milk her frequently, 3 or 4 times a day, rubbing and kneading the udder thoroughly afterwards. Bathe the inflamed parts with hot water for 20 minutes after the rubbing and then apply an ointment composed of two tablespoonfuls gum camphor, a teacup of melted lard and one ounce of fluid extract of belladonna. It may be best to support the udder with a wide cloth passed around the body in which holes have been cut for the teats. It is considered good practice to allow the calf to suck until inflammation subsides.—Livestock Editor.

Almond Hulls as Stock Feed.—Have almond hulls any value as stock feed especially for horses?—J. A. R., Paso Robles.

Horses and cattle will eat almond hulls while still green, but refuse them after they get at all dry. They have but little value, however, so far as we are able to determine from what experimental work has been done with them.—Livestock Editor.

A sheep owner of Kentucky took 200 pounds of wool to market for which he received $60. He bought a suit of clothes for the money and there was 4 pounds of wool in them. On this basis the wool sold by this man would make 50 suits bringing $3,000. Profiteering somewhere.

Milk is Subject at Health Convention

(Written for Pacific Rural Press by Ralph Newman.)

The American Public Health Association held its 49th annual meeting in San Francisco from September 13 to 17. As is usual, where those interested in health problems get together, milk came in for considerable attention. Most of the discussions were purely technical and of interest only to experts, but two things were graphically set out to public view that are of interest to all California dairymen.

San Francisco Milk Zone.

A map was displayed showing the localities from which the milk supply of the city comes, with the standing of the dairies. Four milk arteries run into San Francisco—one from Marin county, 38 miles long; one from Dixon, 72 miles in length; one from San Joaquin county, stretching to Escalon, 105 miles long, and the fourth running down the Pininsula through Santa Clara and to Soledad in the Salinas Valley, a distance of 145 miles. The dairies are marked on the map with colored tacks, showing the standing of each from a sanitary angle. Red stands for a score of 60 or over and is good. Yellow is for 50 to 60 and is fair. Green is below 50 and is poor.

In the territory immediately south of the city, there are six dairies marked "fair." All the others in the entire milk zone are "good" except those at Soledad, 145 miles away. There seven are "poor," the rest are only "fair," and not one scores "good."

Now, if dairy scoring means anything, and if San Francisco really believes that pure milk—milk pure from cow to consumer—is the paramount thing, the city should not go to "fair" or "poor" dairies except as a last resort. Has the last resort been reached? Well, most dairymen will remember that the far-away supply was originally sought by certain milk distributors, in an effort to get a supply independent of a certain proders' association, and not because all the supply in nearer communities had been exhausted. It would appear to a "green" dairy is not as safe and good as milk from a "red" dairy. Is any difference made in the price? And, if so, does it pay to sacrifice quality to price? So far as we know the question was not discussed.

The Price of Milk.

Prominently displayed was a card with the picture of a baby drinking milk, and the following message:

Milk is the best of all foods.

Good, pure milk saves babies.

Milk at war-time prices starves babies.

Every community should inspect, label and pasteurize milk, control or fix the price of milk, and insure a supply of safe milk at a price within the means of all.

San Francisco does inspect, label and pasteurize the milk supply.

To control or fix the price, you have got to make milk a public utility, have you not? All right. If that can be done we believe dairymen have no objection. Indeed, many dairymen would welcome such a thing with open arms.

But, "to insure a supply of safe milk at a price within the reach of all."

Thank goodness, this august body gives that job to the "community." Let's see the community do it. There will have to be some underwriting done, and this convention gives the job to those whose business it is—the community having babies to feed. We hope they will be big enough for the job, and, when they get it done, perhaps they will be good enough to show us how to get a few others of the "necessities of life" at a price within the reach of all.

The premium list for the Pacific International Livestock Show to be held at Portland, Nov. 13th to 20th, is out and shows a total of about $60,000 in prizes.

Statistics show that more horseshoes are now sold on the Pacific Coast than three years ago. This is taken as an indication of an increased use of horses again.

SECOND ANNUAL BREED PROMOTION SALE

Polled Herefords

Purebred Herefords with "Nothing Gone But the Horns"

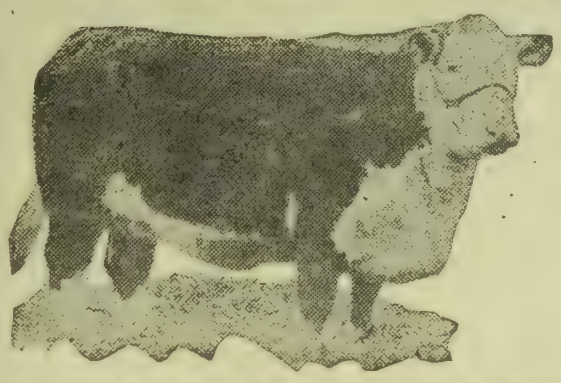
LOS ANGELES LIVE STOCK SHOW GROUNDS

WEDNESDAY, OCTOBER 6, 3 P. M.

40—CAREFULLY CHOSEN CATTLE—40

20 FEMALES——20 BULLS

From Leading Herds of the Central States



Pearl, 11873-676756, Grand Champion Hereford Cow California State Fair, 1919. Shown Against Horned Herefords.

IN 1919

Polled Herefords made an average in the first "Breed Promotion" Sale at Sacramento, of 1813 per head, establishing a record price for beef cattle at public sale west of Denver.

A polled Hereford cow, Pearl (picture herewith), won grand championship at California State Fair showing in open competition with horned Herefords.

Polled Herefords sold in our 1919 sale to G. W. Emmons, Danville, won many cash premiums in the California State Fair, showing in competition with horned Herefords.

IN 1919

All the Polled Herefords sold in America at public sale in 1919, 1266 head in all, averaged $594 per head, which was $110 more than the general average on horned Herefords sold during the same year.

Only one Polled Hereford sold for more than $10,000, while more than a score of horned ones sold or were reported as selling at figures from $10 000 to $30,000. The average was high, with no extreme top, a condition favorable to every breeder.

Polled Herefords outsold all beef breeds in 1919. Get started with the kind everybody wants

Don't Miss This Opportunity to Investigate and Invest in AMERICA'S MOST POPULAR BEEF CATTLE

Why Breed Horns on Herefords and Saw Them Off When You can Easily Breed Them Off?

CATALOGS

To save time consumed in sending to Iowa for Catalogs, write to PACIFIC RURAL PRESS, 239 S. Los Angeles St., Los Angeles, and a copy will be promptly mailed.

Sale Under Management of

AMERICAN POLLED HEREFORD BREEDERS' ASSOCIATION

B. O. GAMMON, Sec'y. Des Moines, Iowa

COL. H. L. HULL, Auctioneer, Des Moines, Iowa

Three Big Hereford Days

November 4-5-6

State Fair Grounds Sacramento, Cal.

On Thursday, November 4th

4 5—REGISTERED HEREFORDS—4 5

representing picked tops from leading western herds will be sold. It is planned to make this the banner Association sale to date, and that objective will be kept in mind when the selections are made. Full details of the offering will be available about October 1.

Sale under Auspices of

Pacific Coast Hereford Cattle Breeders' Association

J. I. Cazier, Pres., Wells, Nevada.. J. A. Bunting, Sec. Mission San Jose, Cal.

On Friday, November 5th

NEVADA HEREFORD RANCH

will make their first individual public offering, consisting of

5 5—REGISTERED HEREFORDS—5 5

A feature of this offering will be daughters of Harris Standard 2nd in calf to the $10,000.00 Beau Blanchard 76th, who was Grand Champion at the State Fair just closed. The many buyers who have already expressed a desire to buy these Standard heifers carrying the service of this great young bull will have a splendid selection in this offering. Detailed announcemets will appear in later issues.

Owners: J. H. Cazier & Sons, Wells, Nevada

On Saturday, November 6th

Barngrover and Wright will sell a well bred lot of young cattle consisting of

5 0—REGISTERED HEREFORDS—5 0

including well bred cows with calves at foot by equally well bred sires, bred and open heifers, and a very few bulls. Details of this offering will also appear in later issues.

Owners: Barngrover & Wright, Santa Clara, Calif.

These three sales unquestionably afford to buyers the greatest opportunity for selection of high class breeding Herefords yet provided by a like event in the breed's affairs in the west. Catalogs of all three sales free on request. All of these sales under management of

California Breeders' Sales & Pedigree Company

C. L. Hughes, Sales Manager, Sacramento, Cal.

Auctioneer, Col. Ben A. Rhoades. In the Ring, John A. Bunting.

KEEP DATE IN MIND

Ed. Stine & Son's First Annual Sale

MARVEL'S PRIDE COWS AND HEIFERS

WEDNESDAY, OCTOBER 20, 1920

Stronghurst, Illinois, Sales Pavilion

At this first Annual Sale we give you the choicest selection from our great herd of D. S. Polled Herefords. First in quality, size, bone and breeding—all from the home of

MARVEL'S PRIDE

The $14,500 Polled Hereford Bull

The progeny of the World's Greatest Polled Hereford Bull—65 great sale lots, comprising sons and daughters of Marvel's Pride and Improver.

Every animal in the herd is insured in the Capital Livestock Insurance Company, and a policy for this fall selling price of the animal will be transferred to the new owner without cost.

Get ready for this Sale. Get some of the Marvel Pride blood in your herd.

Col. FRED REPPERT, "the Great"

and Assistants will cry the Sale.

Poultry for Profit

PERMANENT EGG-LAYING

Over thirty years' experience in poultry keeping in the Santa Cruz district, and because of numerous exceptional advantages that locality possesses, has forcibly demonstrated its superiority for poultry culture. A well-organized poultry society held frequent meetings, year after year, the industry in the meantime continually enlarging. The attention of poulterers was not confined to egg farming, but to an ever-present effort to raise to the highest possible point the standard of fowls; to accomplish which, especially during the last decade, there has been careful culling, a weeding-out of non-profitable birds, the use of various systems of selection by form, the presence or the absence of pigments, and by trapnesting, the latter method having been found the most reliable.

Two years ago it was decided to conduct a yearly egg-laying contest, which proved to be so satisfactory that, at its expiration, a second contest followed. These contests, confined as they were, in great part, to Santa Cruz county, were so profitable in many ways that the suggestion was accepted that a permanent contest be inaugurated—a fixed feature of poultry culture, which should be wide open to contestants in the State at large and to neighboring commonwealths, as well.

Owing to the increasing popularity of the egg-laying contests in the United States, and an increasing demand for a larger California contest, the Santa Cruz County Farm Bureau and the Santa Cruz Chamber of Commerce, with the countenance and the backing of the State University of California, are sponsors for an egg-laying contest which is destined to have a national, if not an international, reputation.

Details Formulated.

Details have already been formulated. The Chamber of Commerce of Santa Cruz has agreed to furnish, at its own expense, the land (over three acres), buildings and equipments, as are requested by the Poultry Division of the University of California, to make this project a success. After a brief canvass of the matter the sum of $10,000 was raised by citizens of Santa Cruz, and a finely located site in a popular section, near the large Laveaga park, the property of the city, was purchased and the concrete foundation for necessary buildings will soon be completed. The main building, which will cost $7,500, will have a capacity of 1200 hens, double monitor in style, and will be 350 feet long.

The carefully selected plans were gone over with the State authorities and combined in the one adopted are the best features of other like buildings in the United States, and Santa Cruz has the promise of having the most complete and the very best contest in the country. Details have already been formulated. The Chamber of Commerce of Santa Cruz has agreed to furnish, at its own expense, buildings and equipments as shall be required by the Poultry Division of the State University to make this notable project a complete success.

The Poultry Division of the University of California will assume complete responsibility, authority and direction for the running of the contest. The extension division of the College of Agriculture of the University will make this project a part of the work of the farm advisors throughout the State. It is the object of the State Federation of Farm Bureaus to make this California farm bureau egg-laying contest the one official state-wide contest of California. The Santa Cruz farm advisor, Henry Washburn, will act as the University's local agent in all matters furthuring this contest, which will be a University activity. Max Kartum will have special oversight of the workings of the contest.

Egg-Laying Contest.

The California farm bureau egg-laying contest, under the accepted plan of operation, will be a self-supporting institution. Any deficit will be met by local parties. Mr. Barker, president of the Sonoma county farm bureau, is of the opinion that the entries showing the best returns in various local egg-laying contests, in our counties could be made to graduate into the larger state contests, such as is being developed at Santa Cruz, and that he considers this project as being highly desirable and in the interests of the poultry industry of the state as a whole. Geographically, Santa Cruz is very favorably situated for poultrymen in all portions of California who care to take a part in this contest, while climatically it embodies the mild coastal climate which has proved to be the best for both the health and the produce of fowls. The contest is billed to start on November 1, 1920. It will show the world what can be done with poultry in our unparalleled climatic conditions.

TURKEYS HAVE TUMOR ON HEAD.

To the Editor: We have a large turkey gobler and also one of our growing turkeys which have lumps like tumors on the sides of their heads reaching from the eye to the corner of the mouth. They are very inflamed and red looking. The gobbler makes a peculiar noise at intervals—a kind of a "chuck, chuck," with a toss of the head. What is the cause and remedy?—A Subscriber, Vacaville.

To the Editor: What can I do for my baby turkeys? They are on the sick list. Their eyes seem to be affected, as they keep them closed constantly. Their eyelids seem to be somewhat swollen. They seem to "wheeze" in their nostrils.—Mrs. W. G. L., Vacaville.

To the Editor: My turkeys are swelling around the eyes and I have lost a few. Kindly give a remedy for this disease. How can I stop its spreading among all my turkeys?—Mrs. B., Rio Vista.

While, according to these reports, there seems to be a variation in the symptoms, we believe these turkeys are all troubled with the same complaint, which is usually known as "swelled head." In nearly every case of this kind this disorder is the result of the turkeys eating materials that are not properly digested or not completely assimilated by the system of the affected fowl when taken into the crop in large amounts. In the late summer and fall turkeys are likely to obtain too much grain. Turkeys are closely related to the pheasant family, and, in proportion to size, cannot assimilate as much rich and concentrated feed as chickens; they require a much larger share of coarse feed or roughage. If any of the fowls are so badly affected that they cannot see to eat and drink, it will be necessary to frequently wash their heads, mouths, any eyes with tepid water in which a little boracic acid has been dissolved; this solution will also greatly relieve the fowls that may be able to see. The best remedy for this disorder is a change of feed. Give them some cracked bone and lean cooked meat, or meat or fish scrap. Supply all the greens they wish to eat. Cut down the grain feed very much. Do not overlook supplying shell, grit, and charcoal.

BIRDS LOSING PLUMAGE.

To the Editor: My chickens' heads turn red on top and then they lose all the feathers from their heads. One hen has been like that for about two months, and I just thought she had something on her head that made her lose her feathers, but now some of my young stock are getting the same way. It does not seem to affect the hen's laying.—A. L. R., Ukiah.

We believe these fowls have no serious complaint, or actual disease. We advise a careful examination to discover, if possible, any sort of vermin that may be destroying the plumage on the head. In any event, such examination will do no harm, and may stop further loss of feathers if the heads of all of the fowls are anointed with carbolated vaseline, or an ointment made by mixing powdered sulphur in lard or vaseline. Use only a small amount of any sort of ointment that may be used.

According to the government report holdings of storage eggs are about 1,050,000 cases short of a year ago. At the beginning of August, 1919, there were 7,849,778 cases in the coolers, and from the same report this year there were 6,844,825, over 1,000,000 cases short.

Poultry Breeder' Directory

Rate, 4c. per word. Cash must accompany all orders.

BARRED PLYMOUTH ROCKS — "Nothing Better in Poultry." Wonderful layers. Choice hens and pullets for sale; also fine cockerels that will improve your flock. Now booking orders for hatching eggs. I have made a specialty of Barred Rocks for over twenty-two years. That's why our birds win at all the leading shows. Catalog free. Chas. H. Vodden, Box 3, Los Gatos, Calif.

PETALUMA HATCHERY — Established 1902. If you want good fall layers, get chicks in the fall. We guarantee satisfaction. There will be but few chicks hatched this fall. The wise ones are buying. Send for prices. L. W. Clark, 615 Main St., Petaluma, Cal.

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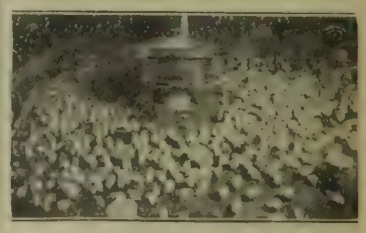

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Shall School Children Be Independent?

(Written for Pacific Rural Press.)

We have read an article by an educator who is pertrubed by certain tendencies in one school which he thinks are anything but conservative. He says some of the young people in our high schools have adopted not only a bill of rights, but also a decration of independence. Specific instances are cited where students have gone over the heads of teachers to school boards with certain grievances, and he "views with alarm" one case where a school board ignored the faculty and treated with the students direct. There he winds up with a plea for "respect for authority."

The writer is just perverse enough to think that the pedagogue is all wrong in his diagnosis. The day has gone by when dignity and a club can command respect, and without respect, any authority that is insisted on will do far more harm than good.

There is too much politics in our schools to make any doctrine of the infallibility of a teacher stick, and if school masters want obedience let them be big enough and wise enough to command it. Nine times out of ten, when an insurrection occurs in a high school, it is a flat confession of weakness somewhere in the faculty, and no iron rule will strengthen that. Instead of condemning "bills of rights" and declarations of independence," rejoice in them and seek school administrators big enough to guide them aright.

And there is another slant to it that our pedagogical friend apparently does not see. Bills of rights and declarations of independence are evidences that some high school pupils are beginning to think for themselves and to form conclusions of their own. That is mighty troublesome to the school administrator and a bit tough on the system.

The easy way—the lazy way out—is to make a crime of it and teach young people "obedience to authority." If we are wise, we will not let the administrators get away with it. We will encourage our young people to think for themselves and to form their own conclusions, even about the ability or desirability of certain instructors, even if this independent mental process does sometimes lead to insurrections. A schoolhouse is a place to train men, not sheep.

I am not so sure but even in our high schools we might, to advantage, encourage more of the Vienna University idea, as it was before the world ran amuck and destroyed many of the finest things civilization has developed.

In the good old days in Vienna, the pupils asked the questions and the teachers did the reciting, and if the answers didn't compare to the assent of the pupil's reason, the teachers heard from it and often were compelled to back up on or even abandon the line of thought.

Mighty little obedience to authority there. There was no authority save that of reason and character, but what mental giants were developed in that bedlam!

There is one nation on the earth today where, in the eudcational program, the old barbarous system of examination is said to have been abandoned entirely. The students are not examined—but the teachers are! When pupils do not seem to progress as they should, authority is applied not to the student, but to the instructor! Why not apply the same idea to school "discipline"?

Opinions About Goats' Milk for Babies

[Within space limits, the Rural Press is an open forum for the discussion of all subject-matters of interest to its readers. For this reason we have admitted the above communication to our columns in full. It touches a matter all important to families where milk is consumed, more especially where very young children are being reared. However, while much that is said is true, some of the statements made are open to question. Notwithstanding the correspondent's indictment of cow's milk, and ardent advocacy of goat's milk, it is this writer's belief that, of the two, cow's milk is to be preferred if properly balanced; that is to say, if you take of cow's milk two-thirds and of water (warmed) one-third, to which add half an ounce of sugar of milk to the pint of mixture, you will get a substitute for mother's milk closely resembling it. On the whole, there is no milk so agreeable to human taste as pure, fresh cow's milk. The milk of the goat, while richer in fat and albumen, and less liable to convey tuberculosis germs (in this respect resembling the milk of the ass, which is not subject to tuberculosis), has so offensive an odor and so strong a taste that many children will refuse to drink it. The upkeep of the goat, on the other hand, entails so little expense and it is so lacking in fastidiousness in the choice of its feed, that it has its proper place in our social economy. It has been aptly called the "poor man's cow"—but when the poor man rises above the plane of poverty he usually discards the friend of his impecunious days and sidles up to the aristocratic cow. The adoption of the cow as the principal source of civilized man's milk supply is unquestionably only another example of the survival of the fittest.

As a substitute for human milk we believe there is little choice between cow's, goat's, ass's or sheep's milk, and the availability and convenience of the supply is the main consideration—all of which favor the selection of the cow for this purpose. What chemical and physical differences there may be in the properties of cow's milk as compared with human milk may be adjusted in the methods of preparation, and this is now generally and satisfactorily done under intelligent medical direction.—Ed.]

To the Editor: Why does a baby thrive better on its mother's milk (when that is plentiful) than on any other known food? Because Mother Nature, in her great wisdom, provided the mother with a milk that was just suited to baby's stomach. The newborn stomach is a very delicate organism, adjusted to digest nourishment which is light and flaky, upon which the digestive fluids do not have to exert much effort to break it up into bone and body-making nutrients. Mother's milk is just that.

What is cow's milk? Cow's milk is made to nourish a great big calf five times as big as a baby, and strong enough to stand by itself. The fat globules of cow's milk are made to correspond. They are five times as large as the fat globules in mother's milk. These large fat globules are hard to digest. At least 10 per cent of them pricipitate in a baby's stomach, setting up a condition of acidity which leads to biliousness and its attendant nervousness. When a baby teethes it is not so much the teeth coming through that cause fretfulness, it is the added strain on the nervous system that works on the digestion. A baby whose digestion is perfect is rarely troubled by teething.

It frequently happens in our modern civilization that a mother cannot nourish her own baby as Mother Nature intended that she should. If she understands the action of cow's milk on her little one's stomach, she will hesitate to subject it to the trial. What milk shall she choose? Mare's milk is so like mother's milk experts cannot tell them apart, but mare's milk is for the average family, quite unpractical. Next comes goat's milk, with light flaky globules like mother's milk, and from it only 2 per cent of curd precipitates in the stomach. When a fretful baby is put on goat's milk, there is quick response from baby to show his appreciation. Nights are passed in sleep, and days in sleeping and gurgling forth his joy in life. His little foster mother is a clean, healthy animal—the healthiest domesticated animal there is; easy to keep in small quarters. Even the City Board of Health encourages the keeping of goats within city limits. The milk, when produced under the simplest sanitary conditions, is sweet and delicious to taste. Babies love it and baby's cheeks grow rosy on it. Why not give baby a chance to grow into a strong, healthy, happy man or woman, for health is essential to happiness and both depend more on the first few months of growth than on anything that may later develop in life. Where is the farmer who expects a poorly nourished calf to develop into a good producing cow, or a runty pig into a fine hog? Why expect more of your baby's physical stamina than you do of your farm animals?—Correspondent.

TOMATO RECIPES.

For catsup, take thirty large tomatoes; peel, cut up and sprinkle with salt. Stand an hour and drain and cook until tender. Strain, letting liquid run off before putting pulp through. This makes it quite thick. Add to the tomatoes five red bell peppers, seeded and chopped; also five onions chopped fine, two level teaspoons mustard, three cups or less of vinegar, according to strength; six tablespoons sugar, a bag of mixed spices. Add spices, peppers and onions toward the last of the cooking. Cook until quite thick. The liquid poured from tomatoes may be canned for soup.

Green Tomato Pickle.—One quart green tomatoes, 1 quart chopped cabbage, 1 quart onions, 1 quart vinegar, 1 quart brown sugar, 1 ounce white mustard, 1 ounce celery seed. Chop tomatoes; let stand with cabbage and onions over night. Drain well and mix with other ingredients. Cook 30 minutes. Put in glass jars while hot.

English Chili Sauce.—Eight quarts ripe tomatoes, 8 red peppers, 3 onions, 3 pints vinegar, 2 pounds sugar, 1 teaspoon black pepper, 2 ounces ground cloves, 2 ounces allspice, ⅔ cup salt, 1 cup mustard seed, 1 teaspoon celery seed. Peel and slice the tomatoes; boil slowly one-half hour, then add the peppers chopped fine and the onions also chopped. Boil two minutes, then add the other ingredients and boil one minute.

LORD, HAVE MERCY.

A little girl was asked, upon her return home, how she liked the singing of the congregation in the church.

"I liked it very much indeed," she said, "although the people said it was bad."

"All the people said it was bad! What do you mean, my dear?"

"Oh, it was so bad that I heard the people praying, Lord, have mercy upon us miserable singers-'".

WE ALL KNOW THESE.

Musician: "There are songs that have never, never died. They go ringing down the ages."

Brown: "That is true, sir. For the past six months and upward I have heard my daughter try to kill two or three each evening, but they never, never die."

What a Piano Meant In the Old Days

Writing from San Francisco during the week of the Democratic National Convention, Correspondent H. L. Mencken sent this dispatch to his eastern paper:

> I met a man in the Bohemian Club who began to tell me casually of his grandmother. This lady, an Irish woman of good birth, came to California from Ireland in 1849, by way of Panama. Imagine the journey; the long sea voyage, the infernal struggle across the Isthmus, the worse trip up the Coast, the trek inland. Well, she brought a piano with her!—got it aboard ship in Ireland, guarded it all the way to Panama, dragged it through the jungle, then shipped it again, and finally packed it to her home in the hills; I daresay many of us could find such grandmothers, going back far enough.

If possession of a good piano meant that much to our grandmothers, surely such ownership should mean no less to you. For those days had neither convenient transportation, nor convenient payment terms, nor the wonderful modern invention of the Player Piano—the piano that any one can play.

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I NEED NOT FEAR.

If I live a life that is clean and square
And I love my fellow-man,
And I lend him a hand to help him bear
His burdens whenever I can,
I need not fear what the future holds
Nor what the reward shall be.
For the mighty Love that all enfolds
Will most surely care for me.

If I speak a good word of cheer to one
Whose sorrows have borne him down,
And I give him new hope to journey on
And change to a smile his frown,
I shall not dread when the shadows fall
And the end of life draws near,
For that wondrous Love that shelters all
Will drive away my fear.

For my lief is measured by what I mete,
And I earn my own reward,
So the love I give makes my heart complete
And through it I gain the reward.
For whether I dwell in the house by the road
Or far from the haunts of men,
If only my love makes bright the abode
No fear shall enter it then.

Sunday-school Teacher (speaking of the apostle): "Peter made one error—"

Irrepressible Kid: "How many runs did it let in, teacher?"

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Home Circle Department

THE FAIRY KEEP-A-LITTLE.

Once upon a time there was a little boy, named Gordon, who had a shiny, new ten-cent piece given him by his grandfather.

"Now," said Gordon, "I am going to the store to buy me a top, and a pencil, and some candy!"

"I should not spend it all if I were you," said grandmother.

"Why not?" asked Gordon.

"I should keep a little of it so that some day when you want something else more than you want these things, you will have the money for it."

"Oh, but I'll have some more money by then!" said Gordin. "Well, you are not at all sure about that," said grandmother. "No one ever is. Before you run down to the store, you sit down here on my little stool, and I'll tell you a fine story."

Gordon thought no one in the world could tell such fine stories as grandmother; so he sat down on her little stool, folded his hands in his lap, and was ready to listen.

"Once upon a time," said grandmother, "there was a little fairy who lived in the woods. She was starting out for a walk one day, when she met a squirrel.

"'Hello, Mr. Squirrel!' said she. 'Where are you going?' 'To the beech-trees, to get some nuts to eat, said he. 'Good!' said she. 'But remember not to eat them all. Keep a little. Winter is coming.' The squirrel thought that was a queer thing to say, and he went off to the beech-trees and ate all the nuts he could find. There were not many that year and it was too early for them to be ripe, but he ate all he could find, anyway.

"The fairy went on, and pretty soon she found a woodchuck. 'Hello, Mr. Woodchuck!' said she. 'Where are you going?' 'To the cornfield,' said he, 'to get some corn to eat.' 'Do not eat it all,' said she. 'Winter is coming. Keep a little.' Mr. Woodchuck went to the cornfield and ate all the corn he wanted, and did not keep a bit. 'A queer fairy,' said he, 'to tell me to keep a little corn, when I can come here any time I want to and get all I want.'

"On went the fairy, and met a big, buzzing bumblebee. 'Hello, Mr. Bumblebee!' said she. 'Where are you going?' 'To the garden,' said he, 'to get some honey for my dessert.' 'Do not eat it all,' said she. 'Keep a little. Winter is coming.' 'Humph!' said Mr. Bumblebee, and that is all he would say.

"Then the fairy met an ant. 'Hello, Mr. Ant!' said she. 'Where are you going?' 'Up a tall grass-stalk for a worm for dinner,' said the ant. 'Do not eat him all,' said the fairy. 'Keep a little. Winter is coming.' The ant laughed as hard as he could. 'What a crazy fairy!' said he.

"The fairy was about to skip through a zigzaggy rail fence, when all at once on the top she spied a striped chipmunk. 'Hello, Mr. Chipmunk!' said she. 'Where are you going?' 'To the sweet-acorn tree for little sweet acorns,' said he. 'Do not eat them all,' said she. 'Keep a little. Winter is coming.' The little chipmunk stopped and thought. 'All right,' said he. 'Thank you for telling me. I'll remember,' and away he whisked.

"Well, after the fairy had had her walk and was coming back, the weather changed, and a cold wind blew the dry leaves around and made everything shiver that could shiver at all; for the fairy's walk had lasted for several weeks. As she was running briskly along she heard a little whining noise, and suddenly saw Mr. Squirrel. 'What is the matter?' said she. 'I'm so hungry,' said he, 'and I can't find a thing to eat.' 'Did you save a little when I told you to?' said she. 'No,' said he, 'but now I wish I had.' 'I'll give you one more chance,' said she. 'Over in the corner you will find a fine hickory-tree. Take all the nuts you wish, but this time be sure to keep a little!' 'Yes,' said he, 'I'll remember,' and off he went, ate a few nuts so he was not so hungry, and carried some to a hole in the tree for winter.

The fairy heard another little whining sound, and out from behind a tree came Mr. Woodchuck, so hungry he did not know what to do. 'Didn't you keep a little of the corn you found in the field?' asked the fairy. 'No,' said he, 'but I wish I had.' 'Well,' said she, 'I'll give you one more chance. In the second field from here you will find some corn still left. Take all you want, but be sure to keep a little!' Off went the woodchuck. He ate enough to stop the hunger, and took a lot into his home under a stump for winter.

"'Buzz, buzz, buzz!' went something on the ground, and there lay Mr. Bumblebee, so cold and hungry he could not fly. 'I am so hungry!' said he. 'Didn't you save any of the honey you found?' said she. 'No,' said he, 'and I wish I had.' 'I'll give you one more chance,' said she. 'Beyond the trees you will find some fairy flowers. Take all the honey you want, but be sure to keep a little!' She waved her wand, and he became warm enough to fly. He found the flowers, ate a wee bit of honey, and took the rest to his hive for winter.

"There was a scratching sound on the ground, and there was Mr. Ant kicking weakly from hunger. 'Didn't you find the worm for dinner?' asked the fairy. 'Yes,' said he, 'but I ate it all up, and now I wish I hadn't.' 'I'll give you one more chance,' said she. 'Yonder is a fine, fat bug. Eat all you want, but be sure to keep a little!' The ant minded this time, you may be sure, and a large piece of bug was put into his cellar.

"Just then, along came Mr. Chipmunk. 'Thank you so much for your advice,' said he. 'My storehouse is full of acorns for the winter, and I have three good meals a day, and four if I want them. Please come to see how snug I am.' The fairy went with him to his nest, and there she saw his stock of nuts; and what else do you think she saw?"

"What?" asked Gordon.

"Why," said grandmother, "Mr. Chipmunk had taken down the old framed motto, 'Home, Sweet Home,' that hung on his wall, and instead Mrs. Chipmunk sat embroidering a new one to hang in its place, and the new one said, 'Keep a Little.'"

When the story was finished, Gordon went to the store, and when he came back what do you think he had bought? The top for five cents, a pencil for one cent, and only one stick of candy for another cent. He brought his bank to grandmother, and said,—

"Grandmother, I think that Fairy Keep-a-Little would be pleased now, for I kept three cents out of the ten, and I'm always going to keep a little of everything I get to spend—even if I get only a penny, and have to keep it all!"

"I think," said grandmother, smiling, "I can hear the Fairy Keep-a-Little dancing for joy, and singing too!"—Blanche Elizabeth Wade.

Why Shouldn't He Smile?

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PEAR RECIPES.

A very delicious and attractive salad may be made from pears. It is called porcupine salad, and is made by peeling the pear and halving it, then placing it rounding side up and place a long clove in the stem end to simulate a nose and two short ones to simulate eyes. In the blossom end place another clove for a tail and across the back in rows push in halves of salted almonds. The effect is more realistic if the salad dressing is placed under the pear when ready to serve. One pear will serve two people in this manner.

Pink pears are most attractive to serve in tall glasses, and are made by adding the pink vegetable coloring to the syrup in which the pears are cooked or any pink color fruit juice. Cook the pears slowly in the colored syrup and when tender, lift out carefully. To the syrup, add a few drops of vanilla and pour over the fruit.

Pears, after being washed and pared with the stem left on, may be cooked whole in a syrup and then frosted. For the frosting beat powdered sugar into the white of egg until it is thick and smooth. Flavor with any desired flavoring and coat the well-drained pear liberally.

Baked pears are very delicious and become a most attractive color. Pare, quarter and core the pears and pack into a baking dish. Pour over them a thin syrup and bake slowly for several hours in a moderate oven. This dish would cook beautifully in a fireless cooker.

ANAEMIAS IN CHILDREN.

Many children suffer from anaemias, the cause of which is obscure; and in order to assist physicians in clearing up such cases, Dr. William Palmer Lucas, heard of the Department of Pediatrics of the University of California Hospital, has advised the Bureau of Child Hygiene that he will accept in the University Hospital, at no cost, cases of anaemia in children. Any cases of rare diseases in children will be accepted upon the same basis.

A full report of the investigation into each case will be forwarded to the attending physician. Drs. Jones and Nye from Johns Hopkins University have recently been added to the staff of the Departmnt of Pediatrics, and they will attend specially to bio-chemistry in relation to the anaemias of childhood.

GOOD TEETH AND GOOD HEALTH

There are 3333 licensed dentists in California, according to Dr. C. A. Herrick, Secretary of the State Board of Dental Examiners. Each one of these men is a factor in keeping people well; for it has been demonstrated beyond the shadow of a doubt that defective teeth are responsible for many cases of illness. From a public health point of view these 3333 dentists are most valuable allies in the prevention of disease. If the teeth of every child were cared for during childhood, many of the ills of later life might be prevented. Keeping the teeth in a good condition is a good way to save money that might otherwise be expended for avoidable illness, to say nothing of the needless suffering.

CORNED BEEF.

Corned beef is simply made in any home by taking five pounds or less of rump beef, four large spoons (larger than tablespoons) of salt, saltpeter the size of a pea, soda the same amount, cold water to cover beef. Let stand twenty-four to forty-eight hours. Cook in the same water three hours or until tender. A fresh beef tongue can be prepared in the same way. Cabbage cooked in this liquor is delicious.

BEAN LOAF.

Put two cans pork and beans, or four cups of cooked, well-seasoned beans into a chopping bowl with one large onion, and four leaves of celery. Chop medium fine. Season with salt and pepper to taste and add a cup and a quarter of bread crumbs; mix well and form into a loaf. Grease well a pan the size of the loaf and bake in a brisk oven for half an hour. This can be used as a dish for either dinner or supper.

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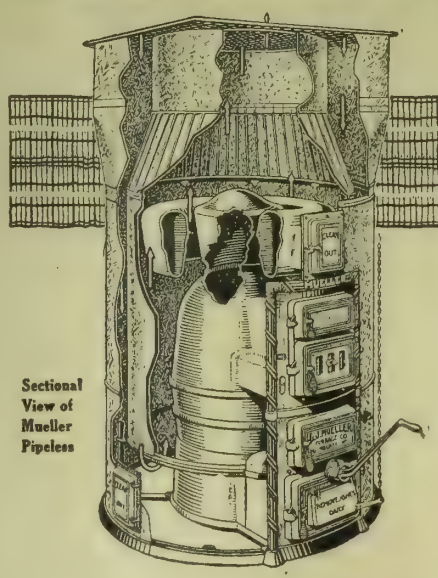
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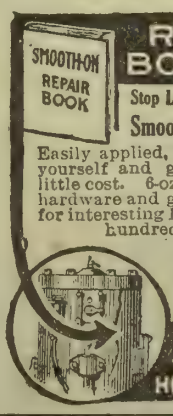

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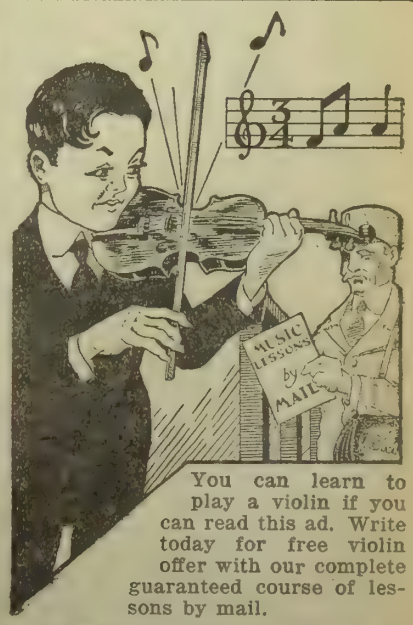

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THE MARKET REPORTS

SAN FRANCISCO

San Francisco, September 22, 1920.

WHEAT.

With hardly any receipts the wheat market remains dull. Prices demanded are higher than buyers will pay notwithstanding rumors to the contrary. Newspaper quotations are too low except for poorer grades.

Wheat .....$3.90@4.00

OATS

There are practically no offerings in this market and the market is negligible. The oats market is weakest of all the grains.

Red Feed, ctl. .....$2.85@3.15

BARLEY

Barley is weak with no spot trading. Dealing in futures has also become negligible.

Feed Barley, ctl. .....$2.30@2.40

CORN

None of the long awaited new crop has arrived as yet. With very light receipts, no changes in the corn market are reported.

Egyptian, white .....Nominal
do, brown .....$3.40@3.75
California .....$3.80@3.85

FEEDSTUFFS.

Indications point to a decline soon in the price of rolled oats. Red bran in 100-pound sacks has dropped to a $50@$55 price but no market is afforded. No middlings have been offered during the week. Cracked corn has not arrived yet in any appreciable quantity.

Rolled Barley .....$48.00@50.00
Rolled Oats .....$55.00@60.00
Alfalfa Products .....$45.00@52.00
Cracked Corn .....$80.00@81.00

HAY

With the lightest week's receipts of hay reported in some time, the market continues very weak, and small sales of limited quantities dragging on the market. All farmers who are able to do so seem to be storing their hay until the market tones up. Prices quoted here are f. o. b. cars San Francisco less $1.00 per ton commission charges.

Wheat, hay new .....$26@28.00
Tame, oat new .....23@25.00
Wild oat new .....17@19.00
Barley .....17@20.00
Alfalfa 2nd cutting .....21@25.00

RICE

The market is still dull and unsettled. Further price declines were made during the week, but indications point to a firmer tone in the near future.

California fancy (choice $9.50) $7.50
do, choice $7.15
Southern Honduras, long grain $12.50
China, No. 1, double mat $11.00
Blue Rose, fancy $10.50
Fancy Head, bulk (Philips & Co.) $12.50
California Japanese, No. 1 .....$7.50
do, No. 2 .....$7.15

FRESH FRUITS

(Wholesale prices paid by commission houses.)

Heavy arrivals of peaches and grapes have featured the market. Large boxes of peaches are selling at $2.50. Plum and pear receipts have been lighter. Although the demand for cantaloupes is not extra strong, pery light arrivals sent prices up a little. The watermelon season is about finished. A large demand for Persian melons is reported with light receipts.

Berry prices have advanced slightly although receipts have been very small and the demand is falling off. Large receipts of bellflowers are reported with a fair demand. The Gravenstein price has dropped a little, due to heavy receipts of bellflowers.

Apples, Gravenstein, fancy .....$2.00@2.25
do, Bellflowers $1.35
do, Red Astrakhan .....Nominal
Plums .....$1.25@2.00
Peaches, 4 baskets .....$1.25@1.50
Pears .....$2.00@4.00
Strawberries, 6 12-oz. boxes .....75@1.00
do, 6 8-oz. boxes, drawer .....60@75c
Blackberries, drawer, 12 oz. draw.30@35
Raspberries, drawer .....70c@85c
do, 8-oz boxes .....30c@40c
do, 8-oz. boxes .....40@50c
Cantaloupes, Standard .....$1.00@1.25
do, Flats .....50@60c
Watermelon, lb. .....1@1½c
Persian Melons lb. .....2@2½c
Grapes, large box .....$2.00@3.50
do, crates .....$1.50@3.00

POULTRY

Fancy grades of small broilers are bringing very good prices with further advances expected. The turkey demand is good and receipts heavy. Large receipts have had a tendency to force down the price of hens, friers and young roosters.

Broilers, small 50c
do, large .....47@50c
Hens, mixed color .....37@38c
do, Leghorns .....25@30c
Roosters, young .....38@40c
do, old .....17@20c
Friers .....40@42c
Squabs .....55@60c
Geese .....25@30c
Ducks .....25@30c
do, old 25c
Belgian Hare, live .....18@22c
do, dressed .....22@25c
Jack Rabbits .....Nominal
Turkeys, young, large, lb. .....50@55c
do, old .....50@55c
do, dressed, lb. 60c

BUTTER.

The market is weak, due to Eastern arrivals, which were forced by the former high prices here. When the Australian butter arrives next month, a large surplus will accumulate in this market, it is thought, with further declines. Most of the good butter has been already sold on contract.

	Thu.	Fri.	Sat.	Mon.	Tu.	Wed.
Extra	64	64½	..	65	64½	63
Prime 1sts	60½	60½	..	60½	60½	57½

EGGS

Shipments to the East from this market are proceeding rapidly. The market is firm in tone on stored eggs too. Prices were all advancing at the close of the week with further raises indicated.

	Thu.	Fri.	Sat.	Mon.	Tu.	Wed.
Extra	66	67	..	67½	68	69½
Ex. Pullets	60½	59½	..	59½	59½	60
Dirties	58½	58½	..	58½	57½	61½
Undersized	44½	44	..	44½	44½	45

CHEESE.

Good fancy cheeses have become a scarce article, while Oregon and undergrade varieties are plentiful. The market on all varieties is becoming slightly firmer in tone.

California Flats, fancy 33c
do, Firsts 22½c
Oregon triplets 26c
California Y. A. Thirds .....Nominal

HONEY.

No changes are noted in the market. The lower grades are especially weak, with no change foreseen.

POTATOES, ONIONS, ETC.

(Wholesale prices quoted by commission houses.)

Onion receipts have been heavy with a consequent decline in quotations. Potatoes are arriving in large shipments, but to some extent in poor condition, leaky, etc. Potato prices are unchanged. All varieties of vegetables have been arriving in good quantities, except summer squash, for which there is an extra strong market.

Turnips .....$1.25@1.50
Peas, Halfmoon .....12@13c
Beans, wax, lb. .....5@6c
do, green, lb. .....7@8c
Carrots, per sack .....$1.25@1.50
Green Corn, each .....$1.50@2.50
Lettuce, local, doz. .....25@30c
Cucumbers, Alameda, lug box.....50@75
Tomato, River, large box .....50c@1.00
Rhubarb, Strawberry, box 40 lbs..... $1.50
Summer Squash, box 35-40 lbs. .....35@75c
Egg Plant., box .....50@75c
Potatoes, New River, cwt. .....$2.25@2.50
Onions, yellow, sack .....85@1.00
do, Red .....75c@85c
Green Onions, box, 25 lbs.....$1.25@1.50

BEANS

There is practically no market for beans. Price quotations are most all lower this week. There is no shipping and a continued quiet market is indicated.

Bayos .....$12.50@14.00
Blackeyes .....$5.75@6.00
Cranberries .....$6.25@6.50
Pinks .....$5.75@6.00
Red Mexican .....$7.50@7.75
Large Whites .....$5.25@5.50
Small Whites .....$5.25@$5.50
Limas, S. F. prices .....$9.50@9.75
do, Baby, S. F. prices .....$9.00@9.25
Limas, Ass'n, Prices South $11.42
do, Baby, Ass'n Prices, South.....$11.42

CITRUS FRUITS.

The lemon market is easy but may tune up in a few days. Grapefruit is not quite so scarce as it has been and more is expected this week. Valencia receipts have been light.

Oranges, Valencies .....$7.00@7.50
Grapefruit, seedless .....$3.50@4.00
do, choice $3.00

LOS ANGELES

Los Angeles, Sept. 21, 1920.

BUTTER.

The market the past week held up very well. Receipts were good, 372,200 pounds, but they were all wanted, the consuming trade taking all offerings of extras at last week's advance. A 67c maret for extras being had throughout the week and this in the face of a ¾c break in the San Francisco market. While all extra creamery met with a good demand, low grades were slow and weak and quite a per cent of the arrivals scored less than 93. We quote:

California extra creamery 67c
do, prime first 65c
do, first 64c

EGGS.

There was nothing new in this market the past week. Receipts for the week were light: by rail only 495 cases, and they were all taken by the consuming trade at last week's prices, which were maintained throughout the week and the market closed Monday firm. Prices now are 7c higher on extras and pullets and 8c higher on case count than this time last year. We quote:

Fresh ranch extras 67c
do, case count 64c
do, pullets 58c

HAY.

Receipts the past week were light and market very dull. Receivers having to carry over a number of cars unsold each day. Oat hay is $1.00 a ton lower. Alfalfa is dull and weak at quotations, though not actually lower. What few sales made bringing quotations

Barley, hay, ton .....$22.00@24.00
Oat hay, ton .....$24.00@27.00
Alfalfa, Northern ton .....28.00@30.00
Alfalfa, local ton .....28.00@32.00
Straw ton .....14.00@16.00

Alfalfa Growers of California, Inc. quotes:

Northern Prices:

No. 1, Dairy Alfalfa $29.00
Standard Dairy $25.00
Stock Alfalfa $24.00

Southern Prices:

Fancy Dairy $39.00
No. 1 Dairy Alfalfa $33.00
Standard Dairy $29.00
Stock Alfalfa $25.00

BERRIES.

Very few berries coming in now, not enough to justify quotations, so we drop them out.

MELONS.

Receipts of cantaloupes falling off and market higher and demand very good for all arrivals. Honey Dew melons also selling better and in very good demand. Casabas and watermelons steady and selling very well in the face of liberal offerings.

Home-grown, Tip-top, standard...$1.50@1.65
do, Rocky Ford, standard ....$1.50@1.75
do, Pineapple, standard .....$1.50@1.65
do, Paul Rose, standard ....$1.75@2.00
Honey Dew, standard crate .....$1.50@1.75
Casabas, lb. .....1@1½c
Watermelons, lb. .....⅝@1c

BEANS.

The market the past week was dead dull. There was nothing doing whatever. While the new crop is being harvested and some have been threshed, no sales were made the past week. Eastern buyers and exporters keep out of the market, as foreign beans are being offered for much less than California. Prices nominal. We quote from Growers:

Limas, per cwt $10.00
Large white, per cwt .....$5.25@5.50
Small white, per cwt .....$5.25@5.50

VEGETABLES.

But few changes to note in this market the past week. Offerings fairly good and all good fresh stuff in fair demand. Receipts of potatoes were heavy and the market was slow and weak. Onions, too, were slow sale and market weak at quotations. String beans coming in more freely and slow sale and lower. Lima beans steady and in good demand. Peas scarce and wanted. Tomatoes were in good demand and No. 1 a little higher. Corn scarce and higher. Lettuce in fair demand, but market weaker. Cabbage dull but unchanged. Celery a little firmer and demand fair. Green peppers selling very well at quotations.

Potatoes, local, cwt. .....$2.00@2.25
do, Northern, cwt .....$2.75@2.85
Onions, Stockton, white, cwt. ....$2.00@2.25
do, yellow, cwt .....$1.50@1.75
do, local, crate .....60@72c
Lettuce, crate .....90@1.15
Rhubarb, per 30-lb. box .....80@1.00
Peas, lb. .....12@16c
Carrots, bunches .....30@35c
Summer Squash, local, lug .....50c@1.00
String Beans, green, lb. .....8@9c
do, wax, lb. .....8@9c
do, Kentucky, lb. .....9@10c
Cucumbers, lug .....50@$1.00
Tomatoes, home-grown, No. 1 lug....60@70c
do, No. 2 .....25@35c
Bell Peppers, lb. .....3@4c
do, Chile, lb. .....4@5c

POULTRY.

Not so much in the past week and demand good for all arrivals. Broilers, friers and hens all highes, under the influence of lighter offerings. Ducks and turkeys, too, selling very well.

Broilers, 1 to 1¼ lbs. 38c
do, 1¼ to 1¾ lbs. 40c
Friers 2 to 3 lbs. 34c
Hens .....28@34c
Roosters (soft bone) 3 lbs. and up 38c
Ducks .....24@25c
Turkeys .....40@44c
Geese 25c

FRUITS.

There was a little better tone to the market the past week as a whole, and prices were generally firm and some times higher. Peaches are coming in less freely and higher and in very good demand. Pears steady and selling very well. The same may be said of apples. Receipts of plums only fair and demand very good and market rather firm. Figs dead dull and so are quinces, and both have to be sold cheap.

Plums, Black Dimond, lb. .....8@10c
Nectarines, lb. .....8@9c
Peaches, Freestones, lb. .....6@7c
do, Clings, lb. .....7@8c
Figs, lb. .....3@4c
Crabapples, lb. .....4@5c
Grapes, Malaga, lb. .....6@7c
do, Muscat, lb. .....6@7c
do, Hamburg, lb. .....6@7c
Tokays, lb. .....7@8c
Apples:
do, Skinner's Seedlings, packed box .....$2.00@2.50
do, Gravensteins, packed box $2.00@2.50
do, Bellfleurs, 4 tier .....1.60@1.75
Pears, lb. .....5@9c

SPECIAL CITRUS REPORT.

Los Angeles, September 22, 1920.

The eastern citrus market remains practically the same as last week, with the exception of New York which shows some improvement on oranges, but the lemon market remains weak at all points.

New York.—Valencias, $4.60@$9.75. One car, bad order, $3.80. Most sales ranged from $5.50@$7.50. Lemon market only fair, $1.80@$3.30. One car, rotten, 95 cents.

Boston.—Market only fair. Valencias, $5.20@$7.35. One car bad order, $3.90. Lemon market, fair, $2.60@$3.30.

Philadelphia.—Market stronger. Valencias, $6.25@$8.35. One car, bad order, $3.80. Lemon market lower, $2.90@3.45.

Shipments to date: Oranges, 28,785 to same date last season, 32,132. Lemons to date, 7,676 last season, 9,057.

SPECIAL DECIDUOUS REPORT.

Sacramento, September 22, 1920.

When we prepared the deciduous report for the last issue of the Pacific Rural Press we did so with "fear and trembling" for the future market, as the daily shipment of table and wine grapes was beyond precedent. However, one week later, with all that, the markets show a decided improvement. Tokay grapes, for example: carloads from Florin ranging in price from $3.90 to $5.00 per crate; another carload, $3.70 to $4.50. From Lodi, prices range from $2.30 to $4.25 per crate. Muscats, $2.05 to $2.30. Malagas from the various points of the San Joaquin valley, $2.00 to $3.37½ per crate. Bartlett pears, $4.75 to $7.67 per box. Cling peaches, $2.20 to $3.37½. Fall pears from San Jose, Comice, ½ boxes, $3.25 to $3.75. Bosch in full boxes, $5.13. Hardy, $4.13 per box.

CALIFORNIA FARM BUREAU MARKETING ASSN. SALES.

The following shows the number of hogs sold, the average weight, price and buyer:

McFarland, September 13—59; 162; $15.50; Virden Packing Co. 46; 197; $13.90; E. B. Miller. 10; 184; $14.90; E. B. Miller. 81; 184; $14.85; Virden Packing Co. 85; 185; $14.80; E. B. Miller. 87; 208; $14.75; Virden Packing Co. 11; 287; $13.90; E. B. Miller. 59; 128; $12.65; O. N. Garrison. 41; 337; $10.95; Virden Packing Co. 70; 195; $14.75; Virden Packing Co. Five cars, 22 consignors.

Tulare, September 14—90; 189; $15.05; J. C. Kendrick. 88; 198; $14.95; Virden Packing Co. 12; 205; $14.90; J. C. Kendrick. 31; 192; $14.75; J. C. Kendrick. 75; 230; $14.70; Virden Packing Co. 50; 150; $13.75; J. C. Kendrick. 10; 175; $10.55; Virden Packing Co. 6; 198; $14.50; Virden Packing Co. 37; 293; $10.55; Virden Packing Co. Five cars, 37 consignors.

Visalia, September 14—88; 199; $14.90; Virden Packing Co. 53; 199; $14.75; Virden Packing Co. 18; 288 $14.25 Virden Packing Co. 47; 151; $14.00; Burke and Wimp. 11; 298; $13.50; Virden Packing Co. Three cars, 13 consignors.

Hanford, September 16—82; 207; $15.85; J. D. Biddle. 129; 188; $15.65; J. D. Biddle. 81; 189; $15.45; J. D. Biddle. 30; 268; $15.15; J. D. Biddle. 91; 137; $14.05; J. D. Biddle. 14; 305; $13.05; J. D. Biddle. 8; 119; $11.00; Hammond. Five cars, 30 consignors.

Corcoran, September 17—50; 193; $16.20; E. B. Miller. 6; 218; $15.95; E. B. Miller. 5; 392; $13.70; E. B. Miller. 2; 170; $15.20; E. B. Miller. One car, 6 consignors.

Special Livestock Market Report

San Francisco, September 22, 1920.

CATTLE—Buyers are on a still hunt for cattle, and from all accounts are having some difficulty in securing same. Something definite may occur as regards prices before the end of the month.

Steers, No. 1, 1000-1200 lbs..... 9 @ 9½c
do, 1200-1400 ..... 8½ @ 9c
do, 2nd quality ..... 7 @ 7½c
do, thin ..... 5½@ 6c
Cows and Heifers, No. 1..... 7½@ 8c
do, 2nd quality ..... 6 @ 7c
do, thin ..... 3 @ 4c
Bulls and Stags, good ..... 4½@ 5½c
do, fair ..... 3½@ 4c
Calves, lightweight .....10 @11c
do, medium ..... 8 @ 9c
do, heavy ..... 7 @ 8c

SHEEP—There has been a sharp let-up in mutton sheep reciepts, and as a result the price situation has steadied somewhat. Sheep are beginning to come out of the mountains. The season has been only average there. We look to see both mutton and lamb in better demand from now on and prices will rule as high as last season.

Lambs, milk ..... 9 @10c
do, yearling ..... 7½@ 8c
Sheep, wethers ..... 7 @ 7½c
do, ewes .....5½@ 6c

HOGS—Heavy increase in hog receipts caused prices to break about ½ cents during the week. The heavier grades suffered most. Hard, fat, grain-fed, 100-150 lbs 15c
do, 150-225 lbs 16c
do, 225-300 lbs. 15½c
do, 300-400 lbs. 14½c

Los Angeles, September 21, 1920.

CATTLE—This market remains much the same as a week ago. The offerings of both steers and cows continue good and killers are getting all they want at quotations. Tone of market weak.

Per cwt. f. o. b., Los Angeles:

Beef steers, 1000@1100 lbs. ..$8.50@10.00
Prime cows and heifers .....$8.00@ 8.50
Good cows and heifers .....$7.00@ 7.50
Canners .....$4.50@ 5.00

HOGS—Not so many in the past week and market firm. Killers, while all wanting a few hogs for the fresh meat trade, refused to bid up prices. No one wanting hogs to cure at present high prices.

Per cwt. f. o. b. Los Angeles.

Heavy, averag'g 275@350 lbs. $12.00@12.50
do, 225@275 lbs .....$14.00@14.50
Light .....$15.50@16.50

Rough docked 20 lbs. piggy sows 40 lbs. and stags, 40 per cent.

SHEEP—Demand for lambs holds up very well, but plenty are coming in to satisfy the demand. Market steady at quotations. Ewes and wethers continue dull. Demand limited, but prices unchanged.

Prime wethers .....$6.00@ 7.00
Yearlings .....$6.00@ 7.00
Prime ewes .....$5.00@ 6.00
Lambs .....$8.00@10.00

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Pacific Rural Press
525 Market Street
San Francisco

MARKET COMMENT.

Table Grape Prices Booming.

Would it be fair to say that constitutional prohibition had boosted the price of the table grape as well as that of the many wine varieties? We can't say that it is caused by a shortage in production; for never in the history of the grape shipping business was there such unprecedented daily shipments of grapes being made from California, amounting to 230 to 295 carloads. We have before us the sales sheet of seven carloads of Florin Tokay grapes, that sold in the various Eastern auction markets September 20th, ranging in price from $2,712 to $3,872, that averaged $3,307 per carload of 1,000 crates of 22 pounds net. The same date there was sold from Atwater, Dinuba, Clotho, Sanger, Glorietta, Cutler, Lemore, Giffin Spur, Sultana, Miley, Hopper, Ceres, and many other points throughout the San Joaquin valley, carloads of Malaga grapes ranging in price from $2,156 to $3,212. Woodbridge had a car of Zinfandel—wine grapes—packed in commercial packages sold in Philadelphia, grossed $2,376.00. "Many showed decay." package of four baskets. They have There is a "nigger" comfortably secreted in the proverbial woodpile, for never before has it been the custom of packing and shipping Zinfandel grapes in the regular commercial always found their way into any old kind of a lug box. However, during the past couple of years they have been given a little more decent passage by being shipped in Los Angeles lugs. If prohibition has been the cause of such splendid prices, the grape growers have been standing in their own light not to have advocated it years ago. Let's watch and see if it will continue.

Condition of Hay Market.

The market report published by the United States Department says that a slight increase in the receipts of hay is shown by the reports from the principal markets for the week ending August 28th. Although the Eastern spot market is dull, the general tone is better on account of the fact that the accumulation of lower grades in the various markets which had exerted a depressing influence earlier in the month as well as stocks in dealers' hands are rapidly decreasing. Invoices also indicate light arrivals in the near future.

Stronger Tone to Wool Market.

From the Boston wool market comes the report that a fair business has been done by some of the principal mills on the better types of worsted cloths. The demand for goods seems to be reviving slowly, although the trade is hopeful that presently it will increase very considerably. One of the largest woolen manufacturies has announced that its mills will begin operation this month, after being shut down for more than two months.

In one year the use of gasoline and motor oils has jumped 50 per cent in the section between Live Oak, Gridley, and Biggs and the Feather and Sacramento rivers. This increase has come from increased tractor use in new land development—rice and orchard.

Classified Advertisements.

Rate, 4c. per word. Cash must accompany all orders.

COUNTRY LANDS.

EQUIPPED RANCH NEAR CITY 160 Acres, Only $14,750.
On boulevard to city, only 2 miles railroad town; 110 acres rich tillage, this year 70 acres fine wheat, 20 acres corn 5 acres beans; 5 acres oranges, lemons, grapefruit, olives, almonds, walnuts, 2-acre pepper tree grove; surrounded by great fruit farms; bungalow 6 rooms, bath, cement cellar, piped water, magnificent shade trees, big barns; good cottage, blacksmith shop, poultry house, corrals for 1500 birds, new garage; aged owner has made money, retiring; quick buyer gets good pair mules, Jersey cow, lot machinery, tools, poultry, etc., every thing $14,750, easy terms. Details this and many other Southern California orange groves and farms, page 91, Strout's Big New Illustrated Catalog Farm Bargains 33 States. Just out. Copy free. STROUT FARM AGENCY 503FA, Wright-Callender Bldg., Los Angeles, Cal.

WANT TO HEAR from party having farm for sale; give particulars and lowest price. John J. Black, Press St., Chippewa Falls, Wisconsin.

A RARE OPPORTUNITY — To secure a large, improved farm in the DURHAM STATE LAND SETTLEMENT. Block 85 is for sale. 167.63 acres—80 acres irrigated, 66 acres seeded to alfalfa. House, barn, fences and outbuildings all new. $500.00 worth of hay and lumber goes with the place. Price. $23,713.00; $10,000.00 cash. Payment of balance can be extended over 20 years with interest at five per cent. For full particulars call on or write to Geo. C. Kreutzer, Supt. State Land Settlement, Durham, Calif. Tel. 865-J4.

IN THE HEART OF CALIFORNIA. 560 acres in Sacramento Co., 18 miles from Capital. This is level, deep, red, with some high well drained adobe. No shallow bedrock soil. Has been used for grain and general farming by present owner for 40 years. Will grow any kind of fruit, nuts or grapes and the best of alfalfa with little leveling. Water 16 ft. from surface. This land will stand the acid test. Finely located for subdivision. Price $100 per acre. Eben B. Owen, Elk Grove, Sacramento Co., Cal

FOR SALE—46 A. alfalfa ranch, good as any in State. Part cash, balance 5 years. Ranch will pay out in five years as dairy. Will sell 60 to 75 tons alfalfa hay with ranch. You must see this place to appreciate it. Full set buildings on ranch. If interested, call or write John Salaberry, Chowchilla, Cal.

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FOR RENT — 5000 acre, good stock range in Monterey county. Well fenced. Plenty water. Good buildings. References required. 2429 Martinez Ave., Berkeley, Cal.

17 ACRES full bearing fruit for rent. Loomis, Cal. Address Box 465, Reno, Nev.

MISCELLANEOUS.

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REMANUFACTURED PIPE
All sizes standard pipe and wrought iron screw casing. All kinds of fittings. Guaranteed good as new. Write for prices. **Weissbaum Pipe Works**, 160 Eleventh street, San Francisco.

FOR SALE—Two Monitor Bean Separators, size 5-E; condition as good as new. Call or write, Califonria Almond Growers' Exchange, 18th C Street, Sacramento, Calif.

ALL SIZES OF PIPE and screw casing, both new and second-hand, dipped and undipped. Guaranteed. Prices right. Shecter Pipe Works, 304 Howard St., San Francisco.

FOR SALE—Will sell following implements at bargain prices to make way for fall production. They are late models, clean and bright.
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3 S-R Tractor disc plows.
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1 Cunningham Pulverizer, 6 ft. 24 in. diam.
2 Deep tilling machines (16 to 18 in. deep).
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1 Set Stump-jump Harrows.
6 Ridging and Furrowing Plows.
10 Four-foot Disc Harrows.
6 Sets Steel Drag Harrows for Fordsons.
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1 Disc Cultivator and Weeder, Fordson size. (For killing Morning Glory, etc.)
Eveners — Doubletrees—Neck Yokes—⅝ in. Cables for attaching implements to tractors.
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CALIFORNIA PLOW COMPANY
Formerly Spalding-Robbins Plow Co.
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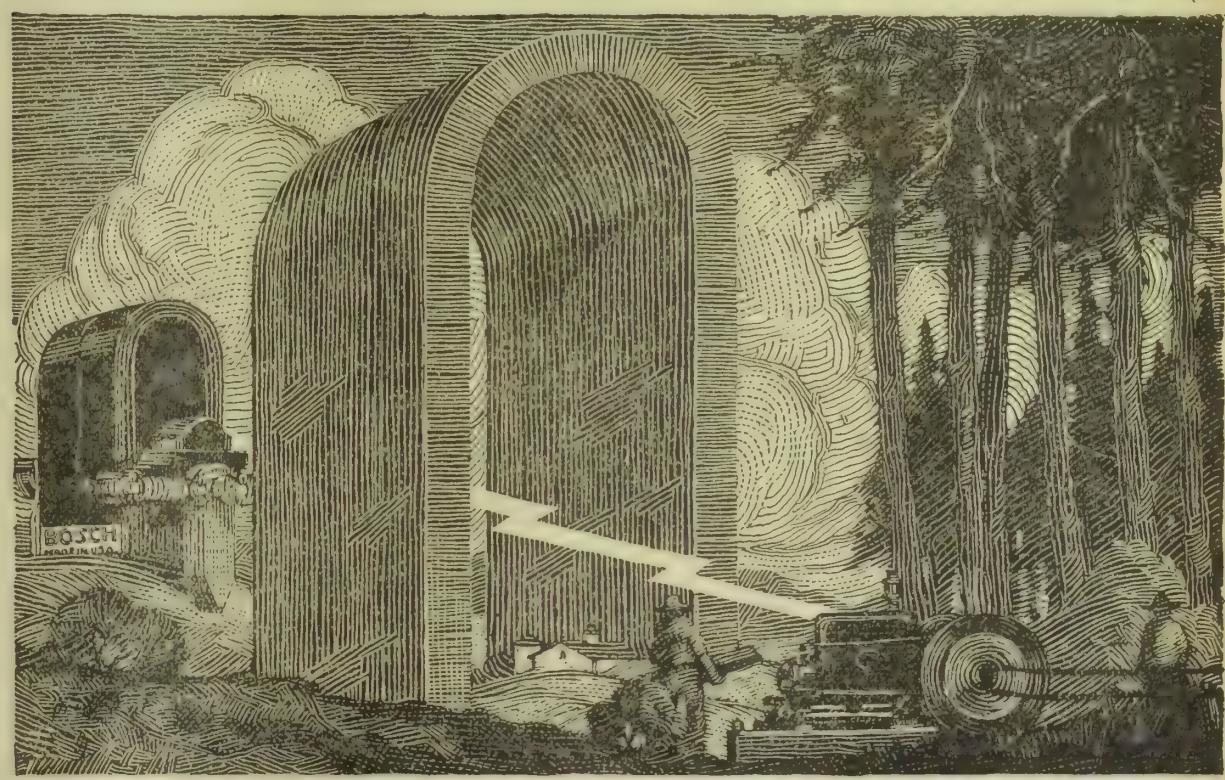

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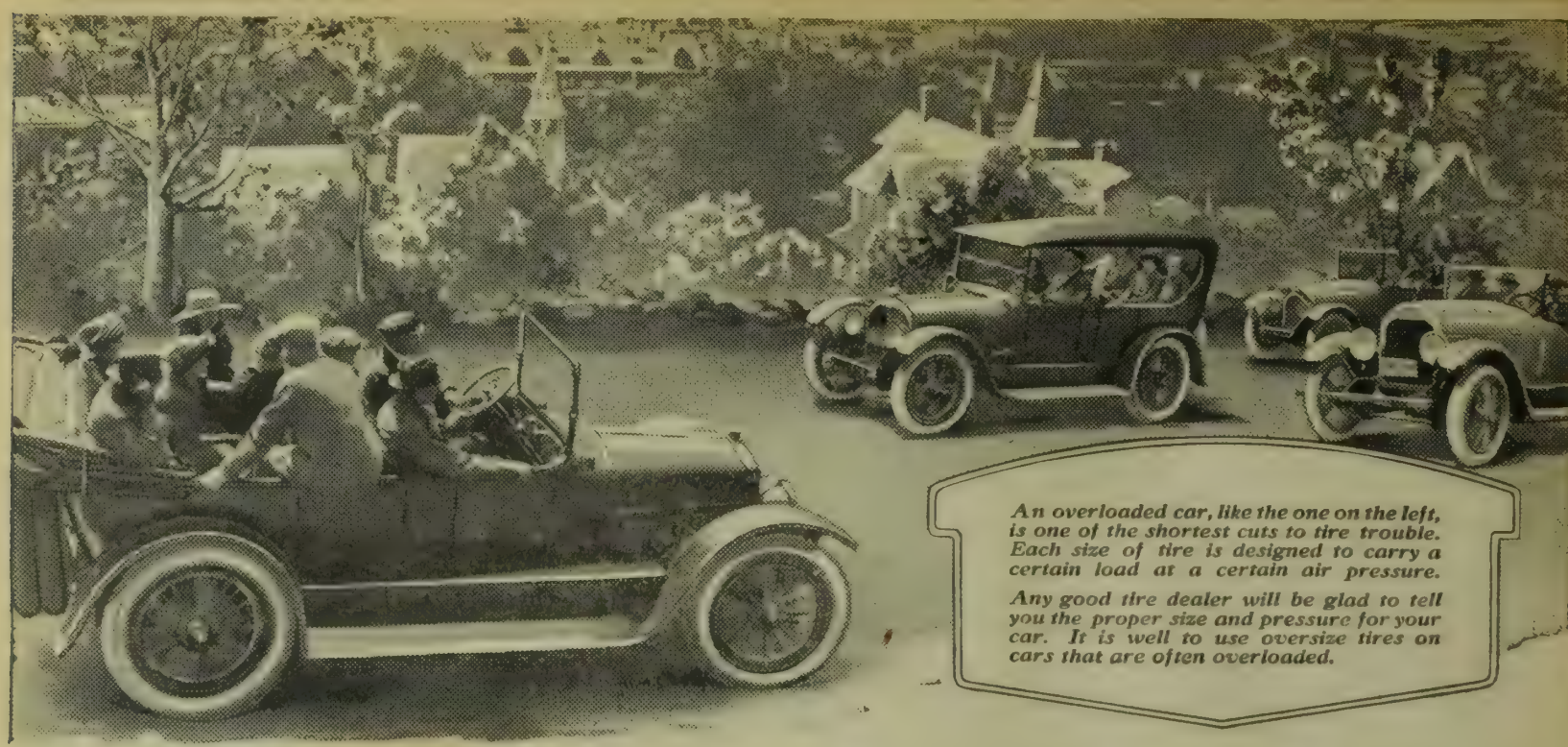

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NOTHING is surer than this—that the man who bets against the informed opinion of the tire users of this country is going to *lose*.

The average American motorist is essentially practical. He may get off the track now and then.

But always you will find him going right in the end.

* * *

The trouble with the irresponsible type of tire dealer is that he allows his ideas of his customers to be bred in an atmosphere of distrust and fostered by a small coterie, not at all representative of the motoring public.

Not every motorist of whom he takes advantage always finds it out immediately.

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The United States Rubber Company has always stood for a *wider spread of tire knowledge* among motorists.

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Two hundred and thirty-five Branches

VOL. C—No. 14 Fiftieth Year

THE PACIFIC RURAL PRESS

SAN FRANCISCO OCTOBER 2, 1920 LOS ANGELES

California State Lib 7-1-2

THE illustration is an exhibit of California's progress in the cereal industry and a concrete exponent of the principles and practices outlined by Professor W. W. Mackie on page 438.

In summing up the possible benefits of bulk handling of rough rice in California, which is estimated for 1920 by the U. S. Department of Agriculture to cover 160,000 acres and yield 9,500,000 bushels, these items stand out:

1—Saving of losses from spillage, leakage and wastage due to the sack system estimated at 3 per cent, or 12,500,000 pounds at 5c per pound, amounting to $627,000.

2—Saving of losses from heating or stackburn, estimated at 3 per cent in normal years, amounting also to $627,000.

3—Saving in labor, sacks, etc., calculated at $20 to $30 per acre for 160,000 acres, or from $3,200,000 to $4,800,000, or an estimated possible total saving by bulk handling over sack handling of rough rice from $4,454,000 to $6,054,000.

These are the points which Professor Mackie intends to enforce by the facts and deductions which he presents on another page of this issue. He has studied California rice growing broadly and is deeply interested in methods and policies which will insure its permanence and profitability.

A TRACTOR FOR THE ORCHARD, VINEYARD AND FARM

An Effectual "30" 4 Plow Tractor Built to Meet the Owner's Expectations—Developed to Get Maximum Traction Under All Conditions

After two years of development by an experienced tractor organization headed by one of the foremost tractor men of the United States, the WIZARD TRACTOR goes into production and will be on the market next spring.

The WIZARD is of rigid unit construction, embodying the only principle that will successfully handle a rigid constructed four wheel drive tractor. The WIZARD is a strictly *Kroyer Product* throughout.

KROYER MOTORS COMPANY

STOCKTON, CALIFORNIA

General Agricultural and Horticultural Review

AGRICULTURAL NOTES.

Modesto growers of blackeye beans e offered 4½c per pound for October livery.

We are told that new farms are be- g occupied by settlers at the rate eight a day in Kern county.

Three cotton gins are now being ected in Kern county and will be ady to handle this season's crop out December 1st.

The Farm Bureau at Roseville, acer county, are agitating a project r an irrigation district of 10,000 res. The project would cost ap- oximately $300,000.

About 25 per cent of the Livermore lley hay crop has been sold at prices nging from $20 to $30 per ton. The sold portion of the crop is still in e hands of the farmers and is stored local warehouses.

The Alfalfa Growers of California, corporated, have sold ten times as uch hay through their Fresno office is year as last. S. S. Crutcher, over rty years a Fresno countyite, is ndling the business.

Around Tracy, where water is still vailable, a number of ranchers are oding their fields preparatory to wing grain. This method, used last ar, brought returns which, the far- ers say, warrants its repetition.

The Farm Advisor's office at Ma- era is showing a stalk of short va- ety of cotton that contains 182 bolls. his was grown on the farm of E. I. are near Madera, who has a large eld growing as an experiment.

W. L. Williams, who has 10,000 cres of cotton in Imperial Valley, is aking a tour of northern California ith a view of obtaining first-hand onditions as they here exist with the lea of extending his cotton growing perations to this section.

The hay producers of Livermore alley say that there is no demand r their hay and the price is not ad- ancing. It is the general belief of onsumers that prices cannot go igher, and they are buying only as hey need for immediate use.

The upper counties of the San Joa- in valley are all exercised over the rospective cotton crop. The one hing that may interfere with big ields is frost, but growers do not ex- ect to be troubled. About 200 cot- on pickers will be needed in Kern ounty soon to harvest the crop.

At a meeting held September 24, the Stanislaus County Fair Commission ompleted its organization. The date or the next fair was fixed for the veek following the Stockton fair in he hope that counties south would ollow them so that stock men start- ng at the State Fair could have a ontinuous line going south.

It is imperative that strenuous ef- orts be used in keeping out Colorado potato beetle, which has, as yet, not nvaded the potato districts of Califor- ia. The Department of Agriculture eports that the potato growers of the United States are paying $15,000,000 a year for Paris green and other ar- senicals to protect their potatoes from the pest. This does not include the labor involved in the application or the immense loss in yield caused by this beetle.

Large acreages of land in Madera and Merced counties are being levelled for irrigation to be planted to alfalfa.

Figures on the hay crop of Livermore Valley for the 1920 season are now available. Local hay men report that the total yield was about 7,500 tons against a normal crop of 18,000 tons. About the same acreage was planted.

Between 500 and 600 inquiries have come to the State Land Settlement Board from all over the United States regarding the eighty farms of the second unit at Delhi, which is to be alloted October 15th. Auto loads of people are daily inspecting the project, preparatory to filing applications.

From reports alfalfa seed will be plentiful in California this season. Very little has so far been purchased by dealers, owing to difference of opinion. Growers generally are holding for 30 cents, while dealers believe 18 cents to be about right for the common varieties.

During the months of July and August the United States imported 127,-400 pounds of alfalfa seed. Same time in 1919, 1,266,300 pounds. Of three varieties of cover—Alsiki, Crimson and Red—there was imported during July and August, 1920, 1,281,800 pounds. Same time in 1919, 3,074,900 pounds.

While at Chico recently W. L. Williams of Calipatria, Imperial Valley, stated that "Northern California will never grow a profitable cotton crop as long as the present labor conditions exist. If a mechanical cotton picker should prove successful, Butte county could grow cotton profitably, but the harvesting cost at present rates of labor would be prohibitive.

The State of Arizona was invited to join California in the establishment of a more drastic quarantine against the pink boll worm and the cotton boll weevil at a hearing conducted at Los Angeles by G. H. Hecke, Director of the Department of Agriculture. A committee was appointed representing both States to confer upon the proposed regulations.

P. W. Riley, the "gopher man" at Tulare, tells us that during the past season over 80,000 pounds of poisoned barley has been fed to the squirrels of Tulare county, spread out over more than 200,000 acres. The winter campaign will start as soon as it rains, and it is expected that all the territory from the mountains to the west line will be practically cleared of rodents by next May.

The dominant factor in the peanut industry since the first of the year has been the unprecedentedly heavy Oriental imports of both peanuts and peanut oil. During April alone 2,794,-879 pounds of unshelled and 29,042,490 pounds of shelled peanuts were imported into the country from China and Japan. This monthly figure is more than 12,000,000 pounds greater than the total imports during the fiscal year ending June ,1919. During the fiscal year of 1920 132,414,423 pounds have been imported.

HORTICULTURAL JOTTINGS.

Atwater has shipped 534 carloads of agricultural and horticultural products this season.

Owing to shortage of cars in the Livingston district quantities of table grapes have been dried for raisins.

Reports from the prune and grape districts are that there was no damage done by the rain of last week.

Clyde Abbott, an Atwater orchardist, sold from one and one-half acres of Levi cling peaches—$1800 worth of fruit.

The Atwater Fruit Exchange shipped 86 carloads of fresh peaches this season and up to date 40 carloads of grapes.

In Stanislaus and Merced counties Persian and Honey Dew melons are going out in huge quantities. Prices are good.

Wherever it is possible the railroads are giving perishable fruits the preference over "dead" freight during the present car shortage.

A tract of one thousand acres is to be set out to Thompson seedless grapes in the "Weed Patch" in Kern county this coming season.

The California Peach Growers have finished with peaches at Sanger, having handled 750 tons of dried up to date. There is still a sufficient tonnage yet to come in to bring the total up to 1100 to 1200 tons.

The warehouse of the California Packing Corporation, located on the river bank at Sacramento, suffered damage by fire to the extent of $1,-500,000. The company had in storage about 200,000 cases of canned goods.

W. T. Webber, secretary of the California Walnut Grower's Association, states that the walnut crop for 1920 will amount to approximaetly 46,000,-000 pounds, valued at $10,000,000 to $13,000,000 and that the shelled walnuts and by-products of walnut shells would bring the growers from $1,000,000 to $2,000,0000 more.

E. E. Kaufman, of the Department of Agriculture, says that very few apples are being dried this season. Many growers are boxing and selling their apples green, as better prices may be obtained. The dried apple pie may be a scarce article this winter.

Deputy Horticultural Commissioner Macdonald of Alameda county continues to make it disagreeable as well as unprofitable to those who will persist in violating the fruit and vegetable standardization law. Last week he threw the hooks into 15 Japanese tomato growers of Santa Clara county for shipping wormy and false packed tomatoes to Oakland.

The California Prune and Apricot Growers, Inc., was recently declared a monopoly in restraint of trade by Attorney R. H. Cross of San Francisco, following the dismissal by the association of its suit against J. J. Smith, a grower at San Leandro. "Methods of coercion were used," said Cross, "in obtaining written agreements from ranchers throughout the State."

The California Packing Corporation are handling 45 tons of raisins a day at their plant at Sanger.

The Rialto citrus growers received in return for this season's citrus crop, a total of $2,000,000.

Sunsweet plant No. 8 of the California Prune and Apricot Growers, Inc., at Mountain View, is now working to capacity.

Fred A. White, president of the Chino Apple Growers' Association, reports the cider sales for the month of August at $300.

At Pleasanton and Livermore, from $100.00 to $130.00 per ton has been paid for wine grapes and a few sales have been made at $150 a ton.

Santa Clara county orchards are still in demand. The latest transaction was the sale of a prune orchard near Coyote by Tony Broecker to R. Bohnett, the consideration being $90,000.

The Associated Raisin Company are handling 75 tons of raisins daily at their Sanger plant. They are also shipping out approximately 50 tons of Thompson, Malaga, Muscats and Sultanas.

Roddan Bros. of Wheatland, Yuba county, harvested 350 tons of peaches from twenty-four acres. The peaches sold at $100 a ton and up, making the year's receipts from the orchard total $35,000.

Oakdale, Stanislaus county, is fast coming to the front as a fruit producer and shipping point. Several cars of both fresh and dried fruits being shipped weekly. Several cars of wine grapes are added to the weekly shipments.

The Sanger fruit packing concerns have been seriously interrupted recently by the shortage of refrigerator cars. The Setchel Fruit company were forced to ship six carloads of grapes in lug boxes intended for shipment in crates.

George Bisbee, president of the Pioneer Fruit Company, is elated over a Placer county sale of Phillips cling peaches, shipped by his company and sold in New York at prices ranging from $3.37½ to $4 per box. This is the top price for many years.

W. D. Butler, horticultural commissioner of Napa county, has returned from an extensive trip through the Orient. Mr. Butler spent two and a half months in agricultural and horticultural research work, gathering much data while in China and Japan. He reports his trip a great success from a scientific standpoint.

An invitation to hold the Fifty-third Convention of California Fruit Growers and Farmers at Fresno, November 9 to 11, inclusive, has been extended to the State Department of Agriculture by the directors of the Fresno Chamber of Commerce. These conventions, now held annually under the auspices of the State Department of Agriculture, are for the purpose of bringing the agricultural men of the State together to discuss problems of vital importance to them, and to enable them to take such direct action on questions relating to the industry as may prove necessary.

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EDITORIAL

THE INFLATION OF MR. FLANNAGAN.

To the Editor: I note what you say in your editorial of September 4 about the proposed movement of Mr. Flannagan for more land mortgage credit. Credit or gold used to purchase any permanent investment—lands, stocks or bonds—invariably leads to inflation. That is, it increases the price without increasing the productivity, and that is an unearned increment the public must pay for without any benefits received. The 1910 census reports show that the lands of Iowa were a 20-year purchase, those of Pennsylvania an 8-year purchase, while those of some of the Southern States were less than a 5-year purchase. The poor man cannot afford to buy land which requires 20 years of toil to pay for, and in consequence the most energetic among our tenant farmers leaves the farms for industrial pursuits, thus leaving the most shiftless on the farms to breed discontent. Credit used for production has the opposite effect. Furthermore, it is necessary to capitalize the honesty of our poor men, if we hope to dignify agriculture and keep our best young men on the farms. We must open the door of opportunity to them. But we are not going to do it by inflating land values. On the contrary, that will have the opposite result, it will drive our best men from the farms.—R. C. Milliken, Monetary Statist, Washington, D. C.

When it comes to money for farming we are probably rather more of a dynamist than a statist; that is, we are more interested in what ought to be in financing farming than in what has been—though we do not discount the service of the statist in checking wild dreams by the teachings of experience. So far as inflation enters into Mr. Flannagan's present proposition we understand it to be the plan of getting the borrowers (who constitute the Farm Loan Associations) together so that they can educate and protect themselves, and we thoroughly believe in it. So far as inflation is threatened in the sense of Mr. Millikin, we are not scared of it. The farmers need to inflate themselves in the public eye as producers who need money, on terms which befit their business, just as much as any other class of producers and traders, and they have not had it in the past. Traders in money like to say "money is scarce and you have to pay more for it"—just as traders in pitchforks or overalls do. In most cases farmers have to pay too much for money, not because there is any lack of it in the reservoir, but because there are too many turns and couplings in the supply pipes, all of which create friction and reduce the outflow at the farmers' end. Inflation has not been a matter of too much wind blowing over the reservoir, but of too much air in the pipes—which also dams up outflow. The Farm Loan Act was passed to straighten and clean out the pipes and to give the farmers direct connection with the sources of available capital, the actual buyers of farm bonds. It is maintenance of this new line of connection which the joint-action of farm borrowers, who constitute the membership of the Farm Loan Associations, is designed to accomplish.

We presume Mr. Milliken is right in his highbrow conception that long-term land-mortgage loans tend to increase capitalization of farming industry, while short term personal credit loans (which we are glad to see him promoting) would not increase capitalization but would immediately produce more spuds for the dear public, but his contention does not commend itself to us as one fit to be made. From the agricultural point of view, there is no enmity between long-term mortgage and short-term personal credit loans—both are inseparably connected in the promotion of the farmers' success; one is supplementary to the other and both have long, gray whiskers on them in agricultural history and economics. It is no more important to have money to put in and carry a crop than it is to have land on terms which will not take all the profit out of the crop. If the latter is "inflation," we would like to have a little more of it!

ARE FARM LOAN BANKS IN THE BREAKERS?

To the Editor: I get papers from North Dakota making the claim that the Farmers' Land Banks are in league with the capitalists to cheat the farmers and prevent the government loans from helping them. You undoubtedly have the means to discover the truth and the Pacific Rural Press seems of a diametrically opposite opinion. Whatever the truth, it is of vital importance that it should be known, and I hope that you will let your readers know it. Please give us enlightenment.—M. S. D., Atascadero.

We are not usually deeply stricken with the theories of economics which emanate from the North Dakota district. They seem to be indigenous to the latitude of Moscow, and are in conflict with American history and experience. There is, however, enough in the attitude toward the government Farm Loan business to warrant the attention you are giving it. All readers who notice our discussions of the matter know that we have not been satisfied with the development of this business, although we have never had reason to doubt the sincerity of those who have administered the "farm loan act" of Congress, nor have we such reason now—except the alleged attitude of such administration to joint action by the Farm Loan Associations, which was discussed in our issue of last week. If that attitude is correctly set forth, we can see neither sense nor reason in it, as we then intimated. As to the alleged effort on the part of such administration to take up the natural fight of private loan-makers, and join with such parties to undo the work which the country is paying them to do, it strikes us as unreasonable and incredible, and so far as we can now understand it, it appeals to us as the wild-cat propaganda of a presidential election year. And yet, if another allegement, made some time ago, is true, viz., that the United States Supreme Court was about to make much trouble for the "farm loan act," but "would not reveal its decision until after election"—then it might be held that the North Dakotans were not the only people who are actuated by political considerations. We shall probably not know all that we ought to know about these things until the skies clear after the general election. It is an unfortunate fact that the original organization of the Central Farm Loan Board and of the District Land Banks did not contain adequate representation of real farmers and was almost lacking in the farming point of view, which the organic act of congress designed to embody in the management. This being the case it would be natural if the organizations were too much dominated by old-fashioned ideas in lending money to farmers which the farm loan act intended to supplant for training in these old-fashioned ideas was about all the incumbents of the new positions in land-banking had ever had. But we have never seen anything to indicate that they were trying to break up their new business to serve their old business—unless they are really trying to prevent borrowers from coming together as the latter are now trying to do—for that would be a very old-fashioned capitalistic idea surely.

LESS LAND THROUGH MORE LAW.

To the Editor: At our recent fair, our superior judge, Ernest Weyand, made an address in which he advocated a special tax on excessive holdings of land and a tax on leaseholds to reduce tenant farming. He declared that "something must be done, and it is better to do it now with fair-minded people still in the majority than to have some impractical scheme thrust upon us by militant revolutionists." He expressed opposition to any proposal by which land would be taken from those to whom it properly belongs unless they be fully paid therefor. He also opposed "nationalization" of the land, or collective ownership. "A system must be contrived," he said, "that operates slowly, but positively, and with no question, and with justice to the end that all large tracts of land be divided into small separate ownership, none to be larger than one good, active and capable man can personally manage and direct." He proposed that some large limit be placed on land ownership, "say 1000 acres of farming land and 2000 acres of grazing land. Such a limit would free the law from needless quibbles, and would tend to associate man with the very land, its acres, rather than any valuation or any commercialized idea thereof." He proposed a special tax on leased lands, in order to abolish tenant farming so far as practicable. The amount of land that could be leased also would be limited. He also proposed a graded excess land tax for a person now owning more than the limit of land. He would prohibit the organization of farm and grazing land-owning corporations. What do you think of those propositions?—R. L. D., Arbuckle.

We see no objection to discussing such questions in Judge Weyand's way: that is, with proper safeguards against riotous lawlessness and repudiation of property rights lawfully acquired. It is the American way to discuss all such questions and ultimately to vote upon them as they arise in concrete form for voting. The people of the United States have been discussing public policy and personal rights for a hundred and forty years and only once have failed to settle them by voting. California has been discussing land monopoly for seventy years and has been gradually curing it—sometimes by the pressure of public opinion, sometimes by the help of economic forces, compelling or inducing disintegration, and once it has tried to settle it by voting—that is, by the adoption of the new constitution of 1879. That settlement was that all property should be taxed at a fair valuation and to apply that principle to land it was declared that all adjacent land of equal potentiality of production should be equally taxed. The outcome of which should be that, to pay taxes on potentiality, land would have to be used to earn its taxes—for if the owner could not make the land feed itself the land would eat him up. We have always believed that the application of that perfectly fair and uniform principle would settle land monopoly in this State just as the man who drafted the constitution of 1879 believed that it would. If we need more laws to make that principle work, why not have them? We dislike the proposition of special taxes and limitations because of the danger of injustice and inequality in dstribution of burdens and their transgression of the American doctrine of equal opportunity to all Americans. For instance, if you start along Judge Weyand's trail and begin to penalize land by unequal taxation with other property, of which a man can have all that he can stretch himself around, the next turn in the road will bring you to placing all the taxes on land or the single tax, which the California people have four times repudiated and will do it again in November. But of course Judge Weyand is not a single-taxer, for he is opposed to "nationalization" of land, which is the single-taxer's heaven.

BACK FROM THE LAND!

To the Editor: The editorial in your issue of September 11 has some good advice under the heading, "Driving People into Farming." I am a woman that has tried "back to the land" and will say that it has not proved a success. There are too many obstacles to overcome. Raising fruit in California is a good deal more complicated than raising grain in the Middle West. So the would-be farmer had better be satisfied with back-yard gardening in the city—it's less expensive, for one thing.—M. C. H., Sonoma.

We have no slam for women in farming. The paragraph to which you refer and kindly approve, may have seemed to have that turn because the question was asked by a woman and in the interest of women. A woman has, of course, a physical handicap in less strength and endurance for the hard work of farming, and although we have seen a woman doing a man's jobs as well as a man could do them, it made us feel bad under our upper, left-hand vest pocket. Still we confess some women had better be doing that than some other things which are recognized as women's work and the re-

sults of which have hit us rather more centrally under the waist-coat and made us feel worse! But our reflection on the insanity of the back to land outcry was not intended to have any sex-bearing at all; it was for all mankind. As for the head-work on the farm, we know no superiority in the man. In fact, we sometimes act to the contrary. There have been cases in which we have been honored with consultation about going into farming in which we have given commendation because the man brought his wife along and we have discerned that she had the better head, the more concrete interest, the more definite understanding and the more conscientious regard for doing the details aright. We can bluff a man by saying, "Of course, you know how that ought to be done." We only tried that once on a woman, and she said:" No; tell me all about it"—and we had to lie that we had forgotten it! Since then, we have always proceded on the conviction that all women are from Missouri, and that is what counts in doing farming aright. We now see that even that conviction may not be right for your letter indicates that it has cost you some time and money to learn that commercial farming is complicated and has obstacles to be surmounted and that it is not merely a stroll down Easy street—financially and otherwise. Of course, "fruit growing in California is more complicated than grain farming in the Middle West," or anywhere else, for that matter, but it is no more complicated than the highest and best work with animals or the other higher agricultural arts which are making California famous and for which the State has exceptional adaptations. But a share in the rewards which California farming affords are reserved for those who know how and do how. They earn their rewards by their knowing and doing, and—"there is something doing every minute." That is the reason why we are apt to get cross when people ask us about "spheres" in farming, as though

"A fiery charriot, borne on bouyant pinions
Sweeps near me now! I soon shall ready be
To pierce the ether's high, unknown dominions
To reach new spheres of pure activity."

QUERIES AND REPLIES

By the Editor.

Inquirers Must Give Full Name and Address
Answered Questions also on other pages.

What the Prunes Needed.

To the Editor: I harvested a heavy crop but the prunes were smaller than usual. I do not irrigate and will have to buy commercial fertilizer. I hope to buy a few tons of poultry manure from a neighbor and thought nitrate of soda would be good also. How much to the acre and when to apply it for fruit as well as growth and leaves? The land is nearly all light loam, but two acres are adobe and I have bought three tons of gypsum. Can I use this three tons on two acres to mellow it and how much fertilizer will I use with horse manure or poultry manure? Up to July 1st the ground is in fine, mellow condition, except the adobe pieces. I understand nitrate is highly explosive so advise as to care and use of it and the amount to an acre. —J. W. M., Gilroy.

Probably the prunes were small rather from lack of moisture than from any other cause. Fertilization is a good thing, but it is not a substitute for water and a good well and pump should be your next investment. Spread all the poultry manure you can get up to two tons to the acre—spreading it all over the ground and not merely next to the trees. Make that application now to help the growth of green stuff with the first rains and then plow it all under after it gets a good lot of weeds, but do not wait too late in the spring. On the adobe piece apply 400 lbs. per acre of gypsum now. Gypsum will not hurt poultry manure, but do not use lime on it. Just after plowing under the green stuff early next spring give the adobe another dose of 400 lbs. of gypsum by surface spreading and apply 200 lbs. of nitrate of soda per acre to the whole orchard—adobe and all. Nitrate of soda can be made into gunpowder, but by itself it is no more explosive than Epsom salts.

Poisoning the Corn Ear Worm.

To the Editor: Several years ago extensive experiments were carried out in Kansas, which demonstrated that the amount of damage from the corn-ear worm could be greatly reduced, at a cost not prohibitive for corn growers for roasting ears, show purposes, or seed. Not only can the number of ears damaged be greatly reduced, but also, of the small number, which may be injured, the per cent of grain injury per ear is very much reduced. The method is to dust the silk lightly, but thoroughly, with a mixture of 1 part sulphur and 2 parts powdered arsenate of lead. Application should be made from 3 to 5 days after the first silk appears, and repeated once or twice a week as long as the silk is green. The dust can be applied with a thin cloth bag, or a mechanical duster. This method has been tested for the past three seasons in our garden. When care was taken to dust soon enough after the silk appeared, and the operation repeated several times, a very material reduction in a number of damaged ears, and per cent of grain injury, resulted. I have no hesitancy in recommending it to any of your readers.—Roy E. Campbell, Scientific Assistant U. S. Dept. Agr., Alhambra.

Thank you. The affirmation of the treatment after three years' use in a California garden should give our readers more confidence in it. The use of arsenate of lead dust was first commended to our readers on the authority of J. M. McColloch of Kansas Experiment Station, in the Pacific Rural Press of August 21, 1915. In the issue of September 4, 1915, we gave the experience of M. A. Germain of Los Angeles, whose results with lead arsenate dust in growing seed corn were surprisingly satisfactory. We have repeated the advice yearly since that time in answer to questions and have given other prescriptions by other readers. Mr. Campbell's testimony ought to settle the question so far as protection of garden or seed corn plots is concerned, but the number of readers who will forget all about it by the time corn silks out next spring will undoubtedly be surprising.

Cover Crops on Gold Ridge.

To the Editor: Is it desirable to plant a cover crop with the first autumn rains in a Gravenstein apple and blackberry orchard in the foothills of Sebastopol (Gold Ridge) district? If so, what crop would you advise and how and when should it be seeded? My soil is sandy loam of this district.—A. G. B., Sebastopol.

With your usually ample rainfall there can hardly be any doubt that it would be desirable to turn part of the fall and winter water, which will sink below or run away from the trees, in to cover crop. As you have rather a leachy soil and somewhat low winter temperature you need a legume which grows well and holds on well even if it should get pretty dry between rains. For such conditions we know nothing better than either bur clover and yellow sweet clover. The seed should be sown as soon as the soil is deeply wet so as to get as much growth as possible before the coldest weather comes on, for you must plow under early, that is, in mid-winter, and not in spring, as soon as you get a good cover of green stuff, because if you turn in a lot of coarse stuff too late it will dry out your light soil too much. As you probably have rather narrow strips between your trees and berries it would be well to chop up all the stuff with a disk and cover it in that way.

Cane Sugar Product.

To the Editor: In the Rural Press for September 18, page 371, it is stated that the cane sugar crop of Louisiana is or will be 358,000,000 tons, or nearly 7,000 lbs. for every man, woman and child in the United States. This must be a mistake of the typesetter.—S. H., San Jose.

Leave off the last three ciphers and you will have the right tonnage. The typesetter has, of course, to stand the blame of it. It is part of his heroic business to often gulp down his sobs and print what he knows to be lies. The probability is that the writer of the item was thinking of the amount of sugar he would buy when the price gets back to normal. The per capita consumption of sugar in this country during the last decade has ranged from 78 to 83 pounds.

What Becomes of the Grain?

To the Editor: What becomes of the enormous quantities of wheat, oats, barley, corn and other grains grown in the U. S.? The amount used for domestic purposes is comparatively small, and our exports are not very large.—S. H., San Jose.

We should hardly call the exports small. In 1918 they were as follows: Corn, 23,020,846 bushels; wheat, 287,438,087 bushels; oats, 109,004,734 bushels; barley 23,381,781 bushels; rye, 36,468,650 bushels. Of course, a lot more grain, especially of corn, goes out of the country in our export meat and dairy products and a lot more we ourselves consume, not only in the form of breads, but as meats, milk and foods made from milk. We used to drink a lot of it in the forms of whiskeys and beers, but that has gone by.

Grain in Alfalfa.

To the Editor: Is it advisable to plant grain in an alfalfa patch during the winter by disking the field? I have been advised to do this for winter pasturage. What would be the effect on next spring's and summer's alfalfa? It is just a three-acre patch. Have you ever heard of such a thing being done? —W. M. R., El Monte.

Yes; it is quite common to get more feed from a scant stand of alfalfa in that way and it probably hurts the alfalfa more than a winter growth of foxtail and weeds usually does—and that is what nature does in such a case. Use a light disk set as straight up as you can, after broadcasting about 50 lbs. per acre of barley or rye. Do this as soon as there is moisture enough to carry the grain and feed it off green. When the alfalfa starts give it a little chance to grow before pasturing, if you can.

Bugs on Late Beans.

To the Editor: I have some young beans that are commencing to bear, and the plants are covered with very small white insects that resemble lice, only that they fly. Kindly advise how I can eliminate this pest.—C. W., Geyserville.

Why did not you send a few with the leaves, showing their work, so that we could see exactly what you have. Your description does not exactly fit anything we know, but suggests several, and all of them can be reduced with properly made kerosene emulsion or soap and tobacco washes. However, if you have string beans, such sprays would probably render them inedible. Probably you can not do better than try to knock them off with a good force of fresh water from a rather coarse nozzle. It is so late in the season they may not bother you much longer.

Torches for Corn-Ear Worms.

To the Editor: I often see inquiries in your paper for a method of destroying corn-ear worms. In some parts of Washington they use two or three old-fashioned flambeau torches to the acre. Plant them on stakes long enough to stand above the corn, put in oil enough to keep a small flame going all night. Keep them going nights for about two weeks when the corn is silking. The moths are attracted to the blaze and lay no eggs.—L. C., Los Angeles.

The use of light-lures for the moth, which is parent of the ear-worm of corn and also of the boll-worm of cotton, were at one time quite largely used in the cotton states, but have been dropped in recent years for lack of efficiency in protection. The field is, however, open for farther trial by those who desire to use it in the way our correspondent describes.

To Kill Pear-Root Aphis.

To the Editor: Kindly tell me how to mix soap and oil emulsion to kill aphis on pear roots.—Subscriber, Martinez.

There are several formulas for kerosene emulsion. This is most widely used: Take distillate (27 degrees to 28 degrees Baume), 20 gallons; fish-oil soap, 30 pounds; water to make, 12 gallons. Dissolve the fish-oil soap in water, heating it to the boiling point, add the distillate and agitate thoroughly while the solution is hot, until you get a mixture from which the oil does not separate. Then, to each gallon of the mixture add 20 gallons of water, and the diluted form is fit to pour on the roots.

CALIFORNIA WEATHER RECORD

The following rainfall and temperature record is furnished the Pacific Rural Press by the United States Department of Agriculture Weather Bureau at San Francisco for the week ending September 27, 1920.

Station—	Rainfall Past Week	Rainfall Seasonal To Date	Rainfall Normal To Date	Temperature Highest	Temperature Lowest
Eureka	1.17	2.85	1.14	64	48
Red Bluff	.04	.35	.69	96	46
Sacramento	T	.01	.31	86	48
San Francisco	.13	.13	.24	81	53
San Jose	.02	.02	.32	86	42
Fresno	.00	.14	.19	90	50
San Luis Obispo	T	T	.41	94	48
Los Angeles	.04	.02	.03	84	56
San Diego	.02	.02	.03	74	54
Winnemucca	.39	.66	.62	74	34
Reno	.04	.48	.63	74	30
Tonopah	T	.95	1.11	74	30

Bulk Handling of Rice for California

(Written for Pacific Rural Press by W. W. Mackie, Asst. Prof. of Agronomy, Univ. of Calif.)

With the approaching rice harvest almost at hand, the problem of storing the estimated harvest of a 9,500,000 bushel crop, has become serious. On account of the slow movement of barley, wheat and other cereals we find almost at the beginning of the rice harvest that the grain warehouses are congested with grain. With the present downward trend of prices in all cereals and the apparent shortage of rolling stock on the railroads, there appears to be no immediate relief for the rice growers by movements of other cereals. The present high costs of materials and labor appear to discourage the construction of necessary additional warehouses for the rice crop.

It is apparent that the millers and purchasers of paddy rice could store quantities of rough rice if it could be purchased at once by them. It is not likely that arrangements can be made satisfactory to both grower and miller by which this can be done. All the rough rice is milled in the State, there being ample milling facilities. It remains, therefore, for the rice growers to plan for storage for the large portion of the rice crop in order that satisfactory prices may be secured by them. This situation brings up once more the question of bulk handling of paddy, or rough rice.

By the time the rice crop begins to move there will be available considerable unused space in large custom eleavtors for handling grain in bulk now nearing completion at Oakland on the tide water. In San Francisco are a number of rice mills. At Vallejo and Stockton are large grain elevators which have been used for cereals other than rice. At several points in the Sacramnto and San Joaquin Valley adjacent to rice areas, grain elevators are already in operation. None of these grain eleavtors have handled paddy rice in bulk. A number of reasons may be given why bulk storage of paddy rice has not been attempted in California, the foremost being the following: (a) danger of heating or stackburn; (b) lack of equipment for handling paddy rice with facility; (c) prejudice of farmers, warehouse men and millers against untried methods; (d) the difficulties arising from differenciating the rough or paddy rice into grades satisfactory alike to the grower, the miller and purchaser of rough rice. On the other hand the following points favor the practice of bulk handling of rice: (a) the use of elevator storage otherwise not aavilable for sacked paddy; (b) the decided saving in cost of bulk handling over sack handling; and (c) lastly but not least, the possibilities of improving the quality of the milled product by the better clearing and grading and by the prevention of heating and discoloration of rough rice.

Heating or Stackburn in Paddy Rice.

Cereals, including wheat, barley, oats, corn and rice, when stored too damp are liable to become heated from fermentation. The amount of moisture which cereals may contain and be stored safely is approximately 15 per cent. For rice, which is clean of moisture-holding trash and dirt, 12 to 14 per cent of moisture is considered safe. With crops like milo, corn and rice, which are harvested in the fall and subject to wetting from early rains, the conditions are quite reversed. It becomes necessary, therefore, to provide means for reducing the moisture content of these cereals at the time they are stored. So clearly is this recognized that the corn of the delta region in the vicinity of Stockton is purchased by the Sperry Flour Co. on a basis of 15 per cent. moisture with deductions or premiums considered in fixing the purchase price. Apparatus for rapidly drying the corn containing too much moisture is available. The moisture content is determined in a few minutes by a simple tester known as the Brown-Duval Moisture Tester. In addition to this apparatus used before the grain is placed in the elevators, there has been perfected a comparatively cheap automatic alarm thermometer which sounds a continuous alarm when the temperature has reached the fermentation point. These automatic alarm thermometers may be so placed throughout the grain in the elevator that no pocket of damp grain can become dangerously heated without giving the alarm. Grain elevators are so equipped that even an elevator of 5,000 to 10,000 bushels capacity may be entirely emptied and the grain carried into another elevator or bin within 5 or 6 hours. Grain does not become damaged within 8 to 12 hours after heating or fermentation has begun, thus permitting the removal and drying of the damp and heating grain before any damage may result.

The process of transferring the grain from one elevator to another gives two beneficial results — the breaking of capillary contact between fermenting and damp kernels and the reduction of moisture due to friction engendered by the movement of the rice. Fermentation and resulting heating start in pockets and spread rapidly by capillary contact. Molds also spread, following the established capillary connection.

The United States Department of Agriculture recently demonstrated that 2 per cent of excess moisture is removed in the process of the mere mechanical movement of grain from one elevator to the other. This is sufficient in nearly all cases to reduce the moisture content below the danger of heating. In case this process is not sufficient to reduce the moisture content below the danger point, an air blast rapidly reduces the excess moisture. In case the moisture content is still too high, the process of transferring the grain from bin to bin may be immediately repeated. This failing, the air in the blast may be heated and dried before it strikes the conveyed grain. No paddy rice is likely to be received which will not yield to these processes. The repiling of heating sacked rice is usually sufficient to prevent heating. All the larger elevators are regularly equipped with all the appurtenances described for moving, cleaning and drying grain.

Cleaning Paddy Rice Prevents Heating.

The most prevalent sources of heating in rice arise from harvesting immature rice and from trash or dirt from improper cleaning of paddy rice by the thresher. Rice, unlike wheat, oats, and barley, does not mature in the sheaf and shock but ceases all processes of metabolism immediately on being cut by the binder. In the processes of storing protein, starch and oil in the rice kernel, the production and storage of fat is not completed until after starch storage has been completed. Not only is the flavor and other desirable qualities closely connected with the fat content but the presence of this oil in the bran and in the layers lying immediately beneath serve not only to prevent the entrance of moisture but at the same time produce conditions unfavorable for molds and fermentation. The harvesting of immature rice, therefore, directly adds to prevalence of heating, or stackburn. All straw, chaff, dust, dirt, weed seed and other foreign matter serve to absorb and retain moisture when rice is harvested or handled under wet weather conditions. If rice were stored in bulk all foreign matter would be removed at the eleavtor before the grain was elevated into the bins. Bulk storage of rough rice has been practiced with success in Arkansas for many years. According to the opinions of all millers and other handlers of paddy rice, the processes herein described will entirely prevent heating, or stackburn, in rough rice handled in bulk.

Equipment.

The changing over from sack handling to bulk handling in California has been hindered or prevented by the lack of local or terminal facilities for properly handling grain in bulk. The successful beginnings of bulk handling have already been made in many grain areas of the State. The Moorening Brothers on the Natomas have successfully and cheaply handled wheat in bulk from field to mill at Stockton. Mr. A. Kaiser of Glenn county has been equally successful with barley. At Vallejo, the Sperry Flour Company is equipped to handle annually 6 million bushels of wheat in bulk. There is now being completed on the Oakland estuary by the Western Milling Company an immense equipment for custom handling of cereals in bulk for storage or for shipment. Special provision is being made for handling barley, milo, corn and rice. Until trucks and wagons are equipped with beds paddy rice must be hauled to the railway in sacks. At this point the rice may either be shipped in bulk or in sack to the elevator or mills equipped to handle bulk rice. The railroads are prepared to handle grain in bulk and will provide the proper grain door or to pay for these supplied by the shipper.

Prejudice against Change to Bulk Handling.

The present local warehouses are not suitable for bulk handling. The practice of handling sacks entails little machinery but a great deal of expensive labor. Metal warehouses for use in promptly housing the rice as rapidly as threshed, should become part of the equipment in all large ranches. The present handling of the rice acreage by tenants will still further serve to delay the placement of proper bulk handling equipment. (Eighty per cent of the rice acreage is farmed by renters, sixty per cent. of whom are Orientals). The very evident saving in expense of bulk handling over sack handling should go far, however, to remove objections to bulk handling.

Grading Rice in Bulk.

The principal objection offered by growers, millers and warehousemen to bulk handling lies in the lack of well-established grades for paddy rice. If the rice could be graded on its milling value, the standards established by the U. S. Department of Agriculture would satisfy all possible conditions as they are based entirely on mechanical separation except for color, chalkiness and hardness. The rough rice is separated into nine grades by the Pacific Rice Growers' Association, which handles the greater portion of the California rice crop. These grades include Fancy No. 1, Choice No. 1, Ordinary No. 1, No. 2, No. 3, No. 4; to which may be added "damaged," "badly damaged" and "rotten." Differences of opinion may arise between the Dealers' Association and the Growers' Association over the actual placing of the grades. Many bins of various sizes are available at the large elevators for handling separately any odd lots varying from the established standards. If this practice is made possible and all paddy rice sold only on a recleaned basis, many of the difficulties now causing dissatisfaction would tend to disappear. The satisfactory handling of wheat under the Federal standards, which requires 6 grades for 14 established varieties or 84 distinct grades would indicate that the grading of rice should not be seriously difficult. As nearly all (over 96%) of all California grown rice is included in the Japan class, the grading of rice should eventually yield to some satisfactory system.

Advantages of Bulk Handling.

The immediate advantage of bulk handling lies in the use of elevator storage not otherwise available. If any considerable storage can thus become available, serious difficulties and losses may be avoided and expensive warehouse building costs averted.

The saving from bulk handling over sack handling is apparent at all stages of rice handling. At the thresher, the bulk handling would do away with the sack filler, sack sewer and sack piler. In loading in wagons, cars or elevators, more labor would be saved. Spillage and wastage would be reduced at all stages. This may amount to 3 per cent. of crop. The high cost of sacks, which increased 300 per cent over pre-war prices, constitutes a heavy but avoidable expense. It is true that 7 or 8 cents are allowed when purchasing rice in sacks, but there still remains a loss of about 12 cents on sacks amounting to $3 or $4 or more per acre for ordinary crops. It has been calculated after careful conservative computations that bulk handling would save over sack handling for ordinary rice crops, all cost and losses considered, from $20 to $30 per acre.

The rice farmer faces a falling market, and deterioration of his rice lands through fouling with water grass and continued cropping. Expensive irrigation systems must be paid for and maintained. This condition calls for less tenant farming and more attention to improving the rice crop and maintaining the fertility of the soil. No one event will be likely to prove as beneficial to the rice crop as bulk handling because of its direct effect on improving the quality of the rice produced. This improvement will assist through bulkhandling in two ways—first, by the recleaning the seed and thereby removing the trash and dirt, which are the main causes of heating or stackburn in stored rice, and second, by a more careful grading of rice on its merits, according to the milled product.

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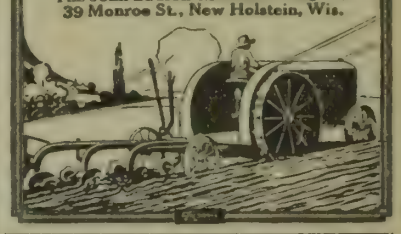

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Agricultural Graduates Great Asset to State

(By Dr. Thomas Forsyth Hunt, Dean of the College of Agriculture, Univ. of California.)

I have a list of one hundred and six graduates who have taken higher degrees from the College of Agriculture of the University of California—12 doctors and ninety-four master's degrees. I have another list of about six hundred and fifty persons who have taken bachelor's degrees. And still another of about two hundred and fifty persons who have received diplomas from the University Farm School.

An Important Factor.

Then there is that larger but unknown number who did not graduate, but have been benefited by one or more years of study.

Of the one hundred and six who have taken advanced degrees, thirty-eight are instructors, of which nineteen are connected with the University of California, eleven are with other institutions, while eight are high school teachers. There are twenty research workers and chemists, including workers in the United States Department of Agriculture. Eleven are operating ranches.

Of those whose occupations are known, all but five are employed in work for which their training fitted them. Among the men who have taken bachelor's degrees, two hundred and three are ranchers, one hundred and twelve are teachers of agriculture or otherwise employed in educational institutions, one hundred and five are engaged along other agricultural lines, such as horticultural commissioners, agricultural chemists, irrigation engineers, managers or employees of fruit packing plants and farmers' co-operative associations, while sixty-six are known to be in other lines than agriculture, including salesmen and real estate agents.

These men and women are gradually becoming an important factor in the agriculture of the State. There is scarcely an organization or activity of the farmers of California that does not employ one or more agricultural graduates. Not all are graduates of the College of Agriculture of the University of California, but no matter what college of agriculture they are from they are doing their part to strengthen the rural life of California.

A Strong Testimonial.

Listen to this letter from the California Packing Corporation, the greatest institution of its kind anywhere, written under date of April 5, 1920:

"We have on our various ranches several graduates of the University of California, and also a good many young men who have not gone further than a high school education. It is the policy of the corporation to make promotions in our ranks from material that we have, rather than take outside people, provided that they prove themselves fit for promotion. With that in view, I have for some time been trying to figure out a scheme whereby we could get these young men interested in continuing their studies in the agricultural line, but have been unable so far to think out any program that would be practical and am writing you, therefore, for advice.

"It has occured to me that it might be possible to make some arrangements with the University Extension to have a correspondence course, and then have the boys on each ranch form into a club and every once in a while someone from the University give them a talk on a live subject. For instance, when they are spraying for red spider, we could have someone give them a talk on this subject, and so on with other things. This would make the boys realize what they are doing the work for and make it more interesting to them."

Change of Opinion.

This letter is fairly indicative of the change that is coming about in California. Formerly, although the superintendents of the large ranches were capable enough, they were generally self-made men without college education. They all too often either despised the college graduate as a white-collared good-for-nothing, or were afraid of him for fear he might know more than they did. It was difficult for the college man to maintain himself under their dislike or suspicion. In spite of this serious handicap the students of the College of Agriculture have been successful. Indeed, they are succeeding beyond our fondest expectations. In due time they are becoming the superintendents of the larger ranches and agricultural industries. The last three years has seen a decided change in the attitude toward the college graduate as indicated by the inquiries received in the Dean's office. Formerly, too many letters were received from men who wanted laborers at less than the ruling rate. Now we are receiving more requests for trained men than are available. When I say trained men I mean really trained men—upstanding graduates with two or three years of actual experience beyond their college days. It generally takes two or more years for the graduate to get the college out of his system.

It is not difficult to understand the opportunity that this new situation offers to the recent graduate. Other things equal, the college-bred superintendent, when looking for an assistant, will prefer a graduate because he is the sort of man with whom he likes to be associated. Furthermore, he does not expect too much of him; he appreciates how little he knows when he graduates, because he knows how little he knew when he graduated. Having been a college student he knows how to go about it to find the type of young man he wants. There is much yet to be accomplished, but this movement is like a snowball—the larger it grows the more snow it gathers.

Demand Trained Men.

During the year 1919 we had an average of one request every day for men with college training. It is definitely known that we placed eighty-one college men, twenty-two Farm School men and three ex-students. In other words, we filled one out of four of these requests. It is probable that more than this number were actually placed, since the persons given include only those who have subsequently written notifying us of the fact. Many graduates are remiss in this matter, often thereby causing us embarrassment in the work of placing men.

There is, however, another factor of prime importance in connection with the opportunites of the Agricultural graduate. In 1900 the value of farm crops and animals was estimated at five billion dollars. In 1910 the value had risen to over nine billions though the quantity had increased only ten per cent. What does this mean? It means that it had taken a period of three hundred years for farm production to reach five billion dollars and then in ten years it nearly doubled in value. So far as values are concerned, about as much was accomplished in the decade ending 1910 as in the three previous centuries. The United States Department of Agriculture has recently estimated the value of farm crops and animals for 1920 at twenty-five billion dollars—five times the value of twenty years ago. Part of this increase is due to the decrease in the value of the dollar but not all of it. Agricultural products will buy more commodities, whether housing, clothes, education or recreation, than ever before in the United States. Those of you who are under twenty-five can not understand the change in attitude toward the College of Agriculture that has occurred since the last decade of the last century when corn sold as low as twenty-five cents a bushel and hogs for three cents per pound. We now complain about the high price of coal, but it was not so many years ago that corn was used for fuel. During that period I was called to take charge of a College of Agriculture in one of the most prosperous states in America. The first year there were three and a half University students and thirty-seven short course students. That half-student was a special; he was only half-way in. The enrollment of University Farm School and Short Course students in Agriculture in the University of California this year is over 1800.

Graduate's Responsibility.

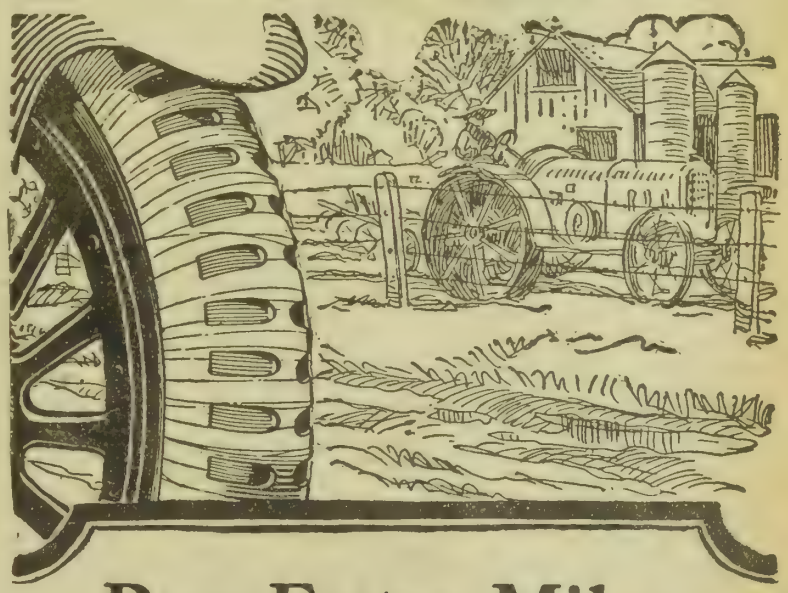
This discussion brings me to the responsibility of the Agricultural College graduate. In another ten years there will doubtless be in California one thousand graduates of the College of Agriculture and the University Farm School between the ages of thirty and forty-five, the ages between which men do things. If these one thousand men do not become the most important factor in the material and social welfare of all those who live in the open spaces of California, then the College of Agriculture will not have been worth its salt.

Without doubt, your first duty is to earn a sufficient living to rear and educate a family. That is the first duty of every man. But if, in addition to this fundamental requirement, these thousand men who have had the unusual advantages furnished by the State for a special purpose, do not lead in every progressive enterprise which affects the agriculture of California, then the college will have been a failure and should be abolished.

In 1917, just after our entry into the great conflict, I had occasion to write the following:

"Whatever food control may mean, prices of food products cannot appreciably decrease in the next two years. The sooner the consumer adjusts himself to the present or higher scale of prices the better it will be for him and for the cause for which this country is fighting. The pity of it all is that very little attention will be paid to those recommendations. There will be in the hands of the American public during the next two or three years, more money, more instruments of credit per capita, than there ever were in any nation in the world. There is reason to believe that this country is to witness the most prosperous times and the most riotous living that it has ever known. In

(Continued on page 447.)



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Racine Country Road Fabric Tires are built for severe country road service. That's why

"Country Roads" for Country Miles

mean greater mileage and real tire economy.

Racine Tires—Country Road Fabric and Multi-Mile Cord—are Extra Tested so that all Racine Tires are perfect tires. Racine Absorbing Shock Strip is an added insurance of extra miles because it welds perfectly the tread and carcass of Racine Tires. Be sure the name RACINE RUBBER COMPANY is on every tire you buy.

RACINE RUBBER COMPANY
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RACINE COUNTRY ROAD FABRIC TIRES

The '49er says= "the genuine GIANT dates back to 1866"

"I remember well when we used black powder for stump blasting and mining. Just after the Civil War the first Giant Powder ever made in the United States was manufactured in a little laboratory in what is now Golden Gate park.

"Out of that beginning has grown The Giant Powder Co., Con., with its chain of great plants and magazine stocks throughout the entire West. And the Giant Farm Powders are being used for stump blasting, boulder blasting, tree planting, etc., by thousands of Western land owners. Giant Powders have always been so popular that some people have thought any ordinary dynamite was Giant Powder, but that is wrong. The only way to get Giant economy and efficiency is to get the genuine Giant Powders made by the originators of the name.

Just call or "send me your book," and we will mail you our valuable guide to blasting, "Better Farming with Giant Farm Powders."

THE GIANT POWDER CO., CON.
"Everything for Blasting"
216 First National Bank Bldg., San Francisco. Branch Offices:
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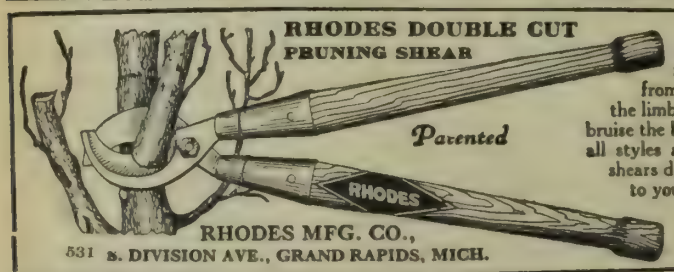
GIANT FARM POWDERS
STUMPING EUREKA

FRUIT TREES
We can still supply a limited number of trees.
Write for our price list
The Fresno Nursey Co.
Fresno, California



THE only pruner made that cuts from both sides of the limb and does not bruise the bark. Made in all styles and sizes. All shears delivered free to your door. Write for circular and prices.

RHODES MFG. CO.,
531 S. DIVISION AVE., GRAND RAPIDS, MICH.

ORNAMENTALS
Trees, Plants, Shrubs direct from nursery to you. For windbreaks, hedges, and beautification. WRITE FOR CATALOG, which illustrates and describes best varieties for California conditions.
LEONARD COATES NURSERY CO.
MORGAN HILL-CALIFORNIA

STUMPS AND WILLOWS
Get Rid of Them Now With
CRESOLITE
A few ounces applied now in the hot weather to a stump will paralyze and kill it in a week. Sample can of 13 lbs. $2.15. Money back if it fails. Bbl. lots at 12c. per lb.
LOUIS BAHRS, LOOMIS, CAL.

PLANT BERRIES
Produce big crops the first year. Small Fruit prices are high and sure to continue. Order your plants from us now for Fall and Spring delivery, because plants will be scarce later.
M. J. MONIZ, Berry Specialist
Sebastopol, California

Timely Work in the Orchard

(Written for Pacific Rural Press by W. S. Killingsworth.)

Rodent Injury to Trees.

Rodent injury to trees, especially the cherry, is becoming more serious each year. The rodents responsible for the major portion of the damage are gophers, ground squirrels and field mice. The damage is more noticeable in the spring and summer, mostly summer, as at that time there is less green food for the rodent to work on. Where much damage has been done it is generally due to neglect of the orchard. Weeds and grass have been allowed to grow at random, thus making a splendid hiding place for the rodent, and while hiding and resting, they attack the trees; the vegetation acts as a protection against hawks, owls and other natural enemies. Before actual work of destroying the animals clean cultivation should be done. By this, keep the orchard free from weeds, etc., during the dry season. A cover crop may be grown but should be turned under before the dry season begins. Grass and other vegetation growing around the trees should be hoed away. In addition to protecting rodents, rank vegetation may sometimes increase the chance of damage by insects and fungi. The writer had occasion to visit a large, full-bearing orchard awhile ago and about the only criticism we had to offer was the great amount of dead weeds and grass around each tree. We suggested that it would be a wise plan to have such moved, and the orchardist replied that, owing to the high cost of labor he had neglected to have his trees hoed around. We told him that the loss of one cherry tree in the entire orchard caused by rodent interference would be a greater financial loss than the cost of hoeing every tree in the orchard. We have had a long dry season and there is absolutely nothing for these pests to feed upon but some portion of the trees, the gopher and ground squirrel attacking the roots and the field mice girdling the tree above the ground. No one should plead ignorance in the matter of control, as the horticultural commissioners of each county in the state keep posted, and keep on hand all remedies used in killing these pests. It is valuable time lost in not consulting your horticultural commissioner at once should you learn of invasion by any of the pests we have named.

Guide in Selecting Nursery Stock.

We are constantly asked as to what kind of nursery stock one should order, as well as the kind of fruit best adapted to certain soil and climatic condition. The best answer to such query is: Some months ago at a meeting called by a number of the nurserymen of the State, a decision was reached and agreed upon as to the varieties they would hereafter propagate. (1) For the canneries; (2) for eastern shipment in a fresh state; (3) for drying purposes; (4) for the family orchard. Now we have this complete list in our possession and will gladly furnish our readers with information regarding same. In taking this view of the matter the nurserymen contend that by establishing a standard they will not be compelled to propagate hundred of thousands of nursery stock that might be left on their hands, as the eastern consumers refuse to accept it in a fresh state. The canners refuse it as the trade is against it, and when it is the trade that must be satisfied the nurserymen are compelled to act in accordance.

House the Farm Implements.

Now that the season is practically over and there will be no further use for farm implements until the beginning of another season, as a protection against the weather all implements and machinery of whatsoever nature should be housed, and where tools or machinery will bear painting, such should be done. Many a spray tank has been allowed to stand out and take the winter's rain and in the spring it was hauled up to the filling station and filled with spray material, and if it didn't "shoot" on all cylinders the first turn of the crank, a howl was raised, the manufacturer was abused, and there was hell to pay. Had it been properly overhauled, cleaned and stored in a dry shed, there would not have been the least difficulty in getting it in action the following season. This proper housing applies to the tractor, gang plows, disks and harrows as well.

Wipe Fruit to Remove Spray Coating.

It would seem that someone has found a "mare's nest" in the matter of some of our fruits, showing the effects of late spray material by its perceptible adherence to the fruit. Same old story: some busybody with nothing else to do, and if they had they wouldn't know how to go at it, inorder to make some kind of a showing that he might hold his job, has registered a complaint with the health department of one or more of the large eastern cities, to the effect that the populace at large are liable to be exterminated by eating California Bartlett pears and apples that have been sprayed with any one of the arsenical poisons. "Thunder and blitzen!" Should a Californian, native or otherwise, make such a break, the Lunacy Commission would have him before he could crank his Ford. However, the United States Department of Agriculture has stepped in and temporarily solved the problem by urging the growers to remove the coating by wiping the fruit before packing, which will make the fruit acceptable in the market. One method recommended for apples and pears which can be done at a cost of a few cents per box, is have the packers wear cotton gloves, by that means the fruit will be wiped as it is packed. This apprehension would never have been aroused in the mind of the consumer, but for the ignorance of those registering the complaint, and to be within the law you had better wipe your fruit, else it might be dumped.

State Certifies Condition of Fruit.

A complete State certificate showing the kind and condition of cars loaded with fruit (how they are loaded, their icing, the kind and condition of packages and the fruit in them at the time of shipment) is now available to shippers who ask the State Department of Agriculture for it. F. P. Roullard and Mr. O'Day are the inspectors for San Joaquin Valley. Only because the car shortage is reducing shipments can they carry out this work anywhere near adequately for those who have requested it. Over 50 per cent of their work has been on wine grapes.

Peaches Holding Up Well.

It has been a long time since California cling peaches have sold in the Eastern markets as they are selling at the present time. A carload of Levi Clings shipped from Penryn September 2d sold in New York September 20th grossing $2,987.00, selling from $2.50 to $3.37½ per box of 18 pounds net. Another car containing mixed fruits, Orange Clings averaged $2.50 per box.

Judge W. H. Rice of Modesto fined two persistent violators of the standardization act $25 each. He has stated that he is in sympathy with the reasonable points of the law. A Japanese brought before him for packing little strawberries under big ones was informed that little ones were equally good, and was dismissed with a nominal fine, if any at all.

Grapes in the Clovis district, Fresno county, have heretofore been picked by Indians, but Mexicans invaded that territory this year, and the Indians were deprived of much work, and have returned to their mountain homes much earlier than usual. These Mexicans came all the way from Mexico to work in the vineyards.

Half the Wearing Parts

In the *ordinary* battery there are *two* wearing parts—the lead plates, and the insulation between the plates. These are the parts of the battery exposed to the chemical action of the solution—the parts most likely to give out.

The Still Better Willard has only *one* wearing part — for Threaded Rubber Insulation is *not* affected by the solution—it will outlast the battery every time.

Threaded Rubber Insulation has all the high insulating qualities of ordinary rubber, yet allows easy flow of current from plate to plate.

With this acid-proof insulation there are no rotted separators, no expensive replacements. No internal short circuits due to carbonizing or punctures. No checking or cracking.

Finally, the Still Better Willard is shipped and stocked "bone dry"—not a drop of moisture in it, no possibility of deterioriation. It starts its service in your car as fresh and "peppy" as if just built.

Of the 191 passenger cars and trucks using Willard Batteries as standard equipment 152 have adopted the Still Better Willard with Threaded Rubber Insulation.

Willard Service

THREAD-RUBBER INSULATION
STORAGE BATTERY
Willard

This trademark is branded in red on one side of the Still Better Willard Battery—the only battery with Threaded Rubber Insulation.

152 Manufacturers Using Threaded Rubber Insulation

Acason
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All American
Allis-Chalmers
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Apex
*Apperson
Armleder
Atco
Atterbury
*Auburn
Austin

Bacon
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Belmont
Bessemer
Betz
Biddle
*Bour-Davis
Brockway
Buffalo
*Buick

Cannonball
Capitol
*Case
*Chevrolet
Clydesdale
Cole
Collier
Colonial
Comet
Commerce
Commodore
Corliss
Cunningham

Daniels
Dart
Denby
Dependable
Diamond T
Dixie Flyer
Dodge
Dorris
*Elgin

Fargo
Federal
Fergus
Ferris
F W D
Franklin
Fulton

Garford
G M C
Giant
Glide
Great Western

Hahn
Hatfield
H C S
Hawkeye
Haynes
Henney
Highway
Holmes
Holt
Hupmobile
Hurlburt

Independent
Indiana
International (I H C)

*Jordan

*Kissel
Koehler

Lancia
Landa
Lewis-Hall
Lexington
*L. M. C.
Luverne

Madison
Marmon
Master
Menges
Menominee
Mercer
Mercury
Meteor (Phila.)
M H C
*Mitchell
Murray
McFarlan
*McLaughlin

Napoleon
Nash
Nelson
Nelson & LeMoon
Noble
Northway

Ogren
Old Hickory
*Olds
Oneida
Oshkosh

*Paige
Parker
Peerless
Peugeot
Phianna
Pierce-Arrow
Premier
Preston
Rainier
Renault

*Reo
Republic
ReVere
Riddle
Robinson
Rock Falls
R & V Knight
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Sandow
Sayers
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Service
Shelby
Signal
Singer
Southern
Standard 8
Standard
Stanley
Studebaker
Stutz
Sunbeam

Tarkington
Thomart
Titan
Tow Motor
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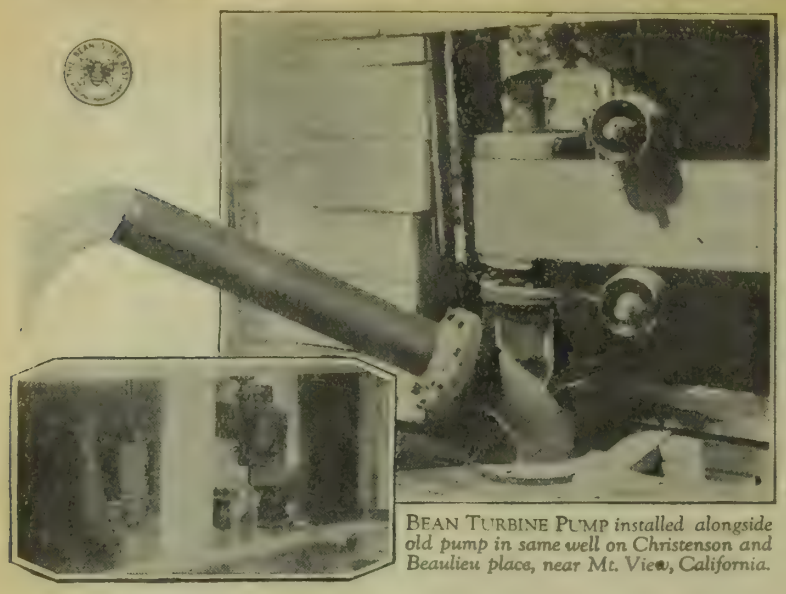
**For Export*

Willard STORAGE BATTERY



BEAN TURBINE PUMP *installed alongside old pump in same well on Christenson and Beaulieu place, near Mt. View, California.*

Back to Life Again!

(Clip Out and Mail)

BEAN SPRAY PUMP CO.
111 W. Julian Street
San Jose, Calif.

*Distance to water below surface of ground*_____
*Probable distance to water when pumping*_____
If water is to be raised above surface of ground, how high? (Length and size of pipe line)_____
Volume of water desired (Gals. per min.)_____
(Inches) _____
If you have pit, give width_____ length _____
depth _____
H.P. of motor or engine if you have that equipment.
Give total depth of well.
Inside Diameter of well.
Is well straight and true?
Is electric power available?
Name _____
Address _____
Rural Route No. _____
(50-P3) Box _____

Christensen & Beaulieu of Mt. View, California, were up against the problem that is now facing ranchers all over the state. The water level in their well had fallen so low that their old vertical pump wouldn't get more than half of a supply.

They might have dug the old pit deeper, and worried along a while with the old pump—but they weren't going to be satisfied with temporary makeshifts. They *wanted permanent results!* So they installed a Bean Turbine in the same well where the old pump worked—and *they got permanent results*—

—they have a good supply now.
—a good supply insured for the future.
—pit dangers eliminated.
—money saved.
—time saved.

If your water levels are lowering, your problem is the same—*solve it with a Bean Turbine.*

BEAN SPRAY PUMP CO.
111 W. JULIAN ST., SAN JOSE, CALIF.
Branches: Fresno Los Angeles

Bean

Turbine Pumps

PEAR and PRUNE TREES

We can still accept orders for Pear and Prune Trees—budded by experts from trees of known productiveness. We can also fill orders for

PEACH TREES (June Buds)

—the two popular varieties—Phillips and Tuscans. WRITE FOR PRICE LIST.

Elmer Bros. Nursery

"The Nursery That Helped to make Santa Clara Valley Famous."

76 So. Market St., SAN JOSE, CALIF.

NURSERY STOCK
PLACENTIA & EUREKA WALNUT SPECIALISTS
NURSERIES—VENTURA and LOS ANGELES COUNTIES
R. E. Pierce OXNARD, CAL. A. G. Snow

Mariout Barley

COMPENTENTLY TESTED FOR PURITY. GOOD, CLEAN SEED OF HIGHEST QUALITY FROM HEAVY-YIELDING STOCK.

H. G. STEVENSON, JR. Winters, Cal.

Here and There in the Fruit Business

Fruit Rotting by the Millions.

A half-million dollars worth of fruit is said to be rotting on the ground in the State of Michigan within half-day runs by rail or boat to Chicago. This calamity is said to be brought about in several ways: (1) Inability of boats to handle the huge crop. (2) Car shortage. (3) A sudden general ripening due to late warm weather. (4) Last and by no means least, it is said that there were "bugs" in contracts made by commission men last spring, simply repudiating contracts, on account of prevailing conditions. It is the same old story that has occurred each season from the beginning of the fruit industry, where the growers have produced fruit and shipped it promiscuously without any knowledge of market conditions or responsibility of those to whom they shipped—a parallel case of conditions as existed in California until the wise heads of each particular horticultural industry devised plans by which a co-operative marketing system was inaugurated, the results of which, in each instance, have proven eminently satisfactory. Should the fruit growers of Michigan forget their community differences and pattern after California, who can truly boast of more successful co-operative organizations than any State in the Union, in time they will market their fruits at a profit.

Feel Sting of Increased Freight.

The almond comes in for its share of high freight rates of this country and the cheap rate from foreign countries. The rates from Spain to New York has been more than twice as cheap as those from California to points east of the Mississippi river, and now the increase in freight rates of 25 per cent adds further trouble and expense. This increased rate, with the rate of exchange favoring the foreign almond, is naturally worrying the California growers. The rate on almonds from Spain to New York before the world war was $3.00 to $5.00 per ton, increasing to $45.00 per ton during the war and then receding to $12.00 to $15.00 after the war. The rate on California almonds to points east of the Mississippi river has been $36.00 per ton on unshelled almonds and $45.00 on those that are shelled. With the foregoing conditions to contend with it will make it hard for the growers to compete and realize any part of a profit. May the day soon come when not only the almond but all products of the state subjected to foreign competition be protected to the fullest extent.

Many Wineries Busy.

Napa county vintage is now full under way. Grape growers are receiving from $35 to $100 per ton for their crops, the more recent offers being from $95 to $100. The Eph Light Winery at Calistoga is crushing grapes for wine and grape juice. Beringer Brothers in St. Helena and the California Wine Association cellars in St. Helena, Napa and Oakville also are crushing grapes. The New Colonial Grape Products company, which has headquarters in San Francisco and plants in Napa, Sacramento, Elk Grove, St. Helent and Sonoma county are also crushing grapes for grape juice and grape syrups.

Car Shortage Affects Apple Shipments.

Apple shipments from Watsonville are feeling the effects of refrigrator car shortage; however, shipments are moving steadily—about fifty cars a day. This number would be materially increased if cars could be secured. There are a sufficiency of box cars to handle local shipments. This car shortage is largely due to the delay in getting the Tehachapi tunnel open for traffic which the Southern Pacific Company reports will be done in a very few days.

New York's Consumption of Fruits.

To feed each year the millions of consumers who live in New York City and their close neighbors who depend on the wholesale markets, requires nearly 50,000 carloads of the eight leading fruits and vegetables which would make a train 370 miles long.

Red Spots Not San Jose Scale.

The Division of Plant Industry, Department of Agriculture, calls attention to the fact that apples affected with blemishes referred to by various growers and shippers as sun spots or aphis "stings," which closely resembles the red spot commonly associated with San Jose scale infection should not be confused with the latter. These red spots are entirely superficial, amounting to nothing more than a red discoloration, and are properly admitted to the California "B" grade. It seems that this condition exists in the Watsonville district this season.

C. B. BILLS LEAVES PIONEER FRUIT CO.

We have just learned that Chas. B. Bills, for many years president of the Pioneer Fruit Company, has resigned as president of the company, but retains a directorship. It was our fortune and pleasure to have been connected with the Pioneer Fruit Company for years, and in this way we learned to know Senator Bills in his true type, which prompts us to say that on entering a new field the fruit industry of California has lost the livest wire ever connected therewith.

The Sutter Basin crops this year promise in food products 2,000 cars, most of which have been shipped. The cars are thus divided: Barley, 1,100 cars; wheat, 100 cars; potatoes, 300 cars; green peas, 40 cars; cantaloupes, 225 cars; rice, 350 cars; lettuce, 50 cars; cabbage, 5 cars; casabas, 50 cars; squash and pumpkin, 15 cars.

The orchard model Holt 45, enclosed almost like a tank and with no point over six feet high, was exploited for its economy of time and labor by virtue of its ability to cultivate the entire center between rows at one trip.

SAVE MONEY—BUY PIPE FROM US

Farmers, Miners, Builders—people in every kind of business are saving money buying used or renewed pipe from us. We sell every kind of pipe. Send in a list of your requirements today and get our prices. We have saved hundreds of people 33 1-3 to 50 per cent on their pipe bills. Here's a partial list of some of the miles of pipe we have in stock for immediate delivery.

8,000 ft.	6 in.	Riveted	16 gauge
700 ft.	8 in.	"	16 "
5,000 ft.	12 in.	"	12 "
1,000 ft.	18 in.	"	12 "
800 ft.	22 in.	"	14 "
300 ft.	24 in.	"	14 "
500 ft.	36 in.	"	12 "

10,000 feet light wrought iron 8-inch pipe with cast-iron collars.

All above pipe thoroughly overhauled and inspected and ready for immediate use.

We also have large quantity standard pipe and screw casing, pressure tested and guaranteed.

Don't delay—write for our prices on your pipe requirements today.

PACIFIC PIPE COMPANY
229 Howard Street, San Francisco, Cal.

Apple Market Is Devoid of Speculation

(Written for Pacific Rural Press by W. S. Killingsworth.)

If reports which are coming from the great apple-producing sections of the Nation are to be relied upon, we are of the opinion that there is to be some hard sledding for the apple—the king of all fruits. To begin with, the crop in sight is unusually large, and the prevailing uncertainty over the price outlook and high cost of operation has made buyers extremely cautious. The first estimate made in August, for the total farm crop being 213,187,000 bushels against a yield of 147,457,000 in 1919. The estimate of the commercial crop on August 1st was 32,588,000 barrels compared with 26,174,000 barrels in 1919. Owing to the high prices of material of all kinds used in preparing a box or barrel of apples for market as well as the labor involved in handling fruit from tree to car there is a decided tendency to sell in bulk throughout the East and Middle West. We are told that fancy Newtown Pippins are being offered at $1.50 per barrel in the Middle West to purchasers to furnish labor and containers. At that there are no contracts being made. Should the fruit be stored, which, of course, would be the case, many of the New York storage plants have increased their charges to 65 cents per barrel, and at that rate all of the available space has been sold.

The barrel in which the fruit is packed will cost $1.50. Pickers are demanding 30 cents per bushel, making the total cost of picking, grading, packing and delivery from 90 cents to $1 per barrel, all of which are making speculators somewhat shy of the existing conditions, therefore there has not been enough life to the market to make reliable quotations possible. In conferring with one of the large San Francisco dealers we were told that the speculators are strictly hands off on apples for storage purposes, that they are not of a speculative turn of mind this season unless they can buy at a price that eliminates anything of a speculative nature. That feeling exists in all Pacific Coast apple-producing sections. Some apples have already been placed in cold storage in California for subsequent consumption, which will naturally extend into next spring; however, the cold storage people tell it that the amount now in cold storage amounts to about one-fifth of last year's holdings at this time. This, it is said, is indicative of a lack of speculation.

Conditions in the Pacific Northwest are identical with those of California; however, they are preparing to "get from under" by looking for a foreign outlet and the report reaches us from the Yakima apple district that as a beginner, the growers and shippers have contracted for all the available refrigerator space on one of the large steamers. This space will take care of more than 30,000 boxes of apples. The freight will play an important part, which is $1.40 per box. The time that it will take to reach Liverpool, Glasgow, Rotterdam or Antwerp will be approximately 44 days. While the future does not have that rosy appearance for the welfare of the apple, we shall not predict disaster, as it has the happy faculty of being able to care for itself by being a good keeper under almost any reasonable conditions and treatment, and being a universal favorite we are at a loss for some good reason why the apple will not share the same, or a major portion, at least, of the splendid financial assistance that has been accorded other members of the horticultural household.

THE UNIVERSITY FARM AT THE STATE FAIR.

(Written for Pacific Rural Press by Ralph Newman.)

The University authorities in charge of this State Fair work are deserving of a good big bouquet. In addition to the display of their own fine stock, agricultural products and experimental work, they conducted lively contests in cheese, butter and milk-making, ran an ideal cheese-making plant every day, displayed dairy products in a way to make the mouth water, and lined their walls with attractive charts bristling with up-to-date information.

Many a man and woman received a lot of information and inspiration from this service that they might never have gained elsewhere. If anything about the fair was worth while, the work the University did there certainly was.

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There is in California a very limited quantity of choice wheat and barley seed of these varieties. All our seed grown on new soils, one irrigation only. All water from deep wells; no Bermuda, Johnson or Morning Glory. Orders booked as received, shipments following consecutively.

We also have limited quantities Early Baart, Sonora, Diener's Hybrid Baart and Diener's Hybrid Sonora Seed Wheats. This is our first year with last two varieties and data not yet sufficient to permit our making definite conclusions or recommendations. Both tiller well, permitting light planting, and neither shatters so badly as Sonora.

In our judgment Bunyip, Bayah and Dart Imperial wheats and Mariout and Beldi barleys yield more or less soil moisture and shatter less in wind than any grains we have grown.

We are also now booking cotton seed orders for late fall and winter delivery. Pure strains, Durango and Mebane, grown by us in selected, hand-rogued fields. We do our own ginning, carefully avoiding seed mixing.

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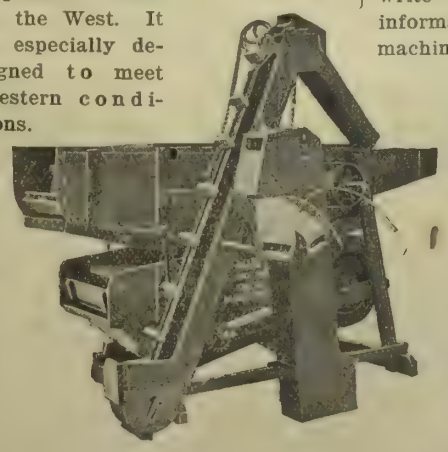

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State Official Supervised Diversions.

Irrigation diversions from Kings River into 20 large canals and 25 smaller ones have been supervised this summer, at the request of owners of the water rights, by Engineer C. L. Kaupke of the State Water Commission. Each canal has a different legal right, and some of these rights vary with the season of the year. The engineer's job this dry season was to divert to each in proper proportion and thus avoid the waterwars which normally occur in a dry season. As the flow of Kings river varies from day to day and from morning to evening, due to varying temperatures on the mountain snow and occasional thundershowers, it kept Mr. Kaupke busy keeping peace in his family and saving the Tulare lake grain from the flood which seriously menaced it at one time. The idea of putting a state official in charge of diversions is new in California, but it worked well.

South Joaquin Crop Acreages.

Recent close estimates compiled by Secretary S. L. Steele of the South San Joaquin Irrigation District indicates relative importance of crops grown in that project in 1920. Alfalfa leads with 30,357 acres, grain grew on 9,281 acres, corn 6.542, vines 4,153, trees 3,079, beets 1,403, sunflowers 1,382, tomatoes 1,113, beans 1,057, gardens 488, melons 341. Melons and beans were formerly much more important.

Sell Milo at Three Cents.

It is now a pretty good time to sell milo when it will bring three cents, as expressed in a sales letter by Manager A. F. Thornton of the Sales Department, Alfalfa Growers of California, Inc. He cites the unsold Kansas wheat crop and believes the Middle West will move all the grains it can get cars for. He mentions the drop in cotton seed which competes some with milo. The economic and financial situation is such that even the increased freight rate may not keep eastern kaffirs out of California, where they may compete with our own grain sorghums.

Weights and Measures Fraud.

A prominent Fresno county fruit shipper is in trouble. Last year the picking boxes he furnished to growers were weighed by County Sealer of Weights and Measures F. B. Johnson and found to average 7¼ pounds. He tared them at 8 pounds through the season and made $4,000 or $5,000. He was tried and convicted for the fraud but his bond was not declared forfeited because the Department hoped he would play fair. This year he has repeated the offense and has been leniently given the alternative of restoring to growers all of the stolen money or losing his bond as well as his permit to weigh anything for commercial purposes.

Delhi State Settlement Prices.

Average price of land in the second unit of the Delhi State Land Settlement project, which applications will close October 11 is $184 per acre, as compared with $184.67 per acre in the first unit for the farm land already sold. Some of the cheaper land of that unit has not yet been allotted. Average size of farms in first unit is 24 acres; in the second unit 37 acres. There are also 23 farm laborer's allotments in the second unit which go at slightly increased prices, besides 391 residence lots in the townsite and 166 business lots there.

Vineyardists Buy Much Hay.

"We have been buying barley hay in Tulare county at $28 and $29 per ton f. o. b. cars for Fresno county vineyardists," said S. S. Crutcher of the Fresno office Alfalfa Growers of California, Inc., in the middle of September. Probably ten per cent of their demand is for grain hay and we attempt to supply it. Almost every vineyardist with five to forty acres has a team of horses and a cow. Their aggregate demand for hay is enormous. Most of it has to be shipped into the vineyard district, where land is too valuable to devote to hay of any kind.

Butte County Mariout Barley.

From 302 acres of Mariout barley in Butte county B. S. Phillips harvested 34 sacks per acre, weighing 114 pounds each, while common barley, under similar conditions did not exceed five sacks per acre, according to Prof. G. W. Hendry of University Farm, the introducer of this variety to California. Thomas Peterson produced 13 sacks of Mariout per acre, but only five sacks of common barley. He figures that he lost three sacks per acre because he planted Mariout later than common barley and some of it grew too short for the header to reach. S. A. Mealey got 30 sacks of Mariout per acre as against 23 of the common variety.

Alfalfa Seed Notes.

About 1,000 acres of alfalfa will be allowed to seed in the Arbuckle distric of Colusa county, as estimated by Edgar E. Wiker. The yield per acre is forecasted at 200 pounds, which is a third better than last year. In Perris Valley of Riverside county, G. I. Lytle estimates 200 acres will go to seed. This is twice as much as last year. In Inyo county only ten or fifteen acres will produce seed, as reported by W. A. Cashbaugh, who is buying Peruvian there at 50 cents per pound. Farmers of Idaho and South Dakota have agreed to sell their surplus alfalfa seed to farmers of Michigan and New York through intervention of the Farm Bureau.

"One-Farm" Diversification.

The "One Farm" exhibit of J. T. Lawson and his wife at the Tulare county fair is characteristic of the diversification of which the county boasts. "One Farm" was spelled out on an attractive sign in their exhibit corner with almonds, of which they showed two varieties. Three varieties of grapes, two of pears, three of figs, two of plums, two of tomatoes, one each of nectarines, olives, walnuts, apricots, prunes, and quinces, two of peaches, dried fruits of several kinds, and a big variety display of home-canned fruits and vegetables were decorated with pampas plumes, roses, etc., which indicate that they enjoy life at home.

Turlock Irrigation Increased.

The number of acres irrigated in the Turlock district has increased from 3,757 in 1901, when water was first run for irrigation to 101,419 in 1919. An increase is noted every year except 1916. The 1915 rainfall had been 17.01 inches, the heaviest in the entire period since 1907. Maximum diversion at the La Grange dam increased every year, being 1750 second feet in 1919. The year 1920 showed another increase to 183,407 acres irrigated.

Extra Heavy Alfalfa Yield.

Two and a half to three tons of alfalfa hay per cutting is claimed for Henry Ramacher's field of Hairy Peruvian in Fresno county. He sowed it extra thick and irrigates twice per cutting so the alfalfa grows dense enough to smother Bermuda grass and uncommonly tall. This makes the hay fine enough to grade about "No. 1 Dairy," though Hairy Peruvian is generally "Standard" as the alfalfa association grades it.

Chino Pools Bean Crop.

Something new in the marketing of the bean crop will be tried out in the Chino district this year in the form of co-operation. The president of the farm center has been empowered to appoint a committee of three to arrange for the pooling of the crop and the marketing of the bean crop. An initial saving has already been made in the purchase of 7,500 sacks. By this purchase there was a saving of $225.

Late Irrigation.

Gyp and milo were being irrigated in many Tulare county fields during the week ending September 18th. This is late, as the corn is all headed out.

LEVELING TIME IS HERE

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Ordinary shells will frequently swell or broom out when wet. They sometimes refuse to work through your gun at all.

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Drowning Out Water Grass in Rice Field

To the Editor: Water grass has taken many hundred acres of rice and will take the remainder of the rice land in a year or two if something is not done to balk it or get around it in some way. After considerable investigation and inquiry, it appears that a crop can be raised by working the land carefully and sowing the rice after the weather gets warm, putting in high checks and seeing to it that the water does not get off the land. Some have made it by sowing the rice on the water and then keeping the water on without a let-off. Others have got a good crop of hay and then sowed Early Onson rice on or about the first of June. One man did not get water until June 7th of this year and his rice is well advanced. Have you any data to help me make an accurate judgment.—H. S. E., Princeton.

Numerous efforts to eradicate water grass by means of deep flooding have been made by farmers in various rice-growing regions in California. The results appear to be as follows:

Deep flooding of water grass (Echinochloa crus-galli) has a depressing and frequently fatal effect in the germination of its seed. Young water grass plants may in a large measure be killed when deep flooding (8 inches or deeper) is continued without interruption after they start. Deep flooding is more successful in killing out water grass if continuous flooding is started late (May 25-June 7). Deep flooding, when begun early on dry planted rice fields, may cause po stands, frequently too thin for go crops. Deep flooding begun too la on young rice fields may cause t rice plants to become scaled if they not stand out above the water aft the third week in June.

When deep continuous flooding begun early, it is quite possible sow the rice seed broadcost into deep water where it will germina and grow thriftily. If the same se were drilled or harrowed in and th flooded to the same depth, the pr tice would very likely result in po stands. Seeding into deep water not successful early in the sea when the weather and consequen the water are so cold that germinati becomes so slow that the rice se rot before they can germinate. Se ing rice into deep water about Ju first and for the next two weeks gi the best results with this meth Our own experiments with depth water to control water grass confi the statements made above.

The control of water grass by c tinuous deep flooding depends enti upon the completeness of the cont over the depth of water and time seeding. When the water is allow to fluctuate in depth, results beco uncertain. Spots which rise out the water or which cannot be floo to the proper depth by reason of t height, will not show beneficial sults by this method of water co control.

A Survey of San Joaquin Valley Alfalfa

(Written for Pacific Rural Press.)

Briefly surveying the San Joaquin Valley alfalfa supply and demand, Stanislaus county this year will approximately supply herself, due to extensive new acreage and the almost universal tendency of dairymen this season to cinch their winter supplies early. Merced county is not a great producer or consumer and will about balance herself. Madera county has a lot of vigorous young acreage and not enough cows to use it, but will find a near market in Fresno county. Almost every vineyardist, large or small, has one or more teams of work stock; and we have it on authority of S. S. Crutcher, representing the Alfalfa Growers of California, Inc., at Fresno, that 90 per cent of what they use is alfalfa. Already over fifty carloads of alfalfa have been shipped in to Fresno county from Madera, Kings, Tulare and even Kern, and orders for additional carloads are received frequently. Mr. Crutcher estimates that 30 per cent of last year's alfalfa acreage in Fresno county has been plowed up for vines and orchards. An equal acreage will be plowed up this winter; and there has been no notable planting of new acreage. Kings county has a surplus to ship to Fresno and the oil fields. Tulare has a great consuming power in her expanding dairy herds, but her alfalfa production is still greater and her alfalfa fields are not suffering from late drouth as was noted farther north. Everywhere in Tulare and Kern county the alfalfa has plenty of water and is growing beautifully. Dairymen in these counties already have big stacks, and there is a surprising amount in barns all through the valley. The policy being followed is to stock up for the winter before prices go up.

Prices seem to be highest in Fresno county. The afalfa grown there is selling at $25 in the shock and up to $32 in the stack. In Stanislaus county Alvin Turner of the Grange Company says the price has been $20 in the stack, but it is now not worth much if any more than that after baling and delivering in town. In southern San Joaquin county Ed Powers bought 2,000 tons in the stack at $20 and quit, but wishes he had quit sooner, because he could buy it now at $18. The acreage in this district is greater than last year and the yield is heavy. We asked Mr. Crutcher what would happen to alfalfa p after the dairymen and fruit men stocked up for the winter. Said "There will be so little left that price will go still higher. The va as a whole will scarcely be abl feed its own stock with its own of all kinds."

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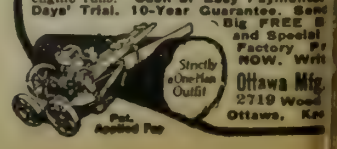

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RAISIN GROWERS NOT WORRYING OVER LAWSUIT.

(Written for Pacific Rural Press.)

The latest news regarding the proceedings brought by the Department of Justice against the California Raisin Growers' Association on the grounds that it is an organization in restraint of trade, is to the effect that the Association will stand its ground and fight until it finds it has the right under the law to manufacture and sell its own product under its own brand, or, failing in that, it will fight until the laws are so amended that the fruit growers of California can pool their interests to their own advantage. This is the conclusion come to; therefore, it is the attitude of the association as has been expressed in a formal statement issued by the association through Wylie M. Giffen, president, at the close of a long session of the board of directors. The compromise in Los Angeles has not weakened the spirit of the association, according to president Giffen, who said that the raw product will not be sold to the packers until the last court in the land has ruled that the association must sell. President Giffen stated further that the association was not satisfied with the settlement, but as the property of the whole community is at stake and by refusing to enter into a compromise, there was a chance of having the crop tied up during the midst of the season, which might have cost the growers $25,000,000; therefore, they thought it wiser to submit to a compromise which cost $100,000, rather than take a chance at a restraining order being granted—possibly a wise conclusion on the part of President Giffen and the board of directors. However, we have no fears as to the ultimate outcome when the matter has had an airing before the proper and unbiased tribunal.

GOOD EXHIBITS AT KINGS' FAIR.

Good weather, fine exhibits and large attendance prevailed at the Kings county fair, Hanford, last week. In the stock sheds, practically every pen and stall was filled. There was a large showing made of autos, trucks, tractors and implements. While in agricultural hall eight farm bureau centers competed for prizes in best collective exhibits. Everything for which Kings county is noted was shown in many different ways and with splendid specimens. Corn, fruit, cotton, alfalfa—everything that the great San Joaquin valley produces was on exhibition. The ladies' exhibit of home-made articles was very complete; also the poultry exhibit was one of the largest seen at any of the county fairs.

AGRICULTURAL GRADUATES GREAT ASSET TO STATE.

(Continued from page 439.)

the meantime, it is our allies who will suffer. "For what shall it profit a man if he shall gain the whole world and lose his own soul?"

Prosperity a Difficulty.

In the future it is up to those agricultural graduates who have gone before and those who will come after to decide whether the United States is to lose its soul. It is as difficult for a nation as for an individual to stand prosperity. Circumstances are such that in the future the representatives of agriculture are going to be heard in the councils of the nation as never before. Whether these hearings will result in the good of humanity must be largely determined by the Agricultural College graduate, whose vision has been broadened and whose courage has been strengthened by the most thorough education which it is possible for a beneficent State to give him. It will be incumbent upon him to see that progress shall be permanent; that prosperity shall not be transitory; and that in material, moral and social ways he leaves to his children a heritage that will cause them to rise and call him blessed.

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The all-round water system for the household. Furnishes water under pressure at small cost. Send for catalog.

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—enable dairy farmers everywhere to add hours to the day for other duties. Write for catalog.

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Get 25 per cent more milk, save feed, and save labor, by making your cows comfortable with Louden Equipment. Write for catalog.

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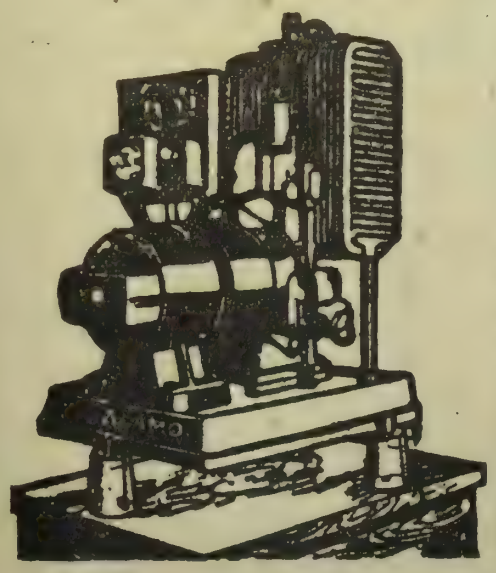

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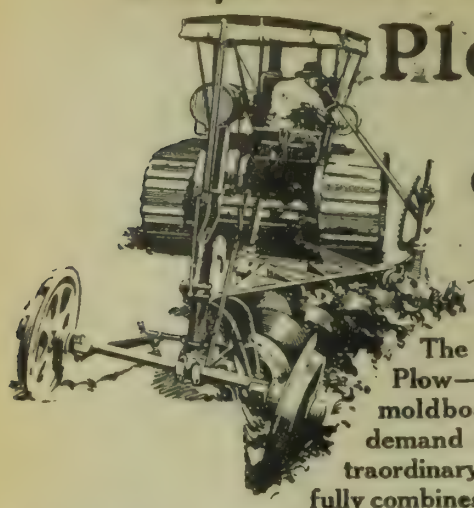

Plowing with CATERPILLAR TRACTOR PLOWS

The "Caterpillar" Tractor Plow—combination disc and moldboard—satisfies every demand for ordinary and extraordinary plowing. It successfully combines light draft and heavy service and is specially designed for Pacific Coast conditions and to work behind tractors of every type, width and power.

Light draft, because of lessened friction, permits deeper plowing, or the pulling of a greater width of plows, which means faster work, with no increase of power. Three-point suspension keeps the plowing depth uniform on uneven ground. Unique hitch keeps the tractor off plowed ground.

As a disc plow, the "Caterpillar" Plow has no equal. Strong disc standards, exceptional clearance, big discs that leave ridgeless furrows—these are a few of the special features. With the discs adjustable to five positions, covering a wide range of uses, the moldboard convertible feature of the "Caterpillar" Tractor Plow completes the plow requirements for the most diversified farming. Required changes from discs to moldboards are made quickly and with little work.

The plow has the steering principle of the automobile. The direction of the front wheels is directly controlled by the hitch. Five disc adjustments adapt the "Caterpillar" Disc Plow for use in the hardest or softest land. The lever control of the direction of the rear wheels makes it the only plow really suited for side-hill plowing. Extension bands on the wheels make it possible to use it even in marshy lands, with water in the furrow.

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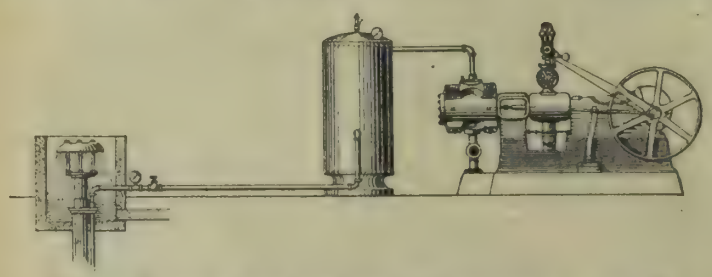

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The simple well piping consists of a water discharge pipe and air line. Pipe can be lowered as water level goes down. Also, any number of wells can be pumped by one Air Compressor.

The Air Compressor is simple, automatically oiled, fool-proof and always ready for work, and does not have to be installed near the wells.

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Interesting Features at Tractor Show

(Written for Pacific Rural Press by R. E. Hodges.)

Ninety-eight or more exhibitors showed tractors, implements, motor trucks, trailers, automobiles, accessories, etc., covering closely about 100,000 square feet of turf in Verdugo Woodlands near Glendale, Cal., September 20 to 26. It was a most beautiful and profitable show.

Successful, popular, delightful, profitable for exhibitors and visitors alike, the First National Tractor Show of the West at Glendale, September 20 to 26, which inspired plans for others like it even before the first day was over. San Francisco and Pocatello, Idaho, are already in the ring for such shows. It seems certain that farmers are convinced that tractors will plow, harrow and do the other operations featuring previous field demonstrations; their only questions now are in regard to economy, adaptability, accessibility, reliability and efficiency. The Show was an ideal place to study these points and compare notes with users who were there.

It is noticeable that many manufacturers who previously made wheel-type machines are now yielding to an insistent demand from the ranchers for a track-type machine; though they are not abandoning the wheel types. Practically every track shown is of manganese steel.

This material is one important step in eliminating what is probably the greatest argument against track-type tractors—expense of upkeep and replacement of the tracks. Every track-type builder has sought to reduce such expense to the minimum, not only by using the best materials, but also by designing the track links, sprockets, pins, and weight-carrying trucks, rollers, balls, etc., so they will wear least, be easiest to replace with new parts, and require the least expense when any part has to be replaced.

One wheel-type machine claims most of the advantage of tracks because of rocking shoes on its rim; one gets many advantages by driving all four wheels; while one track-type is pretty nearly a wheel-type running on a track because its drive sprockets are as large as the drivewheels of many wheel-type tractors and all the weight rests on them. Most of the tracks are intended to be run without lubrication. Another feature that manufacturers have been stdying with noticeable results is accessibility of the parts which often require attention, particularly the engine bearings and transmissions.

Easy to Select.

It is easy now to select a tractor which does not have to be taken to pieces to get at some small part when it requires adjustment or replacement. Every tractor buyer should insist on easy access to all working parts; for if it is hard to get at them, they will be neglected until the tractor is disabled at some critically busy time. It is still noticeable that some models do not make it convenient to put a belt on.

One requires a platform to be removed first. Several require one wheel to be jacked up before the belt can be put on.

A few tractors still do not make adequate provision for the comfort and safety of drivers. Most all of them now enclose working parts well nigh dust proof; but not all have yet provided adequate devices to remove dust from air before it enters the carbureter. Practically all admit the necessity of this; but some are altogether too optimistic regarding efficiency of their devices. Several air cleaners were shown separately, but these did not include the dry vortical or centrifugal types. Breather tubes for crank cases are the latest openings to be protected one way or another from dust. In the matter of rating both tractors and trucks, there seems a notable tendency to recognize that a rating to full capacity is morally sure to bring grief to the operator. Therefore, the tractor with a five horsepower motor rated to take the place of one horse is characteristic of several with nearly as conservative ratings.

Overload Not Likely.

This tractor is not likely to be too much overloaded if its user gives it loads anywhere near what the manufacturer recommends. Most of the motors on new machines are of well-known makes. Kerosene-burning devices are in evidence on almost every tractor except the smaller one-horse types, which are designed for gasoline. Most of the new wheel lugs are built to present their faces to the ground at a right angle to the line of draft between tractor and implement. Practically every wheel-type is built to steer automobile fashion with two front wheels; and it is notable that on some the front wheels are of larger diameter in order to ride over ridges rathed than push into them, or to ride over rough ground without jarring into every small depression. Tractors which cater to the orchardist and vineyardist were in the great majority here; and the manufacturers seem to be in earnest in a policy of driving hay-eaters off the land.

Narrowness and low construction, without projecting levers, tanks, etc., is characteristic of this class, while the field-type tractors are mostly frankly not suitable for orchard work. Not so many as usual aspire to fit both the big field work and orchard work, too.

We believe our readers will be interested in notes regarding outstanding features of the tractors and other power machinery, shown here for the first time, and in new features of the better known machines.

The Thorobred, designed years ago by S. T. Allen, designer of the Allen tractor, is a four-wheeler weighing about 600 pounds rated at 18-30 horsepower with Beaver motor. An interesting feature is the lug construction. Lugs are U-shaped castings fitting diagonally on the wheels and having large holes in their faces to let dirt through and to grip the ground better. Ends are open for dirt to fall out. Belt wheel convenient; tractor faces belt driven machines.

The Burbank Farmer, also designed by S. T. Allen, is a track-type watch charm, weighing 1350 pounds. The machine is 3 feet high, 5 feet long, and 26 inches wide. Many of the engine parts are the same as used in Ford engines. This is to be built at Burbank, Cal.

The Keystone track-type tractor of 15-30 h.p. rating is made in Los Angeles. Its feature is the balancing of all weight on the exceedingly big drive sprocket, which engages a large number of teeth at once in the track because the idlers in front and behind it are of much smaller diameter. They catch overbalanced weight on rocker-arms, permitting considerable climbing or dipping of one track without twisting the frame. This tractor is approximately the same as the one projected several years ago by its designer, T. P. Paulsen.

The Oldsmar two-wheel garden tractor was exhibited at the State Fair and at the National Tractor and Implement Show. It is made in Florida for the market gardens by R. E. Olds. With a five-horsepower engine, its distributors advocate it to replace only one horse in order to have plenty of reserve power. It has a single cylinder air-cooled engine, whose clutch is a belt-tightener on the belt which transfers its power to the external gear shaft. A separate gear engages or releases each wheel independently. Another model to take the place of two horses is to be available about the first of the year.

The New Way tractor is a two-wheel five-horsepower machine, claimed to take the place of about two horses in garden work. Its kerosene-burning single cylinder is air-cooled and is ignited by Bosch magneto. A belt wheel in front runs the belt crosswise of the tractor. This machine is being tried out by Robt. H. Green of Los Angeles with a view to handling it in Southern California.

The Parrett 15-30 four-wheeler, built in Chicago, has come West after eight years in the East. The front wheels are four feet in diameter to travel smoothly over rough ground, and the frame is narrowed in front to permit short turning. Its motor is set crosswise to avoid bevel or worn gears in transmission. The drawbar hitches under and forward from the rear axle. Burns kerosene. Lower half of crankcase quickly removable.

The Tioga tractor is chiefly notable for the rocking shoes fixed by springs onto the rims of the drive wheels to give them greater bearing-area. The geared oil-pump governor works by throwing oil against the under side of a float which is forced up or down by a greater or less speed and thus works the throttle. It is said to be effective within four revolutions of any change in engine speed. This tractor is made in Baltimore, but is to be handled for Southern California by the Tioga Company of Southern California of Redlands.

The Toro 12-horsepower tractor and motor cultivator were once shown at the State Fair, but were never pushed much in California. They were at both the 1920 State Fair and the National Tractor Show. The tractor can be converted into a motor cultivator after plowing is finished, the change requiring about seven hours. The motor cultivator is intended for use with all sorts of implements. It is built in four widths for various distances between rows. The tractor is 51 inches high, 44 inches extreme width, and weighs 2400 pounds.

The Emerson-Brantingham Company has been experimenting four years to develop a suitable two-row motor cultivator. They are now ready for quantity production. The one at the National Tractor Show has a 16 horsepower engine, which works through a triple friction drive. Eighteen acres of corn or potatoes can be cultivated per day by one man with this machine, which is priced at $985 f. o. b. California.

The recently introduced Avery six-cylinder two-row motor cultivator was stationed in a small cotton field on the show grounds, illustrating its method of working. A two-row planter attachment suggested the use of this machine for all farm purposes.

A six-cylinder Avery tractor of about six or eight drawbar horsepower was set on four rollers so that it was running standing still and hitched to a power-adjusting double disk. Instead of forward motion on the latter, the rear pair of rollers under the tractor was connected to a gear by chain and sprocket so that when visitors pulled the rope, the disk angled or straightened itself by turning the planks on which they rested. The latter were laid on greased subplatforms.

The Stockton Sure-grip track-type tractor is a new one, built by the Stockton Tractor Co. Its track-drive sprocket is high up out of the dust and direct connected to the transmission eliminating internal or external gears. Two idlers carry the weight, the rear one being beneath and slightly forward from the drive sprocket. Thus the track engages about half of the sprocket diameter and teeth all the time, reducing the strain on each tooth. This little machine develops 1700 to 1800 pounds pull on the drawbar at 2½ miles per hour and has developed 3,000 pounds maximum.

The Twin City 12-20, which is well known, has a big brother of 20-35 horsepower exhibited at the National Show for the first time publicly in California. This is of the sixteen-valve type and is in other respects similar to the smaller size.

The Macultivator is a 200-pound tractor for use with Planet Junior tools, including a five-inch plow. It sells for $240 and is likely to make small gardening quite easy enjoyable work. It is the same size as the Merry Garden noted in our State Fair report as the smallest tractor made.

Could you use 3 hours more a day?

A Western Electric lamp post outside means an up-to-date farmer inside.

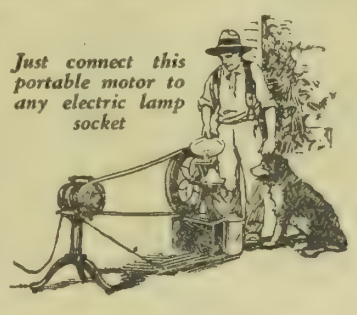
"As a rule we farmers don't give much thought to the value of our time. But we suddenly realize that time is worth money, when milking the cows or mixing the feed keeps us from bigger jobs, out in the fields.

"Last year I made up my mind that I would look for a farm plant with power enough to do real work. The one I picked was the Western Electric Power and Light Outfit, and please notice that putting the word Power first in the name describes the outfit very well. It is powerful. But I'm not going to praise it up to the skies. I just want to describe this outfit and the work it is doing for me, and let you judge whether it would suit your needs too.

The Western Electric Vacuum Sweeper cleans your house quickly and easily.

The battery lasts longer

"It is the 'tapering charge' that makes the Western Electric battery last so long. The charge doesn't strain the batteries, because as they fill, the current gradually slacks up by itself. These batteries are powerful too. They can run my portable motor for hours and hours on a single charge. Or they can operate ten electric lamps for thirteen and a half hours.



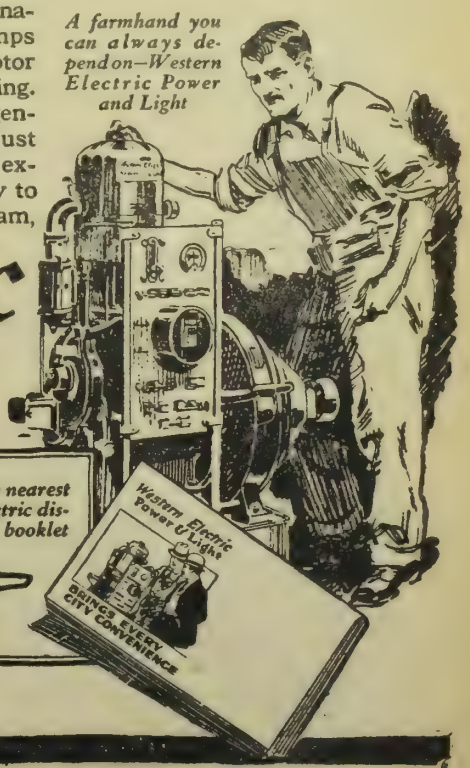
Just connect this portable motor to any electric lamp socket

"Then there is the generator, built for endurance and hard work. In fact, it will run such a combination as an electric iron, twenty lamps and a one-sixth horsepower motor just as long as you keep it going.

"With the batteries and the generator working together, you just add the capacity of both. That explains how I can use electricity to milk the cows, separate the cream, churn the butter, turn the grindstone and pump water.

The powerful engine is a big help

"The Western Electric Outfit has an extra size engine, with a pulley all ready to be hitched up to a lot of the machinery I used to turn by hand. So taken all in all, you can see how I save at least three hours a day for work in the field. And in these times when farm-hands are so few and far between, it is mighty important to have this dependable help that my electric power outfit furnishes."



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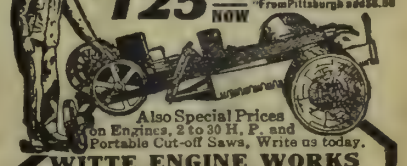

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NEW FOUR-WHEEL TRACTOR.

The long-heralded, long-tested Wizard Model "30" 4-pull Tractor, an effectual four-plow tractor, is now being put into production by the Kroyer Motors Company, and is being demonstrated to the public daily at the Company's thirty-acre factory site, Cherokee Lane, Stockton. The machine is narrow enough to run between vineyard rows, and powerful enough to plow the center at one round. A double disc is easily applied to cultivate the full width of the center. Power is applied to each of the front wheels through an enclosed chain drive. The front and rear wheels on each side of the tractor are so arranged to apply the power to all four wheels evenly and efficiently. A special clutch applies or removes, partially or wholly, the power to either side independently of the other. This turns the tractor as a rigid unit, the wheels being turnably mounted on their axles, which are fixed rigid on the frame. Steering is accomplished by a neat hand wheel through a cam movement operating the specially designed clutches and transmsision. The wheels may be turned in a circle, the radius of which is less than the length of the machine, and this turning movement is accomplished by the specially designed leaders or guides and the manner in which they are surmounted on the wheels.

In the tests the experimental model has worked land sooner than horses could be put on it. Blow sand was plowed and harrowed immediately after without any undue slippage of the wheels. Peat soil has been conquered by the Wizard. The initial production of this tractor is to be five per day, with an output of 1500 for 1921.

Wizard Tractor Companies will handle the distribution of the Wizard from Stockton, Sacramento, Los Angeles, San Francisco, Portland and Kansas City and these companies have been organized by substantial business men in their respective communities.

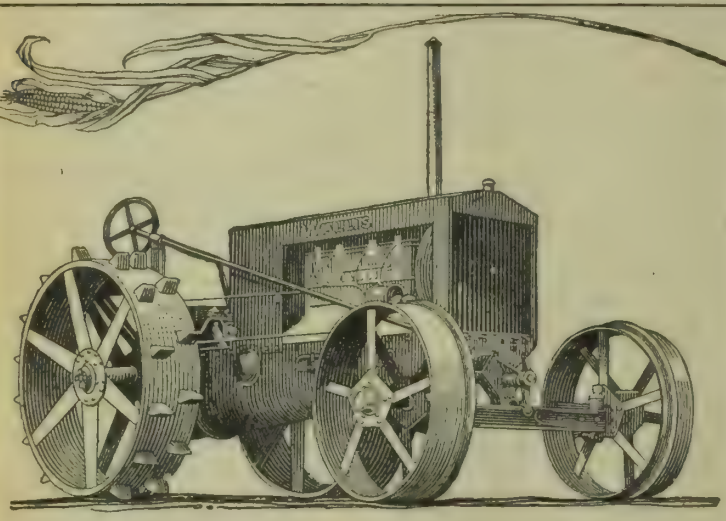
Wizard tractor pulls on all four wheels and rests lightly on them, but works effectively in blow sand and peat soil.

POCATELLO NATIONAL TRACTOR SHOW.

A big degelation from Pocatello, Idaho, visited the National Tractor and Implement Show at Glendale. They represented the Intermountain Tractor-Implement Association, who, according to Ralph Walch of that body, hope to get a national tractor and implement show in their home town similar to the one at Glendale. They have already engaged the services of Manager Guy Hall of the latter show to put it over. It is to be held in June, if practicable.

Wallis tractors are no longer handled by Douglas Boswell, but will hereafter be handled from a factory branch office in Los Angeles. A wholesale shipping establishment will be located at Sacramento for northern California. A complete and ample supply of repair parts is to be maintained at both places. J. R. Adair is the Pacific Coast manager. The Wallis exhibit at the State Fair included an orchard model similar to the field model, but with platform and controls lowered.

The Twin City 12-20 tractor was the first one noted to have been sold at the State Fair.



Working on Schedule with the Wallis

Time waits for no man—the farmer knows this better than any one else. If he doesn't get his work done when it should be done, his crop and his profit both suffer Wallis—AMERICA'S FOREMOST TRACTOR, *removes* this danger.

Because of its powerful light-weight construction the Wallis works steadily where heavier tractors fail. There is no packing of the soil, which makes for the best kind of a seed bed. To gain this desirable light weight the Wallis does not sacrifice one iota of power. Bulk is eliminated by the use of high grade steels and by advanced design. The powerful U-shaped frame (to be found only in the Wallis) is a shining example of rigid strength combined with light weight.

Wallis—AMERICA'S FOREMOST TRACTOR, works on schedule. It will do as much tomorrow as it does today — there is no uncertainty in its performance. Thousands of Wallis farmers have proved to their own satisfaction that Wallis power really means more acres per hour — more acres plowed, disced, dragged, seeded or cut.

If your neighbor owns a Wallis ask his opinion. Or write us for complete information on what the Wallis will do on your farm.

J. I. Case Plow Works Company
Dept. A477 Racine, Wisconsin

WALLIS
—more acres per hour

NOTICE: We want the public to know that the WALLIS TRACTOR is made by the J. I. CASE PLOW WORKS COMPANY of Racine, Wisconsin, and is NOT the product of any other company with "J. I. CASE" as part of its corporate name.

"Specially Built for the Farmer and His Farm"

THE STOCKTON TRACTOR

Built by Competent Tractor Men

"Stockton" tractors are the products of experienced tractor engineers, men who have had years of experience in building and selling farm tractors to meet Pacific slope conditions.

In the "Stockton" they have produced a light, durable, economical, and simply constructed farm tractor that is low, short and narrow.

In it are incorporated all those salient features considered necessary by nationally known tractor investigators to produce a successful tractor.

It develops unusual power at the drawbar through correct gear reduction.

It is the narrowest tractor on the market in its field—giving it opportunity to work in rows where other machines cannot work.

A Standardized Farm Power Unit

The "Stockton" is built of "Standardized" parts—you know them, every good mechanic knows them—they are the "best" parts for the maximum service they are to give.

The correct combination of these items of engineering skill, with the basic principle of "Stockton" tractors, **"mighty power plant in a small space,"** has produced the ideal small tractor.

For All Types of Soil

The "Open-Wheel" type is ideal for general farm, orchard, and vineyard conditions, giving maximum traction without packing the soil.

We recommend the **"Sure-Grip"** type for all classes of farm work, and particularly where the soil is wet or marshy, or where there is extreme sandy conditions. It is the ideal tractor for the rice farmer, on account of its traction, and narrow width, enabling close cutting to the checks.

BUY A TRACTOR—NOT A PRICE—BUY A "STOCKTON"

These are Tried and Proven Tractors

"Stockton" tractors are built to a Standard and not to a Price. They are proven machines.

The combination of "Standardized Parts" with "Oversize Construction" has produced a strong, sturdy farm power unit.

The "Open-Wheel" has been on the market and giving satisfactory service to owners for two years.

The "Sure-Grip," after exhaustive tests covering a period of one year, is now being built in quantity production to meet the demand.

Responsble Dealers Sell the "Stockton"

Many progressive and responsible dealers throughout California are recommending "Stockton" tractors. Traveling service men are continually in the field to give advice. In case of accident the centrally located factory at Sacramento, California, insures prompt delivery of spare parts.

Write us for the name and address of the nearest dealer of "Stockton" tractors in your territory. He will be glad to give you a practical demonstration. We want a few live dealers—Territory is limited.

Get in Touch with Nearest Dealer

A. B. JOHNSON COMPANY
Exclusive Distributors
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Sacramento, Cal.

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Los Angeles, Cal.

Dairymen Are Backing Co-operative Principle

Written for Pacific Rural Press by Ralph Newman.

The deeper I go into the minds and hearts of the organized dairymen of this State, the more insistently do two convictions haunt me.

The Co-operative Movement Menaced.

The first one is that the assault being made on organized dairymen is but the local manifestation of a nation-wide attack on the whole hope-fraught principle of collective bargaining for farmers. The whole co-operative movement, beginning to loom large, is being attacked in its vitals. So far as his own line is concerned, the dairyman knows this; all over the United States the tendency among middlemen in recent years has been toward centralization and the gathering of the manufacture and distribution of dairy products into a few hands, and those few hands practically united. The few creameries, condenseries and milk companies have been growing bigger and stronger while the many have been growing smaller and weaker, or dropping out. A little group of men in the nation control the creameries; a little group of men in a large city control the distribution of milk. None of these, however, nor all of them, own or milk the nation's cows, though some of them do own cows. I have heard, but hope it isn't true, that one fruit company has had a dream of a time when it can own enough orchards to control the fruit of the world. Probably no milk man ever dreamed of owning all the cows, but they virtually dreamed of owning the men who do own and milk the cows, which would be even better. Just before the war they seemed about to realize that dream—when the dreamless dairyman woke up. He awakened all over the country, and all over the country, no matter what form his organization took, so long as he attempted to meet centralization with co-operation, he got just what the dairymen of California are getting.

Makes Black Look White.

When you tell a local dairyman that the present prosecutions are aimed, not at the principle of co-operative marketing for farmers, but only at some details of his particular form of organization, he will meet you with instances from all over the country of assaults from almost every angle on almost every form of farmer's organization in any way involving the principle of co-operative marketing; and he will hammer away with his facts and illustrations till I will be hanged if he will not make you see that he is right, that all these proclamations about "innocent people" and "the co-operative principle rightly used" are mere camouflage.

He will tell you that Webb's "opinion" is predicated almost solely on the San Francisco unit of the State Federation. Then he will quote what the Attorney-General said about the Northern Association and the Corporation law. Then he will point out the fact that the San Francisco unit is organized under the Corporation law.

He will call your attention to the fact that he is damned for posing as a non-profit association, attempting to manufacture its own product, while his brethren in Ohio were thrown into jail in the middle of the night because they were a stock company doing a commission business in milk for themselves.

And he will further remind you that, while here and now it is the dairyman who has drawn the fire, in other places it is the co-operative wheat grower, while tomorrow goodness knows where the shells may be dropping.

It is not this form or that form of organization that is really objected to—that's camouflage; it is the idea of dairymen attempting to defend themselves by doing a little "centralizing" on their own hook. And it is not the dairyman alone—he is just the present goat; it is the farmer in general and everywhere who, sooner or later, must fight for his co-operative life. The principle of collective bargaining for farmers is at stake. The whole fine, world-saving principle of co-operation is being systematically attacked. I cannot get away from that conviction as I talk with dairymen and study their problem.

A Haunting Conviction.

The second haunting conviction is that if the present attempts to up root the co-operative movement among farmers, by a resort to politics, continue, political consequences may follow that may be far-reaching.

I cannot speak for other lines of agriculture, but dairymen are not going back. No doubt it would be highly satisfactory to the exploiting interests if the associations could be broken up and the dairymen driven back to the good old days when the organization was all on one side and the dairyman stood alone and absolutely helpless. But if I know the dairyman at all, he is not going back. It would be well for everybody to get that fact clearly fixed in mind. The dairyman can't go back. He can cease being a dairyman, and he will before he is ever forced back. This isn't a threat on his part; it is a profound determination in the minds of hundreds of him. But he is in no mood for doing either one thing or the other. His present feeling is varied by one of his persecuted eastern brothers, who said: "If we cannot do business collectively under the Valentine act, there is just one answer. We will go to the legislature and amend the act, or write a new one."

Remember that the organized dairymen embrace almost every known form of co-operative organization. They have their local associations, their state association federating these locals, and a national organization federating the states. When you hit one dairyman today, you must answer to dairymen from one ocean to the other. The organized dairyman hasn't yet fully realized his power, but he is beginning to realize it. Must he wield that power politically to save a basic industry from ruin at the hands of organized greed? If he must use it, how shall he go about it and what of the outcome? There is both hope and peril in the present temper of American dairymen, backed as they are by the sympathy of all other organized farmers and most unorganized ones.

Political Action and Reaction.

There is one incident in recent agricultural history that all of us should neither ignore nor damn, but study. Several years ago, in the Middle West, there was formed an organization for the co-operative marketing of farm products—that and nothing else. It began to cut into the profits of great, privately-owned corporations. What did these corporations do? They went into politics and used the courts in an effort to disrupt the co-operators. They finally enlisted the support of one whole state government to keep its farmers from getting the machinery that would have enabled them to reap the benefits of co-operative marketing. That political action had its political reaction, the momentum of which carried a whole great state beyond the unquestioned good of co-operative ownership into the questionable experiment of state ownership—and the end is not yet. Rright now, in California, it behooves all of us who love our state and wish its development along sane, broad, humanity-fostering lines, to sit up and take notice.

Maybe I have let slip a few strong words. Isn't it the time for strong words and real he-man thinking and acting? The dairymen are not going back.

The biggest hay press outfit at the State Fair was the "Junior" Monarch.

Farm Bureau Again Comes to the Fore

(Written for Pacific Rural Press by Thos. F. McConnell.)

The California Farm Bureau is coming more and more into the life of the ranchers of the Golden State and much to their benefit. Their latest achievement in collaboration with the California Dairy Council is a purebred dairy bull sale at Petaluma on Friday, September 24. Not a breed sale but a sale of breeds such as registered Holsteins, Jerseys and Ayrshires were sold.

Why such a sale? Just stop and think that Sonoma and Marin counties are regions of grade or scrub dairy cattle with but very few registered cattle raised in them. We are talking "Better Sires and Better Stock" all the time, but how is a dairyman 200 miles from a purebred herd going to get what he needs. He hears about the high prices obtained for bulls at the much touted auctions and at private treaty and even if he knows about the sales or herds, he thinks the prices too high, the distance too great and time too precious for him to attend and supply his needs. Therefore, he raises his own scrub bull or buys a like one from his neighbor.

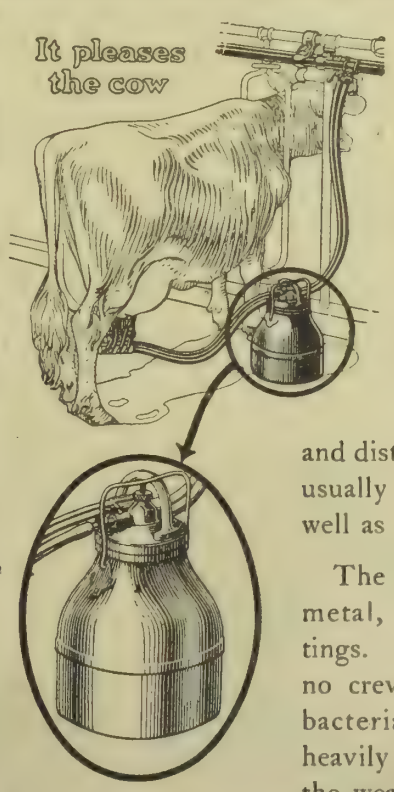
The two organizations mentioned with Farm Adviser Weinland of Sonoma county and Secretary Sam Greene of the California Dairy Council, working for them, had gradually whipped the project into shape, persuaded breeders to consign and held the sale. The stock consigned was passed upon by a plucking committeee, who made the selections from both the viewpoint of conformation and performance. In other words the bulls were brought into the locality where needed practically to the dairymen's door. He had hardly to travel further than his own postoffice.

Bulls from outside were consigned by D. E. J. Weldon of Sacramento, who brought over 7 young Holstein bulls of service age; A. B. Purvine of Petaluma consigned two Jerseys and E. E. Greenough of Merced one; Ayrshires were brought by R. H. Trumbull of Novato. Two consignors of Jerseys failed to send their animals, which is much to be regretted as there was a brisk demand for stock of this kind.

Altogether 16 animals were sold, including 3 calves, for $2,605, or an average of $162.81. The top animal was a Holstein, a grandson of Tilly Alcartra, consigned by Dr. Weldon, which brought $420. The Jerseys consigned by A. B. Purvine brought $300 each, with the Ayrshires selling for a somewhat lower figure. A 7-months-old Brown Swiss calf brought $95 in usual farm condition. Every animal was sold that was on the ground and more could have been disposed of especially of the Jersey breed.

Most of the bulls sold were in usual farm condition, which is to be deplored. Owners of the ordinary dairy herd using a scrub bull when he buys a purebred animal expects something that not only is better, but also looks better than what he has at home. Therefore, wash, clip, brush and teach to lead all animals intended for the sales or show-ring.

A new method of getting the purebred sire into the grade herds and due credit should be given the Farm Bureau of Sonoma county and Sam H. Greene of the California Dairy Council for promoting and successfully holding the first sale of its kind. Take the purebred bull to the dairyman who has scrub cattle.



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The pail is made of sanitary white metal, with nickel-plated brass fittings. It is of sanitary design with no crevices or sharp corners where bacteria might congregate, and is heavily reinforced and protected where the wear comes—made to give long and satisfactory service as other De Laval products.

The De Laval Milker is positive and uniform in action from day to day, and it is faster, more reliable and more sanitary than any other method of milking. Wherever cows are milked the world over, the name "De Laval" stands for quality and highest value to the user.

Write to nearest De Laval office for Milker Catalogue, mentioning number of cows milked

DE LAVAL DAIRY SUPPLY CO.

61 BEALE STREET SAN FRANCISCO, CAL.

Los Angeles Livestock Show Sets Record

(Written for Pacific Rural Press by R. E. Hodges.)

'Twas a rare occasion in history when the livestock entries closed on the advertised closing date and would-be exhibitors pleaded unavailingly until the opening date, as happened in regard to the Los Angeles Livestock Show being held in the southern metropolis, October 2 to 10. When Manager C. R. Thomas went to the State Fair, he left word for his helpers to wire him on the closing date, September 5, regarding the entries. They wired that more than the space provided for would be filled by entries already in. That meant that the 125,000 square feet of exhibit pens would be insufficient and more would have to be built in a hurry. Thenceforth, until the opening date, breeders who wanted to exhibit had to be refused. The seventeen sheds, each about 125 feet long and 24 feet wide, have been supplemented by ten more; and building still proceeds. The more than one hundred thousand dollars put up by loyal Southern Californians to assure success of the show and payment of the $55,000 premiums, etc., has dwindled more than could have been foreseen, because the show has enlarged far more than had been foreseen. The first seventeen sheds are said to have cost $40,000.

But it all goes to make the finest and biggest livestock show ever held in the Southwest; and lovers of the best that has been produced in the world by centuries of selective breeding will enthuse over the animals here. The show is at least forty per cent greater than the splendid aggregation exhibited last year.

Southern California Reveals Her Stock.

Two thousand purebred animals are listed, not including poultry, racehorses, rodeo horses or pet stock. They are shown by about 169 exhibitors, besides 200 poultry exhibits, to include 1750 birds, 500 pigeons and 500 rabbits, all to be located in a separate tent. Animals come from many States from Atlantic to Pacific between Canada and Mexico. Withal, however, it will be a revelation of the wonderful livestock actualities of the Southwest, and particularly of Southern California. Other sections will rub their eyes a bit and kick themselves for being sleepy at the switch.

Of the 150 Holsteins coming to the Livestock Show from California and Arizona, over two-thirds are from Southern California herds. Of the five Jersey exhibitors, four are Southern Californians. Of the four Guernsey exhibitors, three keep their herds in Southern California and one brought home grand championship honors from the State Fair as well as the highest score for milk ever given at the National Dairy Show. Ayrshire herds come from Arizona and California.

Eight Shorthorn exhibitors bring herds from California and Colorado. A dozen Hereford exhibitors represent California, Colorado, Arizona and Iowa. These include at least two Polled Hereford herds, newly developed from the horned strain. Three Angus herds will be at Los Angeles from Washington and Cailfornia. Five fat cattle exhibits from Washington, Colorado and California in the competition will illustrate the superior feeding qualities given by more or less pure blood.

Forty Duroc Exhibitors.

Twenty-nine Duroc-Jersey exhibitors have entered the main contest and eleven Duroc pig club members will compete with the results of their best efforts. Practically all of these are from Southern California. Yorkshire and Tamworth hogs from South Carolina are there, and two breeders of Tamworths from Illinois hope to share honors. Six Southern California Hampshire hog breeders are hoping to win with their stock. Nine Poland-China breeders and eleven Poland-China pig club members will give a representative show of the American breed, mostly from Southern California. Berkshires are represented by half a dozen California breeders, besides eight Berkshire pig club members. The pig club members will have a special barn for their 76 head. Six hundred dollars in prizes have been offered to them in five prizes for each class ranging from $6 to $2 each.

Thirteen goat breeders will exhibit.

Four Percheron horse breeders are entered. Three will show Shires; one will show Belgians, one has Clydesdales. Two exhibits of Standardbreds, four of American saddle horses, one of Arabians, three of Thoroughbreds, four of jacks and jennets, and three of mules, all are from California. A special horse show, staged in eleven divisions for $7,500 in purses, promises to bring out many high steppers and more admirers. Running races, a rodeo, and various surprise events are promised. Special accommodations for women and children and free parking space for automobiles are provided.

A real educational dairy exhibit is staged. An attractive comparative food exhibit has been arranged by the California Dairy Council. Representations of various foods in the quantities required to equal the value of a quart of milk will waken many people to the fact that they may economically use more milk and less of other common foods and get more for their money at present prices. A trained woman will talk to children and parents regarding the necessity of milk for children. A "milk bar" will serve the life fluid in many delicious forms. The Farm Bureau will maintain a demonstration herd to show the benefits of belonging to a cow-testing association.

Central Milk Producers Fail of Quorum

(Written for Pacific Rural Press by Ralph Newman.)

Once more the dairymen of the Central California Milk Producers' Association, who are wrestling with the question of co-operative or no co-operative marketing of the product through the State Association, have failed to take action because of no quorum. It takes over a thousand men to make a quorum and to get a thousand busy dairymen together at one time seems an impossible task. Meanwhile, the Central Association is all stirred up and the rest of the associations are holding their breath. For the sake of all concerned, some definite action should be taken and taken soon.

The meeting at Modesto Saturday was not in vain, however, for it revealed some significant things.

Everybody seems to realize that the steam-roller tactics employed at the meeting of August 14th constitute a serious blunder and the chances are good that no attempt will be made to repeat them.

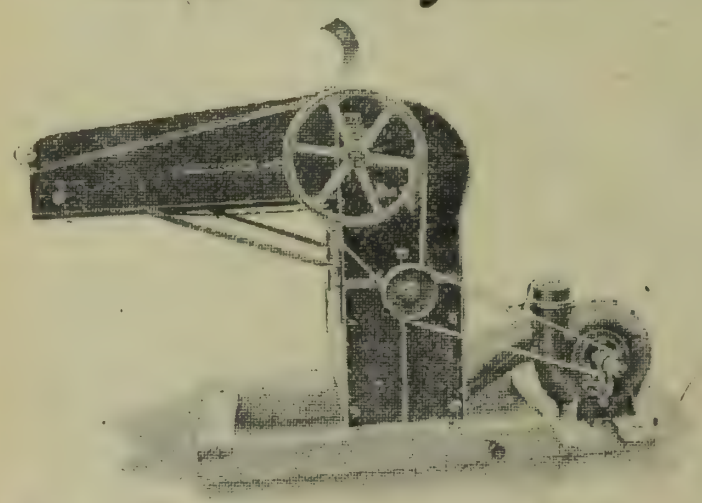
Nearly everybody, too, realizes that mud-slinging does nothing but dirty up the place, and that phase may be considered a thing of the past. There was very little of it Saturday and that only as a sort of appendix to the meeting which, while it could take no action, made headway by forgetting personalities and discussing principles.

Most everybody realizes also that the time has come to talk less and act more. A plan was mapped out to call meetings in different parts of the territory to be held in the evening when local dairymen can attend. At these meetings, and by personal solicitation if it shall be necessary, an attempt will be made to secure enough proxies so that in the near future a general meeting may be had at which official and final action may be taken.

The insurgents—meaning thereby the dairymen who are not supporting the directors in their stand against co-operative marketing through the State Association—say all they are insisting on is an expression by the majority. This they are bound to have and the spirit of the meeting Saturday would indicate that they will abide by the majority decision, whatever it may be.

The butter industry of the United States is so large that more than a ton of butter was made per minute, day and night, last year.

Notice to Stockmen and Dairymen



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E. PETERPOSTEN

WILL SELL HIS ENTIRE HERD

Registered Holsteins

October 20, 1920

Mr. and Mrs. Peterposten are going back to Switzerland for an extended visit, and their very fine herd of Holsteins will be sold at public auction on the above date.

An Opportunity to Buy at Your Own Price
Good Producers and Representatives of the Good Blood Lines of the Breed.

Everyone who has seen Mr. Peterposten's cows has pronounced them especially good. They have been among the leaders in the Stanislaus Cow Testing Association for the last two years. This is saying a good deal in a county like Stanislaus. Here are some of the records the cows have made in the regular dairy herd milking twice a day.

14,951 pounds milk and 634 pounds butter by a 2-year-old.
14,417 pounds milk and 603 pounds butter by 3-year-old (in 9 mos.)
15,556 pounds milk in 10 mos. by a 3-year-old.

Official Records—In the last few months Mr. Peterposten has done some official testing. The results would surely indicate that Mr. Peterposten was not only a good dairyman, but that he had some very good cows. A 20-lb. three-year-old, a four-year-old that has milked continuously since her first freshening and at her last freshening made 508 lbs. milk and 17.1 lbs. butter in 7 days without any fitting (Mr. Peterposten says she is a 30lb. prospect if there is one in the state), another with little fitting made 536 lbs. milk and 28.77 lbs. of butter during the hottest days this season. Most of the 20 cows in the sale will have been officially tested before sale time.

GREAT SIRES—Such great sires as **Prince Gelsche Walker** (a daughter of his and sister to the $12,000 bull is in the sale), **Romeo Aaggie Acme of Riverside, Sir Skylark Ormsby Hengerveld,** and **Colantha Johanna Lad** are represented in this offering.

There are seven as beautiful heifers as you can find in any herd of its size anywhere; the balance of the offering is made up of young bulls and calves dropped in the last ninety days that are sired by **Ensign Wayne Colantha,** a thirty-one pound bull. The herd is in especially nice condition and you will be sure to appreciate them if you will attend.

The sale will be held under the auspices of the

STANISLAUS COUNTY HOLSTEIN BREEDERS' ASSOCIATION

Catalogs ready October 1. Write at once for yours.

E. M. MORROW, Secretary, Modesto.

IDEAL
GREEN FEED SILO

Why Experts Selected the Ideal

Anyone can manufacture a silo with the same lasting qualities as the Ideal Green Feed Silo.

Anyone can build a silo of long-lived California Redwood.

Anyone can prevent leakage by using heavy refrigerator doors that provide a three-point contact on all four sides. Anyone can employ the same methods of making the walls sturdy and airtight.

But the fact remains, that in spite of the many silos being made, the University Farm at Davis selected Ideal Green Feed Silos.

The agricultural experts at Davis chose the Ideal because of its ability to yield returns long after it has paid for itself. Their judgment in selecting silos should be of benefit to you.

You will find it profitable to investigate the Ideal Green Feed Silo. The coupon will save writing a letter for complete information. Mail it right now.

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318 Market Street (Dept. A) **911 Trust & Savings Bank Bldg.**
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Please send me complete information regarding the Ideal Green Feed Silo.

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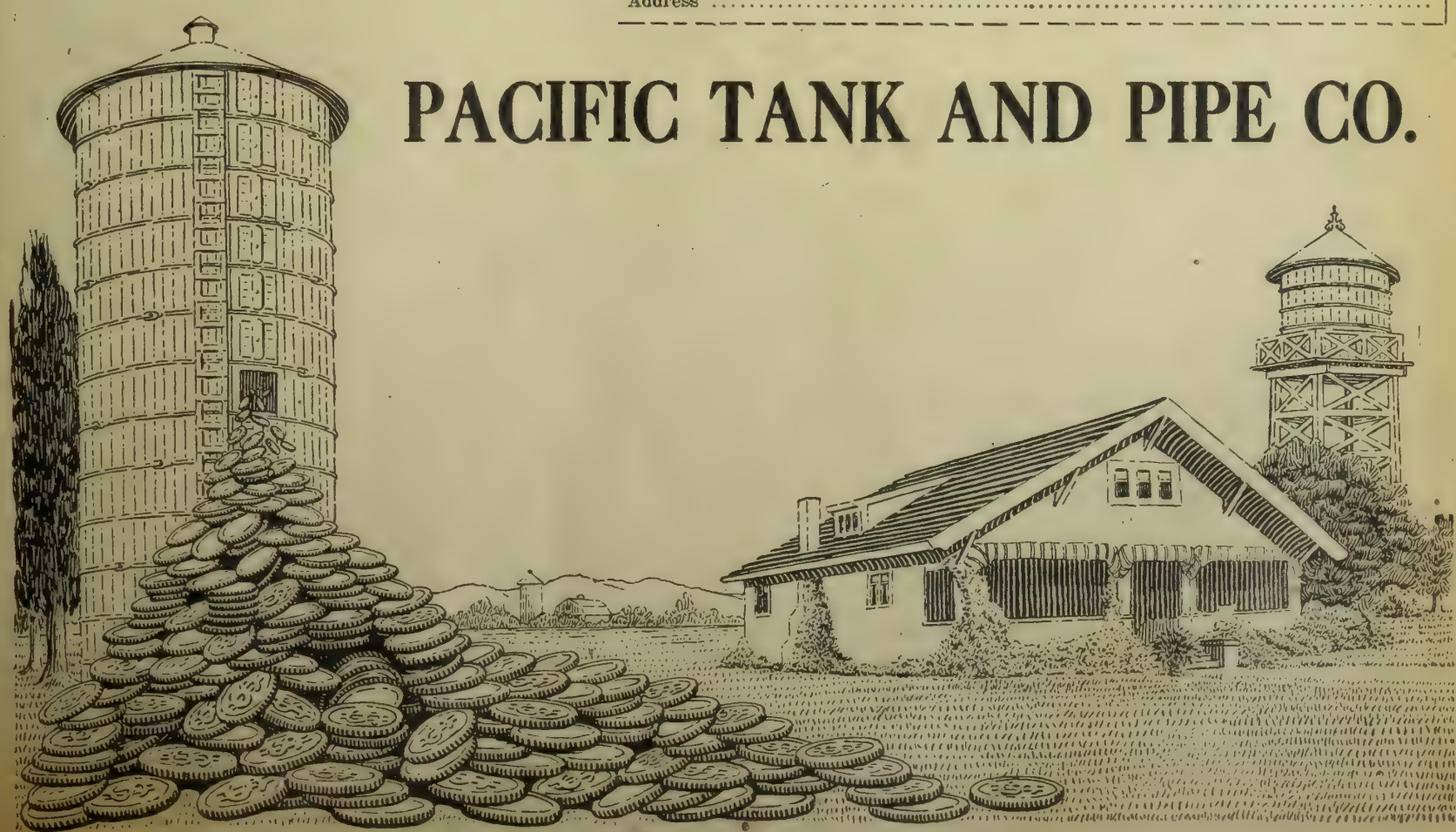

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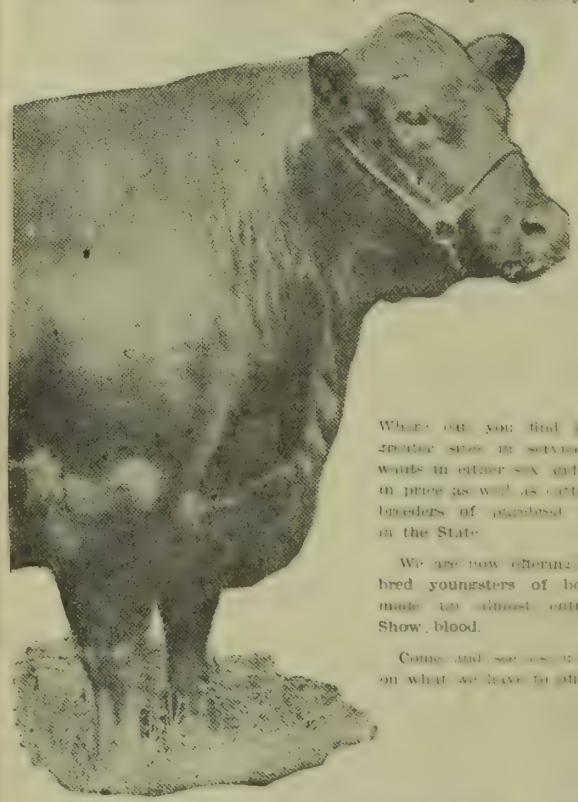
ABERDEEN-ANGUS CATTLE

HERD HEADED BY

QUINCY LAD 2ND, NO. 173126

Sire, Equity Boy, No. 144180. Dam, Della Queen, No. 112131.
Junior Sire—BLACK CAPON, No. 185820
Sire, Erston, No. 135728. Dam, Blackberry McHenry 81st, No. 125467



Purebreds Increase Profits

Where can you find a combination of two greater sires in service? We can fill your wants in either sex and guarantee satisfaction in price as well as cattle. We are the largest breeders of pure-bred Aberdeen-Angus cattle in the State.

We are now offering some very fashionably bred youngsters of both sexes. Our herd made up almost entirely of International Show blood.

Come and see us or write for information on what we have to offer.

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Greatest Combination of Educational, Livestock Features and Program of Amusement Events Ever Held in Los Angeles During One Show

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SATURDAY, OCTOBER 2, TO SUNDAY, OCTOBER 10, Inclusive

$50,000 CASH--Premiums and Purses

Daily Judging of Livestock 9:00 a. m.—Daily Amusement Program 1:30 p. m.

ADMISSION 50 CENTS

Exposition Park

HILLCREST STOCK FARM

Shorthorn Cattle

Won at Sacramento Both Championships
7 Firsts and 5 Second Prizes

Shropshire and Merino Sheep

RAMS AND BULLS FOR SALE
Single or in Carload Lots
See Hillcrest Shorthorns at the State Fair

T. S. GLIDE, Prop. DAVIS, CALIFORNIA

The cow-testing department of the Mendocino County Farm Bureau has been recognized and several more dairymen are taking up the work.

Iowa boasts the largest cattle barn at any fair grounds in the United States. It cost $200,000.00 and has stalls for 1,600 cattle.

Livestock and Dairy Notes

The Dairy.

Gue of Yakima, Wash., and Clark of Modesto will be the auctioneers at the Peterposten and Benoit Holstein sales.

On the Freitas & Theodore dairy at Napa two men with two double unit machines are milking 85 cows. The machines have been in use three years.

The Doyle & Davey certified dairy at Dixon is hauling its milk into Oakland in huge motor trucks, believing the service better than the railroad can give.

The first registered dairy bull sale, including four different breeds, was held in Petaluma on September 24. Sixteen bulls were sold to head grade and scrub herds.

Monte 1st, the Napa State Hospital "world champion grade cow," who made 1064.8 lbs. butter in 1918, is fresh now and looks as though she might do it again.

Where water is available dairymen are still irrigating alfalfa. If another cutting is not made there will at least be a fine lot of pasture to increase milk flow and bloat.

Westlawn Farms, H. E. Vogel, Fresno, will have a dispersal sale of the entire milking herd of registered Holsteins. Date of sale has been tentatively fixed for December 1st.

The Napa County Farm Bureau Exchange is doing a thriving business. They handle large quantities of concentrates for poultry and dairymen and are a big factor in keeping prices at a reasonable level.

Toyon Farm Association will hold a sale of November 10 and 11 of 150 head of tuberculin free Holstein-Friesian cattle. This will undoubtedly be one of the greatest sales of the breed ever held on the Pacific Coast.

An angry bull nearly killed J. C. Brooks, a Merced farmer last week. Mr. Brooks was milking when attacked and was saved by the efforts of his wife and dog. Lookout for the bulls; they are fully as dangerous as the unloaded gun.

The Oregon Dairymen's League has sprung something new. They have secured a temporary injunction from a state circuit court restraining Frank Glass and his henchmen from attempting to induce league members to break their contracts.

Last week the dairymen at Napa State Hospital were busy filling the two big, concrete silos with corn. This is the best possible use that could be made of all the Napa Valley corn for lack of moisture late in the season makes grain a poor prospect.

C. J. D. Nicholas of New York is another eastern man who has fallen for the lure of California and ranch life. He and his wife with their two sons, who acquired a liking for outdoor life during the war are located on a dairy ranch on the Rincon grade out of Santa Rosa. Mr. Nicholas purchased a Jersey at the recent purebred bull sale at Petaluma.

A dairyman of Sonoma county has a cow 22 years old that has always led his herd in production. Her nearest daughter is lacking 221 pounds of her dam's record. This dairyman is and has been for years using bulls from his own herd, which shows this great individual cow to be a freak. If he had used purebred bulls the results would have been different.

From the California State Fair comes the news that the Brant Rancho, Owensmouth, won both first prizes in the classes of guaranteed milk and guaranteed cream. Adohr Stock Farm, owned by the Adamson Corporation, Los Angeles, won first prize in the certified milk class. This is another feather in the cap of the Guernsey breeders as the winning products were all produced by animals of this breed.

Another Ayrshire cow has gone over the 20,000 pound mark. She is Voca 5th of Avon, owned by W. P. Schanck of Avon, N. Y. Without any preliminary fitting she went on the A. R. test July 28, 1919, and in a year made 741.91 pounds fat from 21,123 pounds milk.

The colonists on the Delhi State Land Settlement will shortly decide what breed of dairy stock the Settlement will adopt. The choice lies between Holsteins and Jerseys.

The Lone Oak Farm (J. E. Benoit) Registered Holstein sale will be held at Modesto, November 6th, under management of the Stanislaus County Holstein Breeders' Association.

Swine and Swinemen.

The Stanislaus County Poland-China Association will hold a bred sow and gilt sale at Modesto, January 19th.

The purebred pig-feeding contest in Yuba county showed a net profit above feed and labor of $6.61 for 120 days' test.

The Stanislaus County Poland-China Association will hold a bred sow and gilt sale at Modesto in January, the date to be fixed.

Thomas C. Christensen won the 1920 prize—a purebred cow—for having the best dairy herd in the Durham Land Settlement.

The San Benito county Farm Bureau has taken up the question of improvement of their livestock with especial reference to swine.

Three carloads of hogs in Cottonwood, Shasta county, were sold at the Farm Bureau auction recently. The toplot brought $15.75.

The Farm Bureau Hog auction, held on September 21st at Turlock, was successful in every way. The 70 top in one car, averaging 202 lbs., sold for $15.35, and 73, averaging 160 lbs. for $14.

At Madera, on September 26th, 1[illegible] hogs were sold for $15.25 per hundred while the same grade marketed in the usual manner at Chowchilla brought only $14. This is about the usual difference.

Professor Haring of the California College of Agriculture, in commenting on the work of immunizing hogs stated that science's battle against disease in animals would be totally stopped if the proposed antivivisection measure number 7 on the November ballot were adopted.

Ten brood sows, constituting the remainder of a Big-Type Poland-China herd owned by Chas. Gatewood of Fresno, was sold by him on the 23rd of September to C. H. McNeil of Fresno. Mr. McNeil has been selecting a herd whenever he could find an[illegible] that suited, and by this purchase he has now a foundation on which to build a bunch of sows second to none in California.

The Napa County Farm Bureau has a variation on the hog auction plan. Instead of calling buyers in to an auction sale, they own and operate a big truck, gathering up and hauling the stock into the packing plants. By exercising care in taking even graded loads they get top prices, and the service costs the grower less than freight would if he shipped independently. Moreover, the truck gives much quicker service and saves on shrinkage.

Beef Cattle.

One big feature of the Los Angeles Stock Show and Fair will be California Cattlemen's Association Day on October 7. Leading stockgrowers from every section of the State will meet in the Assembly Hall of the Agricultural Building at the fair to discuss the many present problems confronting the industry. This meeting is expected to bring out the views of the Southern cattlemen on the steps to be taken by the State Convention of the Association, which will be held in San Francisco early in December.

THE SHORTHORN BREEDERS MEET.

What was slated for a directors' meeting of the California Shorthorn Breeders' Association in San Francisco, September 23d, resolved itself into a general and informal discussion of questions relative to the welfare of the breed owing to lack of quorum.

One thing that was brought up and rightfully objected to was the location of a motorcycle attraction on the far-famed "jazzy" street at the State Fair ,so close to the judging tent in which the beef cattle were exhibited that the noise emanating from it at frequent intervals made it impossible to hear the announcing of the awards and other important matters.

The matter of judges was pretty thoroughly discussed and a selection of well known competent and impartial men was placed on a list to be submitted to the State Fair Board.

A livestock show in San Francisco or Oakland for 1921 was mentioned, and it was the sentiment of the meeting that a permanent show should be established about the "Bay" in suitable buildings situated so that adequate passenger and freight transportation would be available.

FRESNO DISTRICT FAIR BOOMS.

Everything points to a record-breaking fair in all departments. The livestock exhibit is greater than ever was stated by the officials who have the management of it in hand. Draft horses, dairy and beef cattle, sheep and swine all are ready for the placing by the experts.

The machinery exhibit was bewildering in its extent and variety. It is truly a demonstration of progress when one harks back 50 years and thinks what constituted a machinery exhibit at a county, district, or even a State fair half a century ago and then considers the one in Fresno this week.

Fruit? Well, what would you expect from a county or district like Fresno. Entrancing, delicious, glorious—yes, go on and use up all the adjectives known to those who really can write or speak English, and it would do the subject justice. All we can say is that we hope you all saw it.

The one thing that Fresnans are really counting on for the grand finale is the great new speedway constructed at the expense of a quarter of a million of dollars.

LIVESTOCK DIRECTORY.

Rate, 4c. per word. Cash must accompany all orders.

SWINE.

Duroc-Jerseys

SELLING OUT—Lovely cherry-colored reg. Durocs: sow with seven young (two weeks old), beauties, $150.00; gilt (7 months), $45.00; two gilts (4 months), $35.00 each; two boars (4 months), $40.00 each. Crated f. o. b. Placerville, Cal. Dr. Henry A. Malley, Placerville, Cal.

DUROCS—BIG-TYPE—HIGHEST QUALITY—popular blood lines. Herd headed by Johnson's Defender, Jr., and Western Pathfinder. Bred sows and gilts and young boars for sale at moderate prices. Greenwood Farm, Witherow & Stafford, Live Oak, Cal.

BOYANNA BIG-TYPE DUROCS—Buy Durocs now. We offer bred and open sows, gilts, service boars and weanlings—all of excellent conformation and breeding. Write us and get get good ones. J. Boyd Harrold, Dixon, Cal.

BRED SOWS AND GILTS and young stock. Pathfinder and Great Wonder I Am breeding. Monthly payments, if you wish. Derryfield Farm, Capital National Bank Bldg., Sacramento.

BIG-TYPE DUROCS—Herd headed by California Orion King. Am offering excellent young boars at right prices. Inquiries invited. Harvey M. Berglund, Dixon, Calif.

LAMB'S DUROCS—Seven good sows with litters, weaned pigs and choice open gilts ready to breed. Priced right to close out the herd. Elmer Lamb, Ceres, Calif.

DUROC-JERSEYS — Fine big-type gilts, tried sows and boars, Eastern and California bred. H. P. Slocum & Son, Willows, Calif.

WINSOR RANCH DUROCS—Young boars and some top gilts bred to WINSOR'S GIANT ORION—Morris C. Allen, Mgr., Bonita, Cal.

REGISTERED DUROCS — Choice gilts and weanlings, either sex. Breeding and satisfaction guaranteed. H. E. Boudier, Napa.

BIG-TYPE DUROCS — Gilts and boars of Winsor's Giant Orion breeding. Falfadale Farms, Perris, Calif.

FOR THE BEST in Durocs, write June Acres Stock Farm, Davis, Cal.

ROCSTEIN RANCH DUROCS headed by Lord's Orion Cherry King. Breeding stock for sale at all times. W. M. Way & Son, Rt. 1, Box 320, Modesto.

JACK LONDON RANCH, Glen Ellen.—Exceptionally good weanlings. Bred sows and gilts. One good yearling boar and one fall boar. Prices reasonable.

Poland-Chinas.

TOHOQUA POLAND-CHINAS — Big type. A good big tried sow to sell. Has farrowed two litters of ten pigs each. Bred for August farrow. Also a dandy young boar pig from the Grand Champion sow of Glenn Co. Fair. This stuff is good, fully guaranteed and priced to sell. Ferguson and McKaig, Orland, Cal.

ELDERSLEY AND SHADY BROOK Farms big-type Poland-Chinas that make money for the Feeder, the Farmer and the Breeder. Prices reasonable. J. H. Ware, Brown's Valley, Calif.

WAUKEEN HERD POLAND-CHINAS — Home of King's Big Bone Leader. A few service boars for sale. Les McCracken, Ripon.

LAKESIDE STOCK FARM—Large, smooth and big-boned Poland-Chinas. Geo. V. Beckman & Sons, Lodi, California.

REGISTERED POLAND-CHINA SWINE — Prize-winners. Finest stock in the State. Bassett Bros., Hanford, California.

BIG-TYPE POLAND-CHINAS—Good as the best. Always glad to show you. Houck & Lewis, Winton.

REG. BIG-TYPE POLAND-CHINAS—Service boars; weanling pigs. J. H. Cook, R. 4, Chico.

POLAND-CHINAS—Strictly large type. J. F. Lehman, Lodi, Cal.

Berkshires.

ANCHORAGE FARM BERKSHIRES
Orland, Calif.
HERD BOARS—STAR LEADER, Junior and Reserve Grand Champion of the World. The Grand Champion carload of barrows, over all breeds, at the San Francisco Live Stock Show, was sired by a son of Star Leader, NATOMAS BARON DUKE, grand champion of California. For sale, bred gilts, open gilts, young boars and weanling pigs. Write for booklet, prices and list of sows.

BRED GILTS.
Sired by Mayfield Rookwood 2d, a Grand Champion Boar, out of 600-700 lb. sows, and actually bred to "ACHIEVER," our English Blood Boar, the Sire that puts more bone and pork-making qualities into his pigs.
Priced reasonably and absolutely guaranteed.
Castleview Ranch, Santa Rosa, Calif.

The only herd of English Berkshires in the West. Bigger, better, stronger litters. More pounds of meat for less feed. Weanling pig, $35. Satisfaction guaranteed or money refunded at once. Sandercock Land Co., 703 Market St., S. F. In charge Natomas Land Sales.

GRAPE WILD FARMS—Berkshires—Guernseys. Big-type Berkshire Boars of serviceable age, sired by Big Leader—greatest son of Grand Leader 2nd. Panama-Pacific Grand Champion. A. B. Humphrey, Prop., Escalon.

BERKSHIRE BOARS—Real herd sires. We are offering these at sacrifice prices to move them quickly. Write for description and price. R. J. Merrill & Son, Morgan Hill, Cal.

QUALITY BERKSHIRES — Young stock, both sexes. Geo. P. Upham, Martinez.

REAL GOOD BERKSHIRES — Cholera immune. Frank B. Anderson, Sacramento, Cal.

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Holsteins.

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THE LEWIS COMPANY

Registered Holstein Cattle
Bulls, Heifers and Calves
of Ormsby breeding
Tuberculin tested
Lewis Building, San Jose

EIGHT EXCELLENTLY BRED Registered Holstein cows for sale. Tuberculin tested. Just what you want. Terms liberal. Fine bull out of 24-lb. dam and sired by Segis Pontiac De Kol Burke is bred to these females. This bull also for sale. S. J. Strauss, P. O. Box 62. Phone 217, or call at 1016 Eye St., Modesto, Cal.

ASEVEDO BROS. CO.
Patterson, Cal.
Breeders of
REGISTERED HOLSTEINS
For Sale
Young bull, sired by King Abbekirk Johanna 24th, and out of a dam making 24 lbs. as a 4-year-old

REGISTERED HOLSTEIN-FRIESIANS — Both sexes choice stock; tuberculin tested. Sunnybrook Ranch, H. H. Sisson, Mgr., Willits.

REGISTERED HOLSTEINS—Young bulls for sale. Long distance A. R. O. backing. Lester A. Driver, Nicolaus, Calif

CREAMCUP HERD — Registered Holsteins. Pontiac bull calves. M. Holdridge, Rt. A, Box 437, San Jose.

REG. HOLSTEINS, both sexes. World's record backing. Kounias Reg. Stock Farms, Modesto, Cal.

REG. HOLSTEINS—A. W. Morris & Sons Corp., Importers and Breeders, Woodland, Cal.

F. H. STENZEL, SAN LORENZO—Breeder of Registered Holsteins. High test producers.

REGISTERED HOLSTEINS — Best blood lines of the breed. R. L. Holmes, Modesto, Cal.

CHOICE HOLSTEIN bulls for sale. No females. Millbrae Dairy, Millbrae, California

GOTSHALL & MAGRUDER — Breeders of registered Holstein-Friesians. Ripon, Calif.

EL DORADO HERD OF REG. HOLSTEINS —Alex. Whaley, Tulare, California.

Milking Shorthorns.

REGISTERED MILK AND BEEF SHORTHORNS, bulls and heifers for sale; catalogue free. Thomas Harrison, Santa Rosa Stock Farm, Santa Rosa, California.

INNISFAIL HERD MILKING SHORTHORNS—Young stock for sale; both sexes. Owned by Alexander & Kellogg Leased by J. D. Rowe & Son, Davis, Cal.

BREEDERS OF REGISTERED SHORTHORNS—Milk strain; choice young stock for sale. John Lynch Ranch, Box 321, Petaluma.

Jerseys.

SERVICE JERSEY BULL, bull calves Financial King blood, Chester White boars, prize winners. Best blood, type, production. N. H. Locke Co., Lockeford, Cal

JACK LONDON RANCH, Glen Ellen—Two fine Jersey bulls, one ready for service.

SUNSHINE FARM JERSEYS—"Production counts." E. E. Greenough, Merced, Cal.

Ayrshires.

PENOBSCOT FARM REG. AYRSHIRES—Choice individuals, all ages, reasonable prices. Cool, El Dorado County, near Auburn. San Francisco office, 530 Fremont Street.

STEYBRAE AYRSHIRES — Registered; all ages. E. B. McFarland, 414 Claus Spreckels Building, San Francisco.

NORABY FARM AYRSHIRES—Le Baron Estate Co., Valley Ford, Cal.

Guernseys.

FOR SALE — Registered Guernsey bull, three years old. Chas. Townsend, Atwater, Cal.

BEEF CATTLE.

SHORTHORNS—The foremost beef breed—Have a limited number of stock for sale, both sexes. If you wish to start a small herd I can probably supply your needs. T. T. Miller, Hollister, Cal.

ALAMO HERD REGISTERED HEREFORDS (founded by Governor Sparks). Herd and range bulls. Reasonable prices. W. D. Duke, Gazelle, Siskiyou county, California.

RANCHO SAN JULIAN SHORTHORNS—Purebred range bulls, unregistered, for sale. Estate Thos. B. Dibblee, Santa Barbara, or Lompoc, Calif. John Troup, Supt

THE NEVADA HEREFORD RANCH—Jno. H. Cazier & Son Co., Prop., Wells, Nevada. Reg. Hereford cattle. Breeding stock for sale.

CARRUTHERS FARMS, Live Oak, California. Shorthorn cattle and Berkshire swine of quality and select breeding.

JACK LONDON RANCH, Glen Ellen—Shorthorn bull ready for service, and some good bull calves.

WM. BRIGGS & SON, Dixon, Cal. Breeders of Hereford cattle and Rambouillet sheep.

ABERDEEN-ANGUS cattle of quality and breeding. Lilac Ranch, Escondido, Cal.

SIMON NEWMAN CO., breeders of Registered Herefords, Newman.

HEREFORDS — Mission Hereford Farm, J. A. Bunting, Prop., Mission, San Jose, Cal.

REGISTERED HEREFORDS—H. H. Gable, Diamond G Ranch, Esparto, California.

GEORGE WATTERSON — Breeder Registered Herefords Bishop, California.

REGISTERED SHORTHORNS — Fair Oaks Ranch, Willits, Calif.

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FOR SALE—Rambouillet rams and ewes—purebred; the very highest grade of large smooth body; heavy shearers; the wool and mutton type. Immediate delivery of individual or carload lots. You can find none better or of higher grade. Address Glenn, Cal. Location, 8 miles south Hamilton City, 1 mile west Ordbend. Windell Orchards Co.

F. A. MECHAM ESTATE, Petaluma, Cal.—Breeders and importers of Shropshire, Rambouillets and American Merinos, both sexes. Also Red Polled cattle. Take electric car at Petaluma or Santa Rosa for Live Oak Ranch.

OAKDALE GOAT FARM, Walnut Creek, Contra Costa Co., Cal—Breeder of milk goats. Nubian, Saanen and Toggenburg registered grades. Bred and fed for milk production.

TOGGENBURG DOES, hornless, bred to purebred for early kidding; reasonable, low price for lot; also some fine kids. Glendale Goatery, 7256 Chabot Rd., Oakland, Cal.

BUY YOUR FOUNDATION STOCK from the world's record flock of non-shedding Angora goats. Prices reasonable. F. A. Pierce, Trinidad, Calif.

FOR SALE—165 Shropshire ewes, one, two and three years old; must sell. Price, $10 per head, if taken at once. Denver Hoff, Tehachapi, Cal.

WRITE ME for early Rambouillet ram lambs ready for light use by Sept. 1. Also a few yearlings. Carl Lindheimer, Woodland.

DR. A. S. ALMEIDA, Dixon, Calif., Breeder and Importer of Registered Shropshire Sheep. Write me for prices on Reg. Ram Lambs.

J. R. BLOOM, Dixon, Calif.—Twenty-five years breeder of purebred Shropshire sheep. Rams for sale. Single or carload lots.

FOR SALE—850 one, two and three-year-old Merino ewes. J. A. Swall, Box 742, Bishop, Cal.

DORSETS—ROMNEYS—Dorset ram lambs for sale. John E. Marble, South Padasna.

SHEEP FOR SALE—1000 ewes. Will sell in lots to suit. Chas. G. Owens, Livermore.

HARVEY S. VANVLEAR, Lodi, Breeder and importer of registered Hampshire sheep.

CALLA GROVE FARM, MANTECA, CAL.—Breeders and importers of Hampshire sheep.

KAUPKE BROS., WOODLAND, CALIF.—Breeders and importers of Hampshire sheep.

CHAS. KIMBLE—Breeder and importer of Rambouillets, Hanford, Calif.

BULLARD BROS., Woodland, Calif.—Breeders and importers of Rambouillet sheep.

MISCELLANEOUS.

BUTTE CITY RANCH
SHORTHORN CATTLE, SHROPSHIRE Sheep, Berkshire Hogs, Shetland Ponies, Bronze Turkeys, White Plymouth Rocks. Stock for sale at all times. W. B. Dwyer and W. S. Guilford, Box P, Butte City, Glenn county, California.

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HEALTH FOR CATTLE

Remedies for
COW CLEANING, BREEDING and ABORTION
Scouring Calves Hog Cholera
An Insect Destroyer
A Poultry Food
LAMBERT STOCK REMEDIES COMPANY
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FACTORY: MODESTO, CAL.
Mail Orders Promptly Filled

Fall Calves with Little Milk

Grow into fine cows when fed AN-FO Calf Meal.

Many dairymen think skim-milk is necessary for calf feeding, but it is not. If separator milk is at hand use AN-FO Calf Meal to return the fat. Good calves can be raised, however, on just AN-FO Calf Meal and water, after giving the calf a good start on whole milk.

At Feed Dealers or
ANIMAL FOOD CO., Oakland.
AN-FO BRAND CALF MEAL

ORMONDALE RANCH SHORTHORNS
REDWOOD CITY, CAL.
HERD SIRES
BOQUHAN GUINEA STAMP, the great imported young Broadhooks bull.
GOLDEN GOODS JR., sire of LITTLE SWEETHEART, Grand Champion International Show, Chicago, 1919.
Bulls and Heifers for sale.
Duroc-Jersey Hogs for sale.
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REGISTERED HOLSTEINS
Creamcup Herd offers service bulls and bull calves of 34-lb. breeding. Females offered for foundation stock.
Tuberculin tested.
M. M. Holdridge, San Jose, Cal.
R. D. "A," Box 437,
Two miles out North First Street.

HOLMES STOCK FARM
MODESTO.
Registered Holstein Friesians
Prize winners at all the Shows. Inspection invited and satisfaction guaranteed.
Write for prices.
R. L. HOLMES, Prop.

CLARK, HUNTER & CLARK
LIVESTOCK AUCTIONEERS
915 I St., Modesto, Calif.
Registered Hog Sales a Specialty

OVER TWO MILLION CALVES
Protected against Blackleg for LIFE with ONE treatment vouch for Purity Blackleg Aggressin (Germ-Free Vaccine made by the Kansas Process). Absolutely safe to use. Cannot transmit disease. Brand, castrate, etc., when you vaccinate. OTHER PURITY PRODUCTS—Anti-Abortions Vaccine for Cattle; Hemorrhagic Septicemia Vaccine for Cattle and Sheep; Anti-Hog Cholera Serum, and High Count Mixed Infection Vaccine for Swine. For service that counts, write, phone, or wire.
PURITY SERUM CO., J. L. Thatcher, Mgr., Riverside, California

FAIRBANKS SCALES

Never before so essential as today

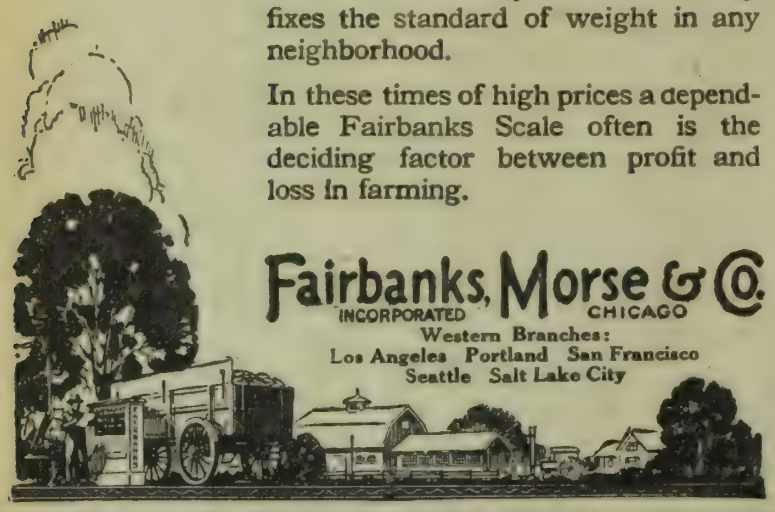
THERE WAS NEVER A TIME when you have had a greater need of a wagon and stock scale than today.

The high price of feed makes it even more essential that your stock should bring the best possible returns.

Because of the high prices of live stock you *must* watch carefully the weights of your animals. You also must know their weights when you take them to market.

To be absolutely sure that your weights are correct you should weigh your feed and stock on a dependable scale. The Fairbanks Scale for Wagon and Stock use has been the world's standard for 90 years and today fixes the standard of weight in any neighborhood.

In these times of high prices a dependable Fairbanks Scale often is the deciding factor between profit and loss in farming.



Fairbanks, Morse & Co.
INCORPORATED CHICAGO
Western Branches:
Los Angeles Portland San Francisco
Seattle Salt Lake City

Herdsmen's Club-Houses at Fair Grounds

(Written for Pacific Rural Press by Ralph Newman.)

The agricultural fair is coming into its own. Every year it is getting to be less a side-show and more an educational exposition. Breeders of livestock are doing their full share in making these fairs a real power for good. Indeed, without the livestock the fairs would not amount to very much. Directors, realizing this fact, are moving for larger and better accommodations for livestock. Even county fair directors are doing wonders in the way of permanent structures to comfortably house and efficiently exhibit stock.

Right now, while the fairs are on, while we are thinking and talking fairs, and while we are enthusiastic over plans for greater fairs, is a good time to put the question asked long ago by the great humanitarian of Nazareth, "How much better is a man than a sheep." The sheep are getting better and still better quarters at the fair grounds. How about the men who care for them?

Sleep with Animals.

Even at the State Fair ground there is no place for the men to sleep except with the animals, no place where they can get meals except at the temporary "eating joints" and at emergency prices, no place where they may take a bath or change a shirt except in the public gaze. Ten o'clock at night, after a long day on their feet caring for and exhibiting stock, the barns brilliantly lighted and the curious throng surging through! How can a man go to bed and rest under those conditions? The answer is, he can't and he doesn't. The writer called on the breeders the last day of the Stockton fair. Most of them had been through two fairs and several of them faced one or two more. They looked worn out and they were worn out. One of them said: "If the Pacific Rural Press wants to do something nice for us, start a campaign for a place on every fair ground where we may install our own cook and steward, where we may get a decent night's rest once in a while, and where we may get a chance to keep decently clean." So here goes for a clubhouse at every fair-ground.

Needs Are Simple.

It needn't be an elaborate affair. It needn't be expensive enough to burden state or county, but it should be in existence. It should provide kitchen and dining rooms, say, for the different breed associations. It should provide ample shower baths and lockers. And it should include dormitory room enough to accommodate good beds enough for every man caring for stock.

If any of the men I have seen this year bunking with their stock at the fairs, should ask hired men on their farms to live that way even for a short time, a howl would go up from some commisison that would be heard all over the state. Let's do a little howling for the men who take their choicest stock to the fairs and by so doing make the fairs. The club-house is as essential as the barn. The man is as good as his sheep. Let's have the clubhouse.

CALIFORNIA DAIRY COW COMPETITION.

Who has the highest-producing grade cows in California? Where are the best Holsteins, Jerseys, Guernseys, Ayrshires and Milking Shorthorns in the State? The California State Dairy Cow Competition will decide where the honor goes in each of these fields of dairy interest, and upon the basis of ten months' records of production, distribute over $6,000 in cash and special prizes to the men who own the best cows. Entries for cows opened September 1, 1920, and will close April 1, 1921.

The generosity of friends of the dairy industry has made possible the offering of a wide range of substantial prizes and valuable trophies. To herds of grade and common cows alone goes $1200 in cash, three purebred bulls from three leading breeders of the State, and four silver trophies. Besides these, there are special cow-testing association prizes, and a number of "free for all," in which grades stand a good chance to win.

There is no entry fee. Purebred herds on test for Register of Merit or Advanced Register require no additional tests. Other herds entered in cow-testing associations require only two additional test periods, cost of which is nominal. Where herds are not being tested, either in association or for Advanced Register, the State University will provide test supervisors at a flat rate, regardless of location.

Communication concerning the competition may be addressed to the Animal Husbandry Division, University of California Farm, Davis, Cal.

Keep your hogs free from lice

Keep their sleeping quarters, the feeding grounds, pure and healthful. Use the sprinkling can. Add four tablespoonfuls of Dr. Hess Dip and Disinfectant to each gallon of water. Sprinkle the animal body to kill the lice, the sleeping quarters and feeding grounds to destroy the disease germs. Or provide a wallow, to which add about one gallon D and D to every 70 gallons of water. Disinfect the barns, the poultry house.

Also use it about the home, in the sick room, sink and cesspools, to establish better health conditions.

DR. HESS & CLARK Ashland, Ohio

DR. HESS DIP and DISINFECTANT

Duroc-Jersey Hogs for Sale

BOARS AND GILTS
BRED SOWS
SOWS WITH LITTERS

DIABLO STOCK FARM,
E. F. PETERSEN, Supt. Danville, Cal.
G. W. EMMONS, Owner, Oakland.

They are the large type and the best blood strains to be had anywhere.

HERD BOARS AND SOME OF THE SOWS

Lucy Orion's Model
California's Defender
Diablo Orion Model
Defender Colonel 70th
Prize of Tulare Belle
Pathfinder's Queen
Great Wonder I Am Gano
Lucy Orion's Mayflower
Twin Oaks Attraction
Lady Defendress 70th
and 50 others.

WEANLINGS—$15.00 EACH AT RANCH — A large number always on hand to choose from. Crates $2.50 each, refunded when returned prepaid in good condition.
MAIL ORDERS SOLICITED. SATISFACTION OR MONEY BACK.

TAMWORTH--The Bacon Hog

PIGS OF BOTH SEXES FOR SALE
FROM MASSIVE
PRIZE WINNING PARENTS

J. J. SUMMERFIELD, SANTA ROSA, CALIFORNIA

Sale of PUREBRED BERKSHIRES

consisting of
25—BRED SOWS AND BRED GILTS—25
AND 10 YOUNG GILTS
from some of the best blood lines in the county—by
SOUTHWESTERN BERKSHIRE CONGRESS AT LOS ANGELES LIVESTOCK SHOW
THURSDAY, OCTOBER 7TH
For further information or Catalog, write C. JACK ZINN, Inglewood, Cal.

GUASTI BERKSHIRES

Weaned pigs, both sexes, from sows that farrow large litters and raise them. Priced reasonable — they are money-makers.

ITALIAN VINEYARD COMPANY
ALEX. M. WILSON, Supt. Guasti, Calif.

DIGESTER TANKAGE

Send for Sensible Folder on Feeding Hogs

WESTERN MEAT COMPANY
Animal Food Dept. 704 Townsend St., San Francisco

THE McCARTY-SHINN-ELLIOTT SALE.

Never since the "Big-Type" Poland-China became fashionable and popular has such an aggregation of these animals been offered to buyers at an auction west of the Rocky Mountains as was that at Tulare on September 27th. This is not derogatory of other herds, but is an example of the selection of the best that are for sale from three good herds. The gentlemen who made the offering deserve the commendation and thanks of the swine-raising public for their courage in holding this sale during the price-slumping period through which we are passing. Under our present conditions the sale could be called nothing but a success, as we are in a period of a readjustment of values following the high tension war prices.

Forty-three head were sold, with top Perfect Beauty, owned by A. D. McCarty, going for $500 to the Loyton Farm at Santa Rosa. Lady Orange, offered by A. J. Elliott, went to Paul B. Long of Santa Rosa for $450. Two yearling gilts, High Spot and Fortuna Bobbie, owned by H. C. Shinn and sired by the Californian, went to the Kern County Pig Club at $205 each. Another gilt, owned by Mr. Shinn, was purchased by Mr. Buckland for the Hollister High School for $200.

Johnnie Glusing of Winton, who had the grand champion Poland-China boar, King George Big Bone, at the State Fair this year was a heavy buyer, selecting several that would nick well with the champion.

Several breeders were present from the southern part of the State, among whom were Earl Sturgis, manager of the livestock on the Santa Anita Rancho, who purchased an excellent selection. Homer Graham of the Eastman Ranch at San Fernando, also picked a good one or two to take south.

The young boars and gilts sired by The Pilot, offered by Mr. Shinn, were all taken by such well-known breeders as H. D. McCune, Johnnie Glusing, A. D. McCarty and Mark Bassett.

Another choice offering was by Mr. McCarty, consisting of three gilts almost a year old out of Liberty Girl 3d, the 1920 grand champion sow.

Just a word may not be amiss here about the offerings at public sales during readjustment periods. When a market is weak a large offering of even superexcellent animals or any other material will have a tendency to lower prices.

ALLANA FARM HOLSTEIN SALE.

This sale held at the Dixon ranch September 23rd must have been rather disappointing to the owner. The day was disagreeable owing to a high wind and the attendance not as large as might have been desired. Some of the well known breeders were present and buying but for all of its being a popular breed, and a well known herd, there was a tendency for bidders to be slow in making up their minds. The average was not a particularly high one with the top female, Aaggie Niko Alka, on her first yearly test going to R. S. Holmes of Modesto for $650. This heifer has a seven day record of 21.18 lbs. butter from 460 lbs. milk and in 197 days of her yearly test has made 470 lbs. milk. This yearly test will be completed. Mr. Holmes was the heaviest buyer, taking ten head altogether, and those of the best. Again, it is noted that the Stanislaus County Holstein Breeders' Association are keeping right on improving their herds with top offerings.

Burr Farms of Los Angeles and Napa State Hospital each secured 5 head while Long of Fallon, and Stock of Fernley, Nevada, bought 3 each. Others were distributed in small lots.

What One Dairyman Learned About HEBE

He had heard many conflicting stories regarding this new food product—some that it would injure and some that it would benefit the dairying industry. Desiring to form his opinion from facts rather than hearsay he started out to investigate. During the course of his investigation he called at the offices of the Hebe Company and asked some very searching questions.

"I have been told," he said, "that HEBE is being marketed as evaporated milk or a substitute for it. Is this so?"

"It is not," was the reply, "HEBE is produced, labeled, advertised and marketed as a distinctive dairy product for use in the home as a cooking and baking ingredient."

"But some dealers sell it as, or for evaporated milk" he objected.

"There are such cases of misrepresentation," was the reply, "but they are becoming fewer each day due to the widespread campaign of education which the Hebe Company is conducting by which the consumer is learning the exact nature and uses of HEBE and the dealer is being made to realize that his greatest profit lies in selling the product for just what it is." He was shown the methods employed by the Company to correct misrepresentation on the part of the distributor and misuse by the consumer. His attention was directed to the label which specifically states what HEBE is and its uses.

"Is not the real purpose of HEBE to develop a market for cocoanut fat rather than a market for skimmed milk?" he asked—

"Decidedly not," was the reply. "To make every hundred pounds of HEBE it takes 210 pounds of skimmed milk and only 7.8 pounds of cocoanut fat and this small amount of non-dairy ingredient is used for the sole purpose of supplying the large amount of dairy ingredient with the shortening and other elements necessary to make it desirable as a cooking medium. It is no more true that the skimmed milk is used as a vehicle to bring cocoanut fat to market than is it true that butter is used to bring salt or ice cream to bring gelatine to market. These non-dairy ingredients all serve the same purpose—to make the dairy ingredients better for the uses intended."

"How will the sale of HEBE benefit the dairy industry?" was the next question.

"By developing a human food market for skimmed milk" was the reply. Government reports were produced which showed that yearly over 30 billion pounds of skimmed milk was not finding its natural and most profitable market as a direct human food. The statements of government and other authorities were read to show the need of creating such a market if the dairy industry is to best serve humanity and itself. HEBE, it was pointed out, is one means to this end.

"How will this benefit all dairymen?" he next asked.

"That which benefits the industry as a whole must benefit each individual member," he was answered. "Every can of HEBE sold and every bit of advertising put out is helping to educate the public to a greater use of dairy products. The ice cream industry is a parallel case. Every dairyman, whether he ships his product to an ice cream factory or not benefits by the increased demand caused by the use of nearly 4 billion pounds of milk yearly by the ice cream manufacturers."

"Why are you advertising HEBE in the farm papers?" he asked.

"For no other purpose" he was told, "than to give other dairymen as we are giving here to you the facts of HEBE in its relation to the dairy industry so that these men may have a complete and accurate knowledge of the subject and form their opinion of our product and our company from facts and not from prejudice or from mis-statements on the part of wilful or uninformed persons."

At the close of the interview the dairyman visitor expressed his satisfaction at the frank and straightforward answers given to his questions and made this significant remark "If every dairyman who now sees in HEBE a menace to his business could have the opportunity of going into this subject with you as thoroughly as I have, I am sure he would see HEBE in an entirely different light."

We will be glad to discuss HEBE with any person interested, either by personal interview or by correspondence. Write for our booklet "The Missing Third" which discusses in detail the relation of HEBE to the dairying industry. Address 3075 Consumers Bldg., Chicago.

Chicago **THE HEBE COMPANY** Seattle

GLOBE "AI" FEEDS

—Judge them on Business Principles!

FEED FOR SWINE, STOCK AND POULTRY

ASK YOUR DEALER

JAVA cocoanut cake meal.
Made where the nuts grow.
Carried in modern ventilated steamers.
Sun-dried—not smoky or rancid.

Has your past experience in feeding cocoanut cake meal been satisfactory? Your feed dealer may

DEPT. 10, JAVA COCOANUT OIL CO., LTD.

16 California St., San Francisco

Largest manufacturers cocoanut products in the world.

Poultry for Profit

SUGGESTION FOR A MASH!

To the Editor: (1) I would like a formula for a mash for 5 month's pullets, containing about 15 per cent protein, using fish meal and dried milk for the protein.

(2) What size incubator house would be necessary for six Jubilee incubators, 504 size?

(3) Do you consider concrete floors practicable for brooder house? W. T. D., Novato.

(1) It is almost impossible to make a satisfactory suggestion for a mash, or a mixed feed of any sort, unless one has at hand a list of the materials that are to be had at the point where the mixture is to be made, and an analysis of each; in addition, to economically select the ingredients to be used, the cost price of each ingredient at the time of mixing should be known. With all of this information supplied it is still difficult to make a proper selection and keep the protein content down to 15 per cent and at the same time avoid an over amount of fat that tends to cause the pullets of this age to go into a molt about the time they begin to lay well. Bulk necessary for easy digestion; palatability to encourage the pullets to eat sufficient; and mineral content must all be taken into account to accomplish practical results. As we have stated in several former items, since the mixing of commercial feeds is under State government supervision, and each manufacturer is striving to outdo his competitor in supplying satisfactory mixtures, it is seldom profitable for the individual to undertake the compounding of his own feeds; even when he considers his time and labor as of no value. However, the following formula is submitted as a reply to the inquiry, but this mash should be fed only when an abundance of green feed is supplied: 30 lbs. wheat mill run, 10 lbs. corn meal, 10 lbs. rice polish, 20 lbs. barley meal, 15 lbs. cocoanut cake meal, 10 lbs. fish meal, 5 lbs. dried milk.

(2) An incubator house should have a floor area of at least twice the actual floor space the incubators occupy. Twice this free space is more desirable. The operator should have room for cooling and turning the eggs without crowding himself during his work. When the location of the brooder house is such that the concrete will not absorb much moisture, and the floor is constantly covered with earth or other desirable material for keeping the chicks off of the concrete, there are decided advantages to be gained by using concrete for floors.

FARM BUREAU EGG-LAYING CONTEST.

The end of the 44th week of the contest found Bellows Bros. in first place, with a total count of 1854 eggs for their ten hens. S. L. Gibson of Santa Cruz caught up with B. F. Rose of Santa Cruz, tying him for 4th place. High pens stood as follows:

Bellows Bros., Lakeside	1854	eggs
D. B. Walls, Petaluma	1841	"
R. C. Gibson, Newhall	1806	"
B. F. Rose, Santa Cruz	1794	"
S. L. Gibson, Santa Cruz	1794	"
Enterprise Ranch, Chino	1787	"
W. J. Neef, Santa Cruz	1782	"
G. G. Barker, Santa Cruz	1748	"
W. Wood, Santa Cruz	1709	"

A CASE OF CHICKEN-POX.

To the Editor: My young chickens are beginning to droop, also have sore spots on combs and eyes and swelling inside of the mouth. What will I do for them? The presence of the sore spots on combs and eyes indicates that these fowls have chicken-pox, and the drooping condition with the swelling in the mouth is probably the result of feeding too much starchy feed and insufficient building feed and bulky green stuff, which has caused a disordered system. The following simple remedies are frequently used in the treatment of chicken-pox: Sulphur ointment; carbolic ointment; glycerine in which is mixed two per cent of carbolic acid. When any one of these ointments is used it should be applied twice each day. The swelling in the mouth may be relieved by bathing with tepid water in which some boracic acid has been dissolved. Feed a light mash and little or no grain for a few days. Supply all the fresh green stuff the fowls can eat. Do not omit to supply crushed bone, shell, charcoal, and grit.

POULTRY PRATTLE.

The Tulare Co-operative Poultry Association is doing a bigger business this year than last, when it transacted a $280,000 business, which was double that done in 1917.

The turkey crop of Tulare county is below average in number this year. At this time turkeys are bringing 34 cents per pound, with a strong demand, and the price is expected to advance to about 50 cents for Thanksgiving trade.

This year's egg yield at Petaluma is showing great gains over last year and from the present rate of production, the total shipped out in the year will have been 5,000,000 dozen. The first six months of the year show shipments amounting to 13,249,724 dozen, which is a figure 3,000,000 dozen greater than for the same period last year.

MOLASSES RATION NOT RECOMMENDED.

To the Editor: Would it be any harm to feed molasses to poultry? If not, what would be the proper amount to about one hundred head? What per cent of protein does it contain?—E. F., Novato.

The following are two excellent reasons for omitting molasses from ordinary poultry rations: It has a tendency to create dysentery and encourages the multiplication of worms. The protein content varies in different lots, but is so small in any case that it is not worth considering. When used as an ingredient in a ration for feeding crate-fattened fowls under the supervision of an expert feeder it has been used with very satisfactory results. When fed to cattle, and some other stock, it is satisfactory if carefully blended with other feed stuff that is bulky and deficient in heating and fattening qualities.

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BARRED PLYMOUTH ROCKS — 'Nothing Better in Poultry.' Wonderful layers. Choice hens and pullets for sale; also fine cockerels that will improve your flock. Now booking orders for hatching eggs. I have made a specialty of Barred Rocks for over twenty-two years. That's why our birds win at all the leading shows. Catalog free. Chas. H. Vodden, Box 3, Los Gatos, Calif.

RAISE FALL CHICKS—They are profitable. Write for circular. See why they pay. Checks every week. R. I. Red, Barred Rock, White Leghorn. Also booking for spring delivery. Order now and get a desirable date. Safe arrival guaranteed. Stubble Poultry Ranch and Hatchery, P. O. Box 67, Palo Alto.

PEERLESS WHITE WYANDOTTES — Our 200-egg strain, bred for years for show qualities and high-egg production. Fifty cockerels, 100 pullets for sale. Trios and mated yards. Eggs for hatching. Catalogue free. J. W. Atkinson, Box 8, 130 Willard St., San Jose.

PETALUMA HATCHERY — Established 1902. If you want good fall layers, get chicks in the fall. We guarantee satisfaction. There will be but few chicks hatched this fall. The wise ones are buying. Send for prices. L. W. Clark, 615 Main St., Petaluma, Cal.

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SPECIAL SALE—Barred Rocks, White Orpingtons, White Houdans. Old and young stock. Get your cockerel for spring breeding, $2.00 and up. R. P. Lutzi, 1217 20th Ave., San Francisco.

GOLDCROFT BUFF ORPINGTONS, Columbian Wyandottes and White Leghorns. Heavy laying strains. Breeders and young stock. Samuel Abrams, Box 13, Los Altos.

PULLETS, $2.00 Cockerels, $5.00 each and upward: White Leghorn, Brown Leghorn, White Rocks. Mahajo Farm, P. O. box 597, Sacramento, Calif.

CHICKENS, DUCKS, GEESE, GUINEAS, Pea Fowl, Pigeons. Wm. A. French, 545 W. Park St., Stockton, California. Stamps.

EASTMAN'S "BRED-TO-LAY," Hoganized and trapnested. Barred Rocks. Fall Chicks. Fairmead Poultry Farm, Fairmead, Cal.

BOURBON RED TURKEYS—Buff Orpingtons. The Ferris Ranch, R. 2-144D, Pomona Calif.

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CRATE FATTENER
With Dried Buttermilk

is probably the most profitable market conditioner manufactured. Recently one of the largest wholesale poultry firms in the West, a concern that ships more than 10,000 birds a week, reported the following results of an experiment:

92 White Leghorns fed 100 lbs. of OLYMPIC Crate Fattener with *Dried Buttermilk*, gained 40½ lbs. in eight days.

A like number fed 180 lbs. of corn, oats, barley and *semi-solid* buttermilk, gained but 32 3/10 lbs. in eight days, or at the rate of only 17 7/10 lbs. per 100 lbs. of feed.

The Test Tells

MR. W. S. FREEMAN, a breeder of Single Comb White Leghorns of Hayward, California, writes as follows:

"During April when my hens fell off about 31% normal egg production, I tried OLYMPIC Scratch Feed and OLYMPIC Egg Mash with *Dried Buttermilk*. A test was made by feeding 200 hens on OLYMPIC Egg Mash dry in hopper and OLYMPIC Scratch buried in litter, as per instructions.

"In about two weeks the production drop was checked, furthermore a decided improvement was made in the condition of the hens. The feeds were greatly relished by the hens, too.

"I intend to continue using both the OLYMPIC Egg Mash and and the OLYMPIC Scratch. Yes, sir, I highly recommend both feeds to every one. The splendid results obtained on my flock can be duplicated on your flock, too."

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THE PARENT-TEACHERS' ASSOCIATION.

(Written for Pacific Rural Press.)

You know what it is. Have you one? f not, why not? So many organiza-ions now there are not days enough n the week to get in all the meetings? 'ou are right about that. We are a reat lot of "jiners" and in many laces we are in danger of having nore organizations than we have eople.

Yet a parent-teachers' association s a very important thing—more im-ortant in the country now than in he city.

We are striving for a closer rela-lonship between the school and the arm. The school authorities have old us that if the rural school is not o our liking, it is because we have ot made our wants known or offered ur help in solving the problems. Too nany rural school teachers feel them-elves alone in the community. If any yes are on them they are questioning yes and any criticisms they hear are pt to be hostile criticisms. There hould be a friendly, helpful relation-hip between teacher and home. This parent-teacher association can es-ablish.

Here, then, is a suggestion. Why ot work this in as a part of your lome Demonstration work? Instead f farming a separate organization, let committee be appointed in the home emonstration circle to handle this 'ork and give up an occasional meet-ng or at least part of a meeting to he school's needs. Goodness me, isn't as important as trimming hats or he cold pack method? Not that we 'ould belittle the hat. Some of the ome demonstration "creations"—this orrespondent has seen all works of rt—and "you wouldn't believe how ttle they cost!"

ART AND THRIFT.

There were three things in the lome Demonstration display at the an Joaquin County Fair that spe-ially caught our eye, though the hole large exhibit was good for that atter.

ou should have seen the pretty hings and useful things and many-olored things the farm women have ade out of flour and sugar sacks. here were dresses — gowns even — ade from flour sacks that, if worn own Market street on a bright day, ould hold their own with the best of hem. And as for bungalow aprons! you think your husband is slipping om you, just don one of these flour ack aprons. If that doesn't fetch im, nothing will—let him slide; he n't worth holding anyway. And if ibby comes in from the hay field on hot day irritable because pestered by icky, itchy underwear at $2.00, a gar-ent, just try a suit of flour sack un-erwear at 65c a garment. Seriously ese garments have everything else acked off the boards for warm eather wear. They are cool, com-rtable, easily laundered and econom-al. When farm men once get hold of em they will have no other kind.

Farm Grown Hats.

Then there were the farm-grown ats. There was a show case con-ining fourteen "models." I will ave it to anybody who saw them if ey wouldn't have passed muster in y milliner's window. All of them ere made by farm women with the idance of the Home Demonstration pert. The most expensive one in e lot cost $6.00 for material, and ere was one—the sweetest thing—ade of wire and a flour sack. Placed a gold-plated standard resting on lvet in an "exclusive" shop and arked $25.00 instead of the 25c which cost, it would create a sensation. together this exhibit shouted the ith that art and extravagance need t go together but that art and thrift y.

Then there was a fireless cooker orthy of description. A metal con-ner 4 inches smaller in diameter an the pail and having a tight cover, soap-stone to fit in the container, me saw dust and sheet asbestos and cushion stuffed with newpaper—

Home Circle Department

these are the parts. To make the cooker, cover the sides and bottom of the metal container with asbestos, pack 2 inches of sawdust into bottom of pail, then set in the container and pack saw dust solidly all around it; cover saw dust at top with asbestos and the thing is done. The total cost is about $1.00, and it is a mighty handy thing to have around. It is worth the price and trouble just for picnics. Pile in the dinner, slap on the metal cover, tack the cushion over the top, put it in the car and let Johnnie sit on it. Arrived at your destination, a hot dinner is ready. Or leave out the soapstone and put in the ice cream. It is a big thermos bottle as well as a cooker—and it does the business.

AN INSTANCE OF COUNTY LIBRARY GROWTH.

(Written for Pacific Rural Press.)

County libraries as we know them are a little over ten years old. What strides have been made in that decade! As an evidence of that, consider Fresno county. In March ten years ago, the Fresno County Library was organized, and the board of supervisors appropriated $4000 for the year mark. This year the library authorities asked for $108,000. In such high esteem is the work held, and so evident are the good results of its service the supervisors voted $112,000. A voluntary increase over the amount asked for exactly equal to the total appropriation for the first year.

One who has been familiar with the work in the whole State was asked if the Fresno officials were getting extravagant. The answer was a decided "no." Time and again it has been figured out that the book money for the county spent through the county library system, no matter how large it may be, is a certain economy. The fact that over $100,000 is needed in Fresno is evidence that the people are demanding books. The county library buys them more cheaply, distributes them more economically, and furnishes far more of them to individuals, schools and clubs than an equal sum expended in any other way could do.

So well has this fact been established that all but 13 counties in the State have been organized, and the plan is being copied all over the United States.

AN ELECTRIFIED FARM HOME.

(Written for Pacific Rural Press.)

They are getting to be fairly numerous in California, but we have one particular farm in view. It happens to be located on a power line and buys juice instead of making it, but the owners say if the power line went out they would buy an electric generating plant for they would quit farming rather than give up their electrified home.

The laundry was displayed first. It occupies a room in the tankhouse with concrete floor and drains connecting with sewer which runs to the septic tank. The equipment includes an electric washing machine (no set tubs needed) and a mangel. Power is furnished by motor that pumps water for the tank. Hot water is piped from kitchen and cold water from the tank line. The mangel is heated with gasoline and does 95 per cent of the ironing. An electric iron is used for the fussy work. The madam says the only real work about washing and ironing now is that involved in hanging out the clothes to dry and that isn't much for the line is on pulleys so the operator can stand in the laundry and pin the clothes to the line as it moves past her.

The kitchen equipment includes a beautiful electric range, a water heater supplying the whole house and laundry, a dish-washing machine and several small devices — percolator, toaster, etc.

The dining-room is provided with an electric fan, the sewing room an electric machine, the living room with a vacuum cleaner, and madam's dresser with an electric hair drier. The whole farm, wherever a light could possibly be needed, can be as brilliantly lighted as Broadway.

That ought to satisfy most folks. It does satisfy the lady of the house, but hubby says if next year's crops bring a decent price they are going to get that electric refrigerator—he may, by that time, hear of an electric razor and get that too.

How about the expense of all this. The entire equipment cost less than the cheapest good, small tractor on the market and the depreciation on electric machinery is very little. It is there practically for a life time. It costs a little more to run the range than coal or wood would cost, but they use it the year around because of its convenience and cleanliness. The difference in cost is more than repaid in solid comfort and saving in "woman power." As for the rest, the operating expense is so small as to amount to no burden at all. The madam says it is more than covered in the saving on clothes which used to go to the "wet wash" laundry.

PICKLES AND SAUCES.

Tomato Catsup.—To 1 gallon of strained tomatoes add 1 quart of vinegar, 1 pound of sugar, ½ pound of salt, 2 or 3 red peppers, 1 ounce whole black pepper, 1 ounce allspice, also of ginger and cloves, ¼ pound mustard and a little mace. Boil 2 hours; after it is boiled strain.

Tomato Butter.—Nine pounds peeled tomatoes, 3 pounds sugar, 1 pint vinegar, 3 tablespoons cinnamon, 1 tablespoon cloves, 1½ tablespoons allspice. Boil 3 or 4 hours, or till quite thick, and stir often that it may not burn.

Green Tomato Pickle.—One peck green tomatoes, sliced, 12 good onions sliced, 2 quarts vinegar, 1 quart sugar, 2 tablespoons salt, 2 tablespoons ground mustard, 2 tablespoons black pepper, 1 tablespoon allspice, 1 tablespoon cloves. Mix and stew till tender.

Crab Apple Catsup.—Boil 1 peck of crabapples till soft in enough water to cover them, then strain, add 2 teaspoons cinnamon, 1 teaspoon cloves, 1 teaspoon allspice, 1 teaspoon cayenne pepper, 3 teaspoons salt, 3 pounds brown sugar, 1 pint vinegar. Boil 45 minutes, then place in wide-mouthed jars.

Chutney. — Three dozen apples, peeled and cored, ½ pound raisins, stoned, ½ ounce ground ginger, 2 ounces mustard seed, 2 cloves of garlic or 6 shallots, 5 Spanish onions, ¼ ounce cayenne pepper, ¼ pound salt, 3 pounds moist sugar, 3 pints vinegar, 2 quarts tomatoes. The whole to be boiled till it is a thick, dark jam, and everything well blended.

Indian Pickle. — One gallon strong vinegar, 1 ounce allspice, 1 ounce white pepper, 2 ounces broken ginger, 1 ounce cloves (spices unground), 1½ pounds ground mustard, 1 teaspoon cayenne pepper, 1 cup salt, ½ ounce tumeric powder. Mix mustard well with cold vinegar. When boiling hot, add the rest. Boil ½ hour; when cold, add the vegetables. Cover closely.

Onion Pickles.—Peel the small white onions and let stand in strong brine 4 days. Drain, and put into pickle bottles; into each bottle put a small handful of unground white pepper. Scald enough vinegar to fill bottles, sweeten to taste with white sugar, and pour over the onions; seal. Let stand 2 or 3 weeks before using.

Success comes through proper care and attention to the hens, not as a result of foolish coddling, over-care and over-feeding. Proper protection from the elements, dry floors, plenty of dry litter and small grain fed in the litter are the playing cards that win fresh-laid eggs in winter.

GOD GIVE US FAITH IN FOLKS.

So many gifts we ask of Thee,
So many which we do not earn,
Such wealth of mind and store of gold,
And yet at last our hearts must turn
With longing to a gift whose lack
To utter ruin the soul provokes,
Withhold from us all other gifts
But leave us, God, our faith in folks;

Teach us to know that he who fails
In time of need to keep his post,
Who broke with us a point of faith,
Was not the one we loved the most;
For love gives faith and yet dictates
The wisest course which one must choose
In dealing with another soul,
Unselfish love can never lose.

For faith breeds faith and souls expand
Beneath such warmth and grow to be
So big and fine they touch at times
The borders of Infinity.
So humble us till we may know
That lack of faith deceit provokes,
That in ourselves the error lies
And we may keep our faith in folks.

—Sheila O'Neill.

THE TENTH OF AUGUST.

Every tenth of August our minister, Dr. Jarvis, comes to our house to dinner. He comes other times, but the tenth of August is an especial occasion with an especial dinner. Sometimes Uncle Jim comes, too, from Kansas City. That's a long way to come, for we live in Harmony, N. Y. Harmony was named after my great-great-great-great-grandfather, who was one of the first settlers.

Dr. Jarvis is almost seventy years old, but father says he's the youngest man in town. He's a little man, too. Grandfather Harmon and father are both six feet tall, and they look taller than ever when they stand beside Dr. Jarvis; but grandfather says he wishes every man were as big as the doctor.

Dr. Jarvis has eyes that smile even when the rest of his face is sober, and he has a funny way of talking. You can't always tell whether he's joking or is in earnest. He knows all about birds and plants, and he has the greatest collection of Indian relics: tomahawks and arrow-heads and wampum and Indian pipes and mortar bowls. He has given Joe and me a lot of things, and he says some day he is going to give the entire collection to us.

The tenth of August after dinner we all go out on the porch, or if it's cold or rainy, we sit around the fireplace in the library and some one tells what happened on the tenth of August thirty-three years ago. Sometimes Grandfather Harmon tells it; sometimes Dr. Jarvis tells it; sometimes father or Uncle Jim tells it; sometimes they all tell it together. Joe and I think it's the finest story we ever heard.

To understand it, a person has to know something about Harmony the way it used to be. The village is built on both sides of the Nenesac with a wide dam running across the river. We live on the south side. Grandfather's flour-mill is on a kind of island between the barge canal and the river. Where the barge is now there used to be just a raceway, joining the river above and below the dam. The water furnished the power for running the mill machinery. The current used to be pretty swift, for the raceway was narrow. When they put the barge canal through, they made the raceway wider and built a big lock, a power-house, and a fine new bridge instead of the little old one.

When we go over town we have to cross two bridges: the one over the barge canal and the one over the river. Joe and I like to stand on the river bridge and look down stream to a clump of willows on the south side where the bank comes out into a kind of point. It was under those very willows that—but I haven't come to that yet. Perhaps I had better begin at the beginning and tell the story just as it happened.

The first year Dr. Jarvis came to preach in our church father was al-

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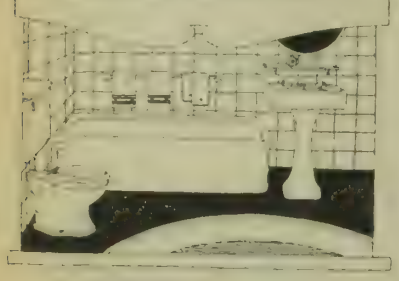

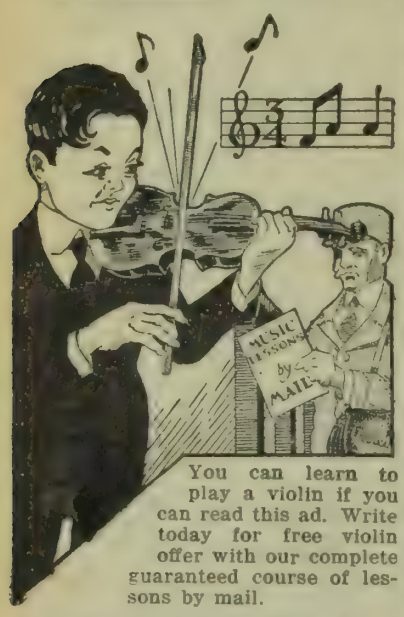

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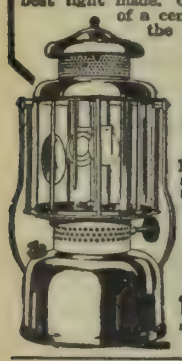

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most five years old and Uncle Jim was three. Grandmother Harmon has a picture of them the way they looked then. It's the funniest thing! Father has his hair in curl—long curls! He has on kilts and a little jacket, and Uncle Jim has on a dress! Grandmother says they look just like Joe and me, but I can't imagine myself with curls and a kilt; but, then, they dressed differently in those days.

Every afternoon father and Uncle Jim used to go to meet grandfather when he came from the mill. Grandmother would dress them all up spick and span and they would go down Cayuga Street to Elm Street and wait on the corner till they saw grandfather coming over the little bridge. They were told never to cross the road, and father always had to look after Uncle Jim. He says it was a great responsibility. I know how he felt, for Joe is two years younger than I am, and they're always making me responsible for him.

This particular tenth of August father and Uncle Jim had been playing in the garden till they got tired. They sat on the back porch for a time, then they went into the house to see what was going on there. They went into the kitchen first, but the cook had gone upstairs to take a nap. They peeked into the front room where grandmother was talking to a caller, then they decided that it must be almost time to go to meet grandfather. They put on their best broad-brimmed hats with blue ribbon streamers and rubbers that went under their chins and started off without saying anything to anybody.

They went along till they reached the corner where they always waited. Across the street they could see the big gray mill and hear the roar of the machinery. They noticed some red lights on the edge of the raceway which the workmen who were fixing the bank left when they stopped work for the day. The boys stood on the corner a few minutes, but grandfather didn't come. It was too early; besides, the office was on the other side of the mill, so he didn't see them.

Father was watching a man on the little bridge. This man was leaning over the railing looking at the water, and father wondered if he could see a fish. While father was wondering about the man all of a sudden Uncle Jim let go of his hand and trotted across the road before father could stop him. The sun was shining on one of the red lights and it looked so pretty that he wanted to see it near by. Father ran after him and caught up with him just as he reached the light. The ground at the top of the bank was loose where the men had been digging, and with the boys right on the edge it began to crumble. Father caught hold of Uncle Jim's little skirt, but it wasn't any use, for a big piece of earth slid off and they both slid with it into the water.

Right here is where Dr. Jarvis comes into the story—and the water. He was the man who had been standing on the bridge. He heard father scream and whirled round like a flash. He threw off his coat and jumped over the railing of the bridge, shouting as he jumped. Grandfather says he called so loud that they heard him in the mill above the clatter of the machinery, and all the men came running out.

When Dr. Jarvis struck the water, he caught father in one arm and Uncle Jim in the other. He couldn't swim with both of them, so he began to tread water. I don't know just how you do that, but father is going to show me when I learn to swim. The swift current carried them through the raceway and out into the river before any one could do a thing to help. Dr. Jarvis kept treading water and making for the point with the willows on it. At one time he thought he would have to give it up, but he gritted his teeth and hung on, and father and Uncle Jim hung on to him as if they were leeches—a leech is a kind of blood-sucker that it's hard to get off if it once gets on. The current carried them along so that finally, after what seemed hours but was really only a few minutes, the doctor got into shallow water above the point and pulled father and Uncle Jim ashore. He was so tired he just fell down under the willows and lay there without stirring. Father and Uncle Jim stood by him, dripping wet and crying as hard as they could cry.

In a minute a crowd gathered. The men from the mill ran down the back street as fast as they could, though they couldn't run as fast as the river. Grandfather was ahead of all the rest. His face was as white as a sheet. He picked up Uncle Jim and father soaking wet and held them tight.

"Jimmie ran away, across the street," said father, "and he fell right into the canal and so did I—but a man got us."

"And I lost my hat," sobbed Uncle Jim. "It went right off my head into the water."

By this time the men had helped Dr. Jarvis up. He hadn't any coat, the water was dripping from his hair, and his clothes were sticknig to him; but Grandfather Harmon says he was the best-looking man he ever saw. Grandfather put down father and Uncle Jim, then he and Dr. Jarvis shook hands without saying a word.

"Didn't grandfather even say, 'Thank you'?" Joe asked Dr. Jarvis once, long afterward.

"I didn't hear him," said the doctor. His eyes twinkled and he looked at grandfather; then they both laughed.

Somebody came up with a carriage and the doctor and grandfather and father and Uncle Jim all got in and started for home. On the way they met grandmother and Norah, the cook, running down the street. Grandmother kissed father and Uncle Jim and cried and cried, and the boys hung on to her skirts and cried some more, and Norah threw her apron over her head and cried with them.

"Bless my soul," said grandfather, "this is certainly a moist occasion!" Grandmother always says there were tears in his eyes, too.

Grandmother made Dr. Jarvis come into the house and sent Silas after some dry clothes. The doctor wore grandfather's till his came. He must have looked queer! Then Norah gave them a splendid dinner.

So every tenth of August Dr. Jarvis comes to dinner. He has missed only two times. Once he was in Europe and the other time he was at the Exposition in California; but both of those times he wrote long letters and grandfather read them at dinner.

He married father and Uncle Jim and he christened Joe and me, and he says he's going to marry us sometime; but Joe and I aren't ever going to get married. We're going to stay right in Harmony and look after mother; and every tenth of August Dr. Jarvis is coming to dinner.—Mary Wells.

MULTIPLYING DIFFICULTIES.

The teacher, a lady of questionable age, was having a hard time getting Johnny to memorize the names of the kings of England.

"Why, when I was your age," she finally exclaimed, exasperated, "I could recite the names of all the kings forward and backward.

"Yes'm," replied Johnny, unimpressed, "but when you was my age there wasn't nearly so many kings."

HARVESTING THE CROP.

When the German Army broke into Belgium and swept through the country one detachment was billeted in a farm house. A private, wandering through the fields, came upon a young girl sowing seeds.

"Yah!" he sneered. "You shall sow, but we shall reap."

"I shouldn't be at all surprised," she replied sweetly. "You see, I'm sowing hemp."

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THE MARKET REPORTS

SAN FRANCISCO.

San Francisco, September 29, 1920.

WHEAT.

Only a negligible amount of trading has been done and prices higher than buyers will pay are being demanded. Quotations are the same.

Wheat .....$3.90@4.00

OATS.

While a tendency to hold off is still being evidenced by buyers more samples are being shown on the exchange but the market is very quiet.

Red Feed, ctl. .....$2.85@3.15

BARLEY.

Continued inactivity prevails. Call board trading has fallen off perceptibly and spot trading amounts to nothing. Prices are the same.

Feed Barley, ctl. .....$2.30@2.40

CORN.

Prices are the same awaiting the new crop, which has not yet arrived. Receipts have been very light during the past week.

Egyptian, white .....Nominal
do, brown .....$3.40@3.75
California .....$3.80@3.85

FEEDSTUFFS.

Cracked corn is not dry enough yet and all other feedstuffs are sharing the generally inactive grain market, from which there appears to be no relief.

Rolled Barley .....$48.00@50.90
Rolled Oats .....$55.00@60.00
Alfalfa Products .....$45.00@52.00
Cracked Corn .....$80.00@81.00

HAY.

Only 1136 tons of hay were received in this market during the past week. The previous week's receipts were 1607 tons. Although the market is very much weaker than it has been the same prices which have prevailed for some time are quoted for this week. Only a limited amount of sales in small quantities are being made. The interior districts are sharing the depression of the San Francisco market for all grades of hay. The feeling among buyers is that a price drop of large proportions is imminent. This in spite of the fact that all hay is being cleared off the fields by the farmers. Prices quoted are f. o. b. cars San Francisco, less $1.00 per ton commission charges.

Wheat, hay new .....$26@28.00
Tame, oat new .....23@25.00
Wild oat new .....17@19.00
Barley .....17@20.00
Alfalfa 2nd cutting .....21@25.00

RICE.

Although the market is in a doubtful condition, an almost complete cessation of buying prevails.

California fancy (choice $9.50) $7.50
do, choice $7.15
Southern Honduras, long grain $12.50
China, No. 1, double mat $11.00
Blue Rose, fancy $10.50
Fancy Head, bulk (Philips & Co.) $12.50
California Japanese, No. 1 .....$7.50
do, No. 2 .....$7.15

FRESH FRUITS.

(Wholesale prices paid by commission houses.)

Bellflower receipts continued heavy with Gravensteins about all finished. Virginia greening apples have appeard on the market, which has been very strong for all grades of apples. Hardly any shipments of cantaloupes are arriving, while a strong market is provided, sending cantaloupe prices skyward. Receipts of peaches continue heavy with a brisk demand. There are no price changes in deciduous fruits. Grapes are arriving in large quantities and moving well. No berries to speak of have been seen on the market and arrivals of Persian melons have been slack.

Apples, Gravenstein, fancy .....$2.00@2.25
do, Bellflowers .....$1.35@1.65
do, Virginia Greenings .....$2.00@2.75
Plums .....$1.25@2.00
Peaches, 4 baskets .....$1.25@1.50
Pears .....$2.00@4.00
Strawberries, 6 12-oz. boxes .....75@1.00
do, 6 8-oz. boxes, drawer .....60@75c
Blackberries, drawer, 12 oz. draw.30@35
Raspberries, drawer .....70c@85c
do, 8-oz boxes .....30c@40c
do, 8-oz. boxes .....40@50c
Cantaloupes, Standard .....$2.00@2.25
do, Flats .....60@75c
Watermelon, lb. .....1@1¼c
Persian Melons, lb. .....2@3c
Grapes, large box .....$2.00@3.50
do, crates .....$1.50@3.00

POULTRY.

Plenty of Eastern poultry has arrived during the week, but with a brisk local demand it has all been absorbed without any effect on prices, which in some instances have advanced over last week's figures. The turkey market is firm. California receipts of all grades are becoming lighter. This will be balanced by further Eastern arsivals.

Broilers, small .....50@53c
do, large .....47@50c
Hens, mixed color .....37@38c
do, Leghorns .....25@30c
Roosters, young .....38@40c
do, old .....20@22c
Friers .....40@44c
Squabs .....55@60c
Geese .....25@30c
Ducks .....25@30c
do, old 25c
Belgian Hare, live .....18@22c
do, dressed .....22@25c
Jack Rabbits .....Nominal
Turkeys, young, large, lb. .....50@55c
do, old .....50@55c
do, dressed, lb. 60c

BUTTER.

With a weak market in the earlier part of the week, some butter was forced into storage. Large offerings of all grades tended to further depress the market, but jobbing trade was sufficient to partially reduce the accumulation, and the week closed steady. There will be no session of the San Francisco Wholesale Dairy Produce Exchange during October.

	Thu.	Fri.	Sat.	Mon.	Tu.	Wed.
Extra	63	63	..	62½	63	63
Prime 1sts.	57½	58	..	58	58	58

EGGS.

Throughout the week the market has been steady and storage eggs have held firm. Shipments to the East were very heavy at the week's close. Prices have been advancing steadily and may rise still further.

	Thu.	Fri.	Sat.	Mon.	Tu.	Wed.
Extra	71½	69½	..	71½	72	74
Ex. Pullets	60½	60	..	60	61	61
Dirties	58½	57½	..	57½	57½	57½
Undersized	45½	45	..	47	46½	48

CHEESE.

Oregon and poorer grades have continued to meet with a dull market, but other grades have been advancing, with an active demand for the limited supplies. The week ended with a firm market.

California Flats fancy 34½c
do, Firsts 25½c
Oregon Triplets 26½c
Oregon Thirds 32½c

HONEY.

Comb honey is exceedingly scarce. Liberal receipts of all other varieties with a weak market brought down quotations a cent on all grades.

POTATOES, ONIONS, ETC.

(Wholesale prices quoted by commission houses.)

Receipts of potatoes have been good with a market to balance. There have been no changes in quotations. All vegetable receipts have been large and are moving well. No price changes are noted in the vegetable market.

Turnips .....$1.25@1.50
Peas, Halfmoon .....12@13c
Beans, wax, lb. .....5@6c
do, green, lb. .....7@8c
Carrots, per sack .....$1.25@1.50
Green Corn, each .....$1.50@2.50
Lettuce, local doz .....25@30c
Cucumbers, Alameda, lug box.....50@75
Tomato, River, large box .....50c@1.00
Rhubarb, Strawberry, box 40 lbs..... $1.50
Summer Squash, box 35-40 lbs. .....37@75c
Egg Plant, box .....50@75c
Potatoes, New River, cwt. .....$2.25@2.50
Onions, yellow, sack .....85@1.00
do, Red .....75c@85c
Green Onions, box, 25 lbs .....$1.25@1.50

BEANS.

With practically no inquiries or any demand, prices are weaker, most all grades being quoted at lower figures.

Bayos .....$12.50@14.00
Blackeyes .....$ 4.75@ 5.00
Cranberries .....$ 6.00@ 6.25
Pinks .....$ 5.60@ 5.75
Red Merican .....$ 6.75@ 8.00
Large Whites .....$ 5.00@ 5.25
Small Whites .....$ 5.00@ 5.25
Limas, S. F. prices .....$ 8.50@ 8.75
do, Baby, S. F. prices ....$ 8.00@ 8.50
Limas, Ass'n, Prices South $11.42
do, Baby, Ass'n Prices, South.....$11.42

CITRUS FRUITS.

The market for lemons and oranges is slow, with poor arrivals. Prices are about the same. Grapefruits are quoted slightly higher.

Oranges, Valencies .....$7.00@7.50
Grapefruit, seedless .....$3.50@4.00
do, choice $3.00
Lemons .....$3.50@3.85

HIDES.

Inactivity continues to characterize the hide market. In spite of concessions offered to tanners, only small sales have been recorded. Prices we quote are merely nominal, and, although inquiries are increasing in number, no prediction is ventured as to the immediate future.

Dry flint hides, 22@23c; Kip, 23@24c; veal, 25@27c; calf, 26@28c. Long wool sheep pelts, $1.25@1.50; medium wool, 75c@$1; short wool, 35@50c. Horsehides, dry flint, $1.50@2.00; medium, $1@1.50; small, 75c@$1.00.

Special Livestock Market Report

San Francisco, September 29, 1920.

CATTLE—Buyers are actively in quest of good beef cattle, but are neglecting other grades. Good beef steers, cows and heifers are commanding full current prices, with the tendency favorable for higher prices before the middle of October, unless all signs fail.

Steers, No. 1, 1000-1200 lbs..... 9 @ 9½c
do, 1200-1400 ..... 8½@ 9c
do, 2nd quality ..... 7 @ 7½c
do, thin ..... 5½@ 6c
Cows and Heifers, No. 1..... 7½@ 8c
do, 2nd quality ..... 6 @ 7c
do, thin ..... 3 @ 4c
Bulls and Stags, good ..... 4½@ 5½c
do, fair ..... 3½@ 4c
Calves, lightweight .....10 @11c
do, medium ..... 8 @ 9c
do, heavy ..... 7 @ 8c

SHEEP—Current prices will rule strong during the coming week. We will not hazard a forecast of next week's quotations, but should not be surprised if they rule higher.

Lambs, milk ..... 9 @10c
do, yearling ..... 7½@ 8c
Sheep, wethers ..... 7 @ 7½c
do, ewes .....5½@ 6c

HOGS—Promptly, following the slump in local hog values last week, Los Angeles and Portland made but for all good hogs at the old figures and as a result local packers found only inferior quality hogs coming this way. Therefore to secure desirable hogs they had to advance prices to the old level. Current prices will rule stronger during the coming week.

Hard, fat grain-fed 100-150 lbs. 15½c
do, 150-225 lbs. 16½c
do, 225-300 lbs. 16c
do, 300-400 lbs. 15c

Los Angeles, September 28, 1920.

CATTLE — Plenty of cattle are being offered, both steers and cows, and the tone of the market is weak. Cows are more plentiful than for some time and the market for them is dull. Steers are in fair demand.

Per cwt. f. o. b., Los Angeles:

Beef steers, 1000@1100 lbs. ..$9.00@10.00
Prime cows and heifers .....$8.00@ 8.50
Good cows and heifers .....$7.00@ 7.50
Canners .....$4.50@ 5.00

HOGS—Receipts were again light the past week and the market steady and firm. Light receipts favored shippers and caused killers to bid full quotations for all offerings. While a fair demand was had from killers for hogs for the dressed meat trade, curers continue to hold out of the market.

Per cwt. f. o. b. Los Angeles.

Heavy, averag'g 275@350 lbs. $12.00@12.50
do, 225@275 lbs .....$14.00@14.50
Light .....$15.50@16.50

Rough docked 20 lbs. piggy sows 40 lbs. and stags 40 per cent.

SHEEP—A steady market and fair demand was had for lambs and yearlings the past week at quotations. Offerings fair, and all taken care of. Ewes and wethers continue dull.

Prime wethers .....$6.00@ 7.00
Yearlings .....$6.00@ 7.00
Prime ewes .....$5.00@ 6.00
Lambs .....$8.00@10.00

Portland, Ore., September 27, 1920.

CATTLE—Receipts, 1767; steady. Choice grass steers, $9.00@10.00; good to choice, $7.75@9.00; medium to good, $6.75@7.75; fair to good, $6.25@6.75; common to fair, $5.75@6.25; choice cows and heifers, $6.75@7.50; good to choice, $5.75@6.75; medium to good, $4.75@5.75; fair to medium, $3.75@4.75; canners, $2.75@3.75; bulls, $5.00@6.00; choice dairy calves, $13.00@15.00; prime light, $11.00@13.00; medium, $9.00@11.00; heavy, $7.00@9.00; best feeders $7.00@7.50; fair to good, $6.00@7.00

LOS ANGELES.

Los Angeles, September 28, 1920.

BUTTER.

The market was hardly so snappy the past week. The high prices noted at the close of our last review began to affect the consumption and a decline in San Francisco the early part of our review week caused the market here to break 2c. At this decline, however there was fair buying and the market remained steady.. The receipts, 277,000 pounds, were well taken care of. We quote.

California extra creamery 65c
do, prime first 63c
do, first 62c

EGGS.

Receipts by rail the past week were 791 cases. Yet the supply of fresh eggs was short of the demand. Demand good, and prices were advanced 1@2c on extras and pullets in sympathy with stronger markets elsewhere. Case count steady and firm. We quote:

Fresh ranch, extras 70c
do, case count 64c
do, pullets 59c

POULTRY.

A firm and fairly active market was had the past week for what came in. Receipts of broilers light and demand good. Friers coming fairly, but all wanted and market higher. Receipts of hens light and demand good and heavy hens a little higher. Roasters are coming in freely, but market steady and demand fair. Ducks selling fairly well and market steady. Turkeys scarce and market firm, few coming in.

Broilers, 1 to 1¼ lbs. 38c
do 1¼ to 1¾ lbs 42c
Friers, 2 to 3 lbs. 34c
Hens .....29@35c
Roosters (soft bone) 3 lbs. and up 38c
Ducks .....24@25c
Turkeys .....40@44c
Geese 25c

VEGETABLES.

Nothing new in this market. Offerings good and sales generally slow. Prices, however, ruled much the same as a week ago. Potatoes slow sale and onions dull.. Lettuce steady and so was cabbage, but demand only fair. Tomatoes sold well, but all beans were slow of sale under the influence of better receipts. We quote from growers.

Potatoes, local, cwt. .....$2.00@2.25
do, Northern, cwt .....$2.75@2.85
Onions, Stockton, white, cwt. ....$2.00@2.25
do, yellow, cwt. .....$1.50@1.75
do, local, crate .....60@72c
Lettuce, crate .....90@1.15
Rhubarb, per 30-lb. box .....80@1.00
Peas, lb. .....12@16c
Carrots, bunches .....30@35c
Summer Squash, local, lug .....50c@1.00
String Beans, green, lb. .....8@9c
do, wax, lb. .....8@9c
do, Kentucky, lb. .....9@10c
Cucumbers, lug .....50@$1.00
Tomatoes, home-grown, No. 1 lug....60@70c
do, No. 2 .....25@35c
Bell Peppers, lb. .....3@4c
do, Chile, lb. .....4@5c

FRUITS.

There was less life to the market the past week, though prices generally held steady. Peaches were in much better supply and under the influence of the increased offerings prices went off 1c and sales slow. Pears in good demand and steady and the same may be said of grapes. Apples, too, continue to sell well and prices generally steady. Figs and quinces dull, but unchanged. We quote from growers.

Plums: Black Dimond, lb. .....8@10c
Nectarines, lb. .....8@9c
Peaches, Freestones, lb. .....5@6c
do, Clings, lb. .....6@7c
Figs, lb. .....3@4c
Crabapples, lb. .....4@5c
Grapes, Malaga, lb. .....6@7c
do, Muscat, lb. .....6@7c
do, Conechons, lb. .....7@8c
do, Tokays, lb. .....7@8c
Apples: Skinner's Seedlings, packed box .....$2.25@2.50
do, Gravensteins, packed box $2.25@2.50
do, Bellflowers, 4 tier .....$1.50@1.65
Pears, lb. .....5@9c

MELONS.

There were fair offerings the past week and the market was quiet. The higher prices established last week checking sales of cantaloupes and Honey Dew melons. Casabas and watermelons were in good demand at old prices.

Home-grown, Tip-top, standard...$1.50@1.65
do, Rocky Ford, standard ....$1.75@2.00
do, Pineapple, standard .....$1.50@1.65
do, Paul Rose, standard ....$1.75@2.00
Honey Dew, standard crate .....$1.50@1.75
Casabas, lb. .....1@1½c
Watermelons, lb. .....¾@1c

BEANS.

A few small sales of mixed beans were made to the local trade, but not enough to establish prices. Eastern buyers and exporters keep out of the market. Prices nominal. We quote from Growers:

Limas, per cwt $10.00
Large white, per cwt .....$5.25@5.50
Small white, per cwt .....$5.25@5.50
Pink, cwt. $7.00
Blackeyes, cwt. .....$6.75@7.00

HAY.

The market the past week was dull and lower. Receipts light, also demand. Grain hay went off $1 a ton, and very little buying at this decline. Northern alfalfa broke $2 a ton and market very dull at this reduction.

Barley, hay ton .....$21.00@32.00
Oat hay, ton .....$24.00@27.00
Alfalfa, Northern, ton .....$25.00@27.00
Alfalfa, local ton .....$28.00@32.00
Straw ton .....$ 9.00@10.00

ALFALFA.

(Reported by Alfalfa Growers of California.)

There were 1,000 tons of hay of all kinds received on the Los Angeles tracks the week ending September 25th, and 250 tons held over as against 930 tons the week before.

Northern Prices.

No. 1 Dairy Alfalfa $27.00
Standard Dairy $23.00

The Gasoline of Quality

The "Red Crown" sign stands for the gasoline with a continuous chain of boiling points.

STANDARD OIL COMPANY
(California)

Stock Hay	$22.00
Southern Prices:	
Fancy Dairy Alfalfa	$37.00
No 1 Dairy Alfalfa	$31.00
Standard Dairy	$27.00
Stock Hay	$23.00

SPECIAL DECIDUOUS REPORT.

Sacramento, September 29, 1920.

There is no complaint to be registered against the deciduous fruit markets. As a matter of fact all markets are showing great activity and strength in all lines of both tree and vine fruits. Tokay grape market was never better. During the past week cars have ranged from $2,500 to $4,000 gross. Price varied on condition and color. Malaga grapes have ranged in price from $2,871 to $3,535 gross per carload. One carload of Black Prince grossed $3,906; one carload Thompson, $2,816; one carload of Zinfandel grapes in bad order grossed $933.00. One carload of Comice pears from San Jose grossed $2,111.00. One carload of B. Hardy pears from Watsonville grossed $2,378. Newcastle Winter Nelis pears averaged $3.25 per box; Colfax Bartletts, $2.25 to $4.63; Placerville Bartletts, $1.38 to $7.00—car grossed $3,356. One carload of Penryn cling peaches sold $3.25 to $5.00; car grossed $3,522. Quinces, ½ boxes, sold for $1.80.

WOOL.

Reports from wool headquarters, Boston, are to the effect that the demand for wool is still more or less erratic and of small volume. Prices are more or less at variance and generally a little easier. The primary markets have been hardly changed. Business in the West is of small proportions.

CALIFORNIA FARM BUREAU MARKETING ASSOCIATION.

REPORT OF SALES.

Turlock, September 21, 1920.

Buyer	No. Hogs.	Av. Wt.	Dock	Price
E. B. Miller	73	202		$15.55
E. B. Miller	5	270		15.05
Seim & Son	72	160		14.00
Seim & Son	13	360		12.00
Two cars, thirty consignors.				
Madera, September 23, 1920.				
E. B. Miller	103	191		15.25
E. B. Miller	20	164		14.25
E. B. Miller	9	127		12.75
E. B. Miller	24	249	270	12.75
Two cars, eleven consignors.				
Fresno, September 24, 1920.				
Joe D. Biddle	75	175		15.25
Joe D. Biddle	4	285		14.75
E. B. Miller	42	230		14.50
Joe D. Biddle	23	125		14.00
E. B. Miller	10	336		12.50
E. B. Miller	10	301	320	12.00
Joe D. Biddle	4	210		6.00
Two cars, eighteen consignors.				

Sales Dates.

Oct. 15th—J. W. Benoit, Holsteins, Modesto.

Oct. 19-21—Rosamines Ranch, Holsteins, Durocs, Percherons, Riverside.

Oct. 20th — Kings County Poland-China Breeders' Consignment, Hanford.

Nov. 4th—Pacific Coast Hereford Breeders' Association, Herefords, Sacramento.

Nov. 5th—John H. Cazier & Co., Herefords, Sacramento

Nov. 6th—H. M. Barngrover, Herefords, Sacramento.

The leading seed companies tell us that while no price has been fixed on alfalfa seed for the coming season's planting, and will not be until it is practically determined as to tonnage produced, there is going to be a lively demand for alfalfa seed. Inquiry has been made by a large concern in the Sutter Basin which contemplates planting 1,000 acres to alfalfa.

Classified Advertisements.

Rate, 4c. per word. Cash must accompany all orders.

COUNTRY LANDS.

500 CASH SECURES
40-ACRE California Farm
In high profit fruit zone; improved road, mile railroad station, easy drive city; all level fields, conditions suitable highly profitable orchards, vineyards; 4-room bungalow; owner called away, anxious quick sale, makes price $2500, only $500 cash, easy terms. Details this and ranches and groves in full production; page 90 Strout's Big New Illustrated Catalog Bargains California and 32 other States. Just out. Call or write for free copy. STROUT FARM AGENCY, 503FA Wright-Callender Bldg., Los Angeles, Cal.

A RARE OPPORTUNITY — To secure a large, improved farm in the DURHAM STATE LAND SETTLEMENT. Block 85 is for sale. 167.63 acres—80 acres irrigated, 66 acres seeded to alfalfa. House, barn, fences and outbuildings all new. $500.00 worth of hay and lumber goes with the place. Price, $23,713.00; $10,000.00 cash. Payment of balance can be extended over 20 years with interest at five per cent. For full particulars call on or write to Geo. C. Kreutzer, Supt. State Land Settlement, Durham, Calif. Tel. 865-J4.

FOR SALE—46 A. alfalfa ranch, good as any in State. Part cash, balance 5 years. Ranch will pay out in five years as dairy. Will sell 60 to 75 tons alfalfa hay with ranch. You must see this place to appreciate it. Full set buildings on ranch. If interested, call or write John Salaberry, Chowchilla, Cal.

FOR RENT — 5000 acre, good stock range in Monterey county. Well fenced. Plenty water. Good buildings. References required. 2429 Martinez Ave., Berkeley, Cal.

FOR SALE—Hollister Ranch on Battle Creek, Shasta county, Cal. 316 A.—80 A. best bottom land; 50 A. upland. Gravity ditches, perfect sub-irrigation system. Riparian water rights since 1860, together with deed to 666 2-3 inches water additionally. All equipment, horses, mules, implements. W. W. Hollister, El Nido Rancho, Route A, Box 85, Anderson, Cal.

FOR SALE—Upper Sacramento Valley, 300 to 800 acres of our grain ranch, especially suited to almonds, olives, figs, grapes. Also other deciduous or citrus fruits. Water easily developed or Iron Canyon coming. A snap for quick sale, $50.00 per A. Good oil prospects. Box 472, Red Bluff, Calif.

MISCELLANEOUS.

WANTED—Young man for foreman of Mexican labor on ranch near La Habra. Must have good command of Spanish and be able and willing to work with head or hands. Agricultural training and experience desirable. Mechanical skill with tools, and engineering training would be assets. Must find own quarters in La Habra. $150.00 to $175.00 per month. Reply by letter, R. L. Reynolds, La Habra, giving qualifications fully.

FOR SALE—Small, well-equipped dairy. 9 heifers coming fresh next spring. Present income three hundred dollars per month. About three hudred White Leghorn hens and flock turkeys. Write or call on S. A. Burkhart, Gridley, Calif., R. F. D., No. 2.

DEALER WISHES to connect with fruit and vegetable producer; strictly business. Address Box 2190, Pacific Rural Press.

FOR SALE—Will sell following implements at bargain prices to make way for fall production. They are late models, clean and bright.
2 Heavy-duty 4-disc plows.
3 S-R Tractor disc plows.
1 Four-disc stump-jump plow.
1 Cunningham Pulverizer, 6 ft. 18 in. diam.
1 Cunningham Pulverizer, 6 ft. 24 in. diam.
2 Deep tilling machines (16 to 18 in. deep).
1 California land roller, 8 foot.
1 Hop and Vineyard Disc Plow.
1 Set Stump-jump Harrows.
6 Ridging and Furrowing Plows.
10 Four-foot Disc Harrows.
6 Sets Steel Drag Harrows for Fordsons.
1 Rotary Harrow, 6 foot (700 lbs.) Tractor
1 Johnson Road Scarifier.
1 Disc Cultivator and Weeder, Fordson size (For killing Morning Glory, etc.)
Eveners — Doubletrees—Neck Yokes—⅝ in. Cables for attaching implements to tractors.
Call or Write for Circulars
CALIFORNIA PLOW COMPANY
Formerly Spalding-Robbins Plow Co.
140 Polhemus St., San Jose.

WANTED—Genuine J. P. Pierce grapevines and cuttings in small or large quantities. Write at once how many and price. Shipped in Jauary. A. S. Caldwell, Columbus, North Carolina.

WANTED TO OPERATE on shares or lease from 50 to 100 acres of grain land with implements. A. Hartoebben, Los Gatos, Cal.

TO LEASE or on shares, large prune or apricot ranch by experienced party. Louis L. Peebles, Los Gatos, Cal.

REMANUFACTURED PIPE
All sizes standard pipe and wrought iron screw casing. All kinds of fittings. Guaranteed good as new. Write for prices. **Weissbaum-Pipe Works, 160 Eleventh street, San Francisco.**

ALL SIZES OF PIPE and screw casing, both new and second-hand, dipped and undipped Guaranteed. Prices right. Shecter Pipe Works, 304 Howard St., San Francisco.

RELIABLE CABBAGE SEEDS—I grow them. You want them. Let's get together. Write for special offer on what you need. Isaac F. Tillinghast, 32 Podel St., Santa Rosa.

APPLES FROM GROWERS—Bulk pack. Bellflowers, $1.50 per box; No. 2 grades, $1.10; Newtowns, $1.75; No. 2, $1.25. Edward A. Hall, Rt. 1, Box 39, Watsonville, Cal.

EXPERIENCED DAIRYMAN would like to lease dairy on shares, or take full charge. Energetic, competent, reliable. Highest reference. Box 2200, Pacific Rural Press.

FOR SALE—Two Monitor Bean Separators, size 5-E; condition as good as new. Call or write, Califonria Almond Growers' Exchange, 18th C Street, Sacramento, Calif.

FOR LEASE — 360 A. mountain ranch, Santa Cruz Co. Buildings, stock and tools. Share or cash. F. B. Plant, 178 Kempton Ave., Oakland.

FOR SALE — Mariout Barley Seed—clean and good quality, weighing over 100 lbs. per sack. J. D. Rowe & Sons, Davis.

CROLEY'S BALANCED HOG FEED—The cheapest feed to fatten hogs. Write Geo. H Croley, Townsend St., San Francisco, Calif.

ESSEX MOTORS BY BUICK USA

In 4 Trips Across America Essex 4 Times Breaks Record

San Francisco to New York--3347 Miles In 4 Days, 14 Hours, 43 Minutes

First Essex
San Francisco to New York
—4 days, 14 hours, 43 min.
Lowers Record 12 hours, 48 min.

Second Essex
New York to San Francisco
—4 days, 19 hours, 17 min.
Lowers Record 22 hours, 13 min.

Third Essex
San Francisco to New York
—4 days, 21 hours, 56 min.
Lowers Record by 5 hours, 35 minutes.

Fourth Essex
New York to San Francisco
—5 days, 6 hours, 13 min.
This car took a longer route and also ran into storms. Yet it broke the former record by 11 hours, 19 minutes.

A Proof of Reliability Never Equaled

The first test of an automobile carrying U. S. Mail across the American continent was made with the light weight, moderate priced Essex. And it resulted in establishing the Essex as holder of the trans-continental record both ways.

The performance while of momentous importance in the world of speed and automobile sportsmanship—is of greater value to the motorist. For it removes all doubt about the reliability of light weight in the most difficult and hardest road service.

Also Holds These Noted Records

Many other unmatched Essex records forecast its ability to break the transcontinental records at will. For instance it holds the official 50-hour endurance record of 3037 miles in 50 hours. It holds the 24-hour dirt track mark of 1261 miles, made by an owner-car, which had previously seen over 12,000 miles of service. And it holds the world's 24-hour road mark of 1061 miles, made over Iowa country highways.

Yet these records are significant only because they show the endurance and reliability of every Essex car. They speak for the ability of any Essex to duplicate these feats.

Essex Motors, Detroit, Michigan

(228)

ESSEX MOTOR CARS WATCH the ESSEX ESSEX MOTOR CARS

Economy and Stamina Across U.S.A.

NEW records continue to emphasize even though they cannot increase the Overland reputation for Economy and Stamina.

Recently a stock Overland established a remarkable new 3442-mile Transcontinental Economy Record of 27.2 miles per gallon.

For 179 continuous hours, night and day, with all kinds of roads and weather, in the hands of 25 different drivers who had never before seen it, the car averaged 19.2 miles per hour. It was a dramatic demonstration of the astonishing ability of Overland under **adverse** conditions.

As in hundreds of other gruelling tests, including the record 10,000-mile Non-Stop Economy Run at Philadelphia averaging 27.8 miles per gallon of gasoline, and the unprecedented Mt. Washington climb to the highest point reached by a motor car on this tallest of eastern mountains—Overland mechanical action was as satisfactory as its remarkable fuel economy.

Triplex Springs, protecting the fine alloy steels of Overland from racking and wrenching, make possible in a large measure the **Economy** and **Stamina** in Overland.

Any Overland in every-day use delivers a maximum of Mileage, Comfort, Utility for every cent of operating cost—and **continues to do it** at upkeep cost well within convenient reach of the average income!

WILLYS-OVERLAND, INC., TOLEDO, OHIO
Sedans, Coupes, Touring Cars and Roadsters

WILLYS-OVERLAND PACIFIC CO.,
Main Office, San Francisco

WILLYS-OVERLAND LTD., Toronto, Canada

VOL. C—No. 15 Fiftieth Year

THE PACIFIC RURAL PRESS

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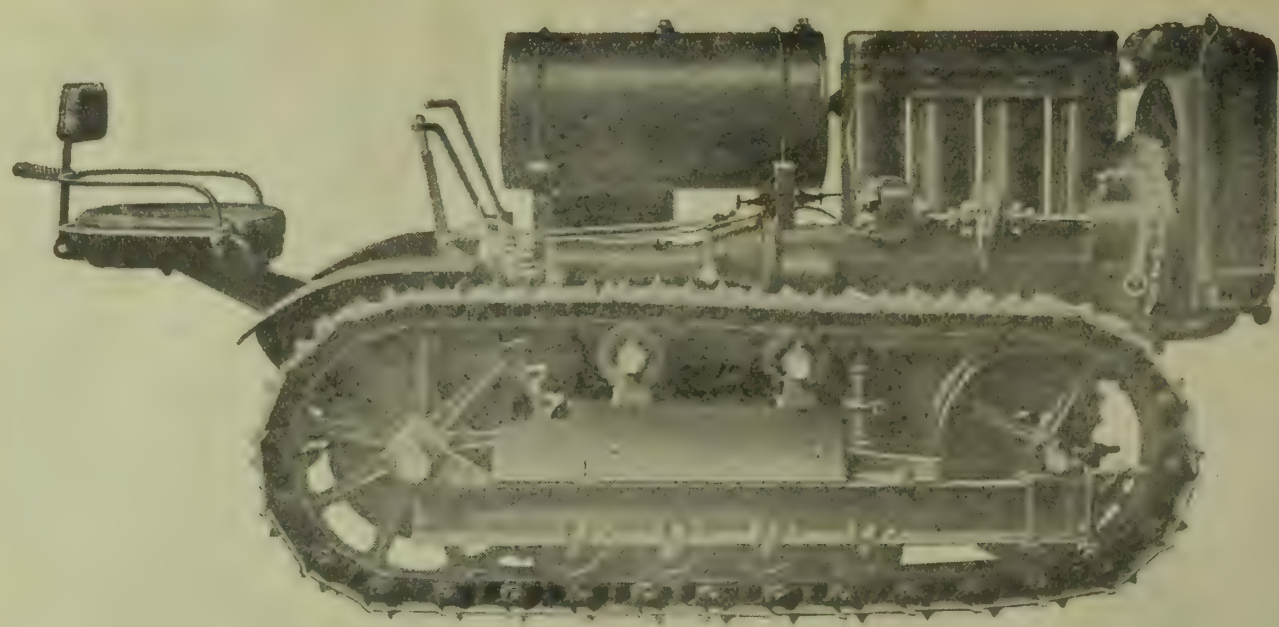
GROWING DEWBERRIES ON A BEAUTY BACKGROUND.

(Written for Pacific Rural Press by A. H. King, of St. Helena)

IN THE FALL of 1913, I planted 1500 dewberry plants six feet apart, in rows with seven feet distances. I made trellises by setting posts firmly in the ground at the ends of each row, and driving four-foot grape stakes every twelve feet along the rows. Number twelve wire was stretched between the posts and stapled on top of the stakes. The next fall there were plenty of long vines which I gathered up, two or three at a time, and wound in long turns around the wire, tucking one end under now and then to keep vines from unwinding. The canes were arranged on the wire so as to be fan shaped from the stump upward to the wire. The following year, a very heavy crop of fruit ripened from the ground to the top of the trellis and along the wire. The new growth started early, and soon covered not only the trellis but filled up all the space between the rows, making it difficult to get the berries and preventing irrigation. When it came to cutting out the old wood and placing new vines on the trellis, I found it a long, bad job.

When the new growth started next year, I cut it off as close to the fruiting wood as possible, but I cut it too early and the vines started to grow, and, by the time the fruit was ripe, it was well covered with the rank growth and it was nearly as hard work to cut out the old vines as the year before, and besides there were few long canes to put on the trellis. The next year I waited till the fruit was nearly ready to gather, then cut the new vines off as before and irrigated freely, and, when the berries ripened, they were easily and quickly gathered. About the 10th of July the year after the crop was all picked, I cut off all the vines, new and old, then burned the vines between the rows, and for once I had a clean field. Plowing a furrow on each side of all the rows, I irrigated freely and in two weeks had a nice new growth of vines started, and, at the end of the growing season, the vines were eight to ten feet long and as straight as a string and were easily put on the trellis, as they were not tangled as before.

I wondered if canes grown so late in the season would bear a crop, but the next season the fruit hung like black ropes along the wire and down the canes to the ground. Now I follow this method each year, and have never failed to get a good crop. When the new growth is left to grow all the season it sends out a lot of laterals, which become very much tangled, and, in cutting them out to place on the wire, they are injured so they often die the next season. By cutting everything clear, the ground can be plowed and the next growth is straight with the laterals



Advance Announcement

BEST TRACKLAYER "Thirty" TRACTOR

Due to the insistent demand of farmers and orchardists upon the C. L. Best Gas Traction Company for a high grade tractor that could be used where the power required did not justify the purchase of a Best Tracklayer Sixty, the Company has perfected a 20-30 Horse-power model of practically the same design as their famous "Sixty"

AFTER months of trials and tests, this model is declared an exceptionally high-grade tractor, and factory production has been started. The design and materials used in this new "Thirty" are the outcome of a decade of high-grade tractor-building experience, and the knowledge gained by the successful operation of the Company's various models in the field. With each model, improvements have been made until today the "Thirty" stands a mechanically perfect tractor.

This new model is especially adapted to orchard work. It is small, compact, turns in its own length and is very easily managed. It will also eat up practically any belt job to which you may put it.

Working parts of the "Thirty" are entirely enclosed, and all gears are run in a bath of oil. Anti-friction bearings are generously used at points where long manufacturing experience dictates. Manganese steel tracks insure long life to the truck units. All working parts, though enclosed, are easily reached. The power is generated from a Best motor —a motor which has long been recognized as the leader in heavy-duty tractor motors—bore 4¾", stroke 6½", valve-in-the-head. The following additional description of the new "Thirty" will prove interesting:

Power Rating: Twenty h. p. at the drawbar, 30 h. p. at the pulley.

Speed: High, 3 1/16 M. P. H.; low, 2 M. P. H.; reverse, 2½ M. P. H.

Dimensions: Length (not including seat), 9' 4". Height, top radiator, 59". Width over all, 11½" shoes, 53¾". Width between tracks, 30¼". Ground clearance, 11½". Drawbar, 16½" high. Track centers, 41¾". Standard equipment, 11½" shoes. Length of track on ground 60". Stationary Drive: Standard pulley, diameter 12", with a 7" face. Pulley speed, 800 R. P. M. Belt speed 2513' per minute.

Weight: 6700 pounds.

Write for full information, specifications, prices and name of nearest dealer.

Ready for Delivery about February, 1921

C. L. BEST GAS TRACTION COMPANY

San Leandro California

General Agricultural and Horticultural Review

AGRICULTURAL NOTES.

Many people from Kansas are settling around Tulare.

Dates of the Orange County Fair are October 7, 8, and 9.

A large acreage will be seeded to grain in Tulare county this fall.

Irrigation water in the Terra Bella district will be available till the middle of October.

A considerable acreage will be planted to alfalfa this fall in the Patterson district.

The sweet potato harvest in the San Joaquin is now on. In the Livingston district the yield is heavy and sizes large.

Tomato shipments from the San Fernando Valley, Los Angeles county, started early in September. A good crop is forecasted.

Five men on horseback have been poisoning ground squirrels in the Palos Verdes hills of Los Angeles county near San Pedro.

The Pieters-Wheeler Seed Company's warehouse, located at Gilroy, was destroyed by fire a few days ago, together with $100,000 worth of seed.

The Bureau of Markets reports that the production of practically all small vegetable seed crops will be considerably less this year than in 1919 or 1918.

Should frost not occur until late in November C. R. Wores of Brawley states that he expects to raise a $400,000 cotton crop of the Pima variety.

The U. S. Department of Agriculture recently estimated the value of farm crops and animals for 1920 at $25,000,000,000—five times the value of twenty years ago.

The cave-in in the Tehachapi tunnel and consequent shortage of cars have caused the Terra Bella tomato growers to suffer severe loss. Hundreds of acres of tomatoes have been plowed up.

The Carlsbad Growers' Association estimates returns from this season's planting of peas at between $300,000 and $400,000. The planting has been made with the idea of marketing during the midwinter holidays.

Cauliflower in parts of Southern California is being planted on the shoulders of flat ridges and irrigated immediately through the furrows between. Plants are about eighteen inches apart in rows two feet apart.

Satisfactory arrangements have been made for handling cotton products of the Lindsay district. It is to be stored, and 40 cents per pound has been offered on warehouse receipts which will assist growers in holding for a better market.

New Zealand spinach, grown in the garden of the California Orchard Co. of Monterey county, has gained favor with Supt. W. E. Goodspeed. It tastes like ordinary spinach, and is equally tender, but when cut down for use, it grows again repeatedly.

The town of San Joaquin, Fresno county, is on a boom. More than $100,000 worth of land in the James Ranch Colony has been sold this year. The James irrigation district, which surrounds the town, has just disposed of the remaining $750,000 in bonds and will spend that money in building many miles of laterals.

The Sacramento Farm Bureau Exchange is a recent organization formed at the State Capital for the purpose of buying and selling farm products for the small farmer. They have been operating for some two months but have only recently incorporated. F. H. Harvey, the well-known rancher and dairyman, is father of the scheme.

Efforts to organize the national farm loan association of California into a State federation along the lines similar to the Federal Loan Bank of Berkeley and the Federal Farm Loan Board at Washington, D. C., at a convention held at Modesto last week were headed off by association representatives friendly to the United States Land Bank and farm board administration.

Harvesting of the rice crop on the 7,000 acres of the Conway Ranch near Woodland is now under full headway.

The second farm bureau fair held in Shasta county closed with a record-breaking attendance. Nineteen farm centers took part.

Adulterating milk with water is not a profitable business. It cost Adam Cheul of Redding the very light fine of $25 to mix the two liquids and sell them as milk.

The crop of blackeye beans in the Modesto and Turlock sections, now being harvested, is turning out well. Pre-harvest prices were $6.30 to $6.40 to the grower, but now have slumped to about $5.25.

The beet farmers of the Pleasanton section are well pleased over the high test of their beets. That district has always had a very high record, and prospects seem even better this year. The tests have been running as high as 22.8 per cent.

On October 1st the following stocks of grain were in warehouses and on wharves in tons: Wheat, Port Costa, 21,047; Stockton, 17,302; San Francisco, 213. Barley, Port Costa, 38,613; Stockton, 32,898, San Francisco, 799. Beans—total in all points, 183,668 sacks.

While the eastern hop market remains quiet, the first 120 bales from the Oregon crop have gone at 55 to 60 cents, which is the price estimated for the California crop. The Oregon crop is estimated at 45,000 bales. California will have 85,000 and Washington 30,000 bales.

In the report of the State Department of Agriculture for August it is noted that 748 herds, including 7,143 cattle, were tested for tuberculosis, with 528 reactors. This is a little over 7 per cent. Sheep inspected for scab numbered 81,399, of which it was considered necessary to dip 41,715.

At Maddock, Sutter Basin, they have a new idea of utilizing farm lands, for heretofore irrigation ditch banks have been allowed to grow up in weeds, but the owners of Sutter Basin believed their soil was too rich for such a wasteful practice and to get away from the unsightly weeds they planted pumpkins and squash on the banks.

The rice fields which lie on the east rim of Sutter Basin are at a fever pitch of activity now with fifty binders and a dozen threshers in action. While several hundred head of horses and mules are employed, motor-drawn binders are also being used. These make more speed than the horse-drawn outfits.

Surveying for the Madera irrigation district in Friant, Fresno county, where the largest dam in the world is to be built, will be completed shortly and actual construction work will begin in the spring. The dam will be 310 feet high and 3,000 feet long, having a concrete base 250 feet through. Twenty-five hundred men will be employed in the work.

The Merced-Stanislaus Sweet Potato Growers' Association recently appointed brokers to handle the present crop. Three shippers in Turlock were given contracts; and the Big Four, who have long been shipping from Livingston, were given the business from the latter point, according to President G. H. Winton, banker and grower of 120 acres of sweet potatoes near Livingston.

W. F. Hume of San Francisco, who at the request of the Delta Farmers' Committee, after a tour of the rice district, makes the statement that eventually nothing but a strong protective tariff can retain rice as one of California's crops. Earlier in the season the growers expected 7 cents, but now their association has announced they will try to get 5 cents, which figure is described as the deadline on profitable growing.

HORTICULTURAL JOTTINGS.

While there has been no price set on this year's crop of dried figs, one grower near Terra Bella is processing his crop of Smyrnas and selling them at 30c per pound.

The outlook for the Butte county orange crop is much better than expected earlier in the season, is the statement made by F. W. Mason, a large shipper of that district.

I. J. Condit, formerly connected with the Forkner Fig Gardens at Fresno, is now in the employ of the California Peach and Fig Growers' Association in the capacity of field man.

Pomegranate packing is now going on in the Exeter district. The Merryman Packing House expects to put out a big pack. Emperor grapes will follow in the next few days.

Reports at the annual meeting of the Lindsay Fruit Association and the Lindsay Packing House Company showed steady growth. The association, one of the oldest in the district, is re-equipping its packing house.

Now that the knocker has disposed of his hammer, the California ripe olive is regaining its position among the products of the State as a popular food and are being sold by the hundreds of cases in all sections of the United States.

Florin has been experiencing the serious car shortage also. As many as 25,000 crates of grapes have been held in the packing-house of the Florin Fruit Growers' Association for several days, awaiting cars; however, they are now moving the grapes at the rate of several cars per day.

Suit to prevent the delivery of raisins to an outside packer from a vineyard under contract to the Raisin Growers' Association has been started against Theodore Markarian, who owns the Elsinore vineyard in Egers Colony, Fresno county. This is the company's regular policy for enforcement of contract.

Charles G. Johnson, superintendent of the State Department of Weights and Measures, announces that he will oppose a move of the Central California Berry Growers' Association, composed largely of Japanese, to place strawberries on the market in 8-ounce containers, as a substitute for the 12-ounce baskets now generally used.

E. J. Lee, director of the State Bureau of Food and Drugs, has been appointed by Governor Stephens to attend the convention of dairy, food and drug association to be held in St. Louis. Mr. Lee will demonstrate a sterilization process recently adopted in California to destroy all danger of botulism poisoning that has threatened a loss of millions of dollars to the olive growers of California.

A report reaches us from Lake county that the Leonard Coats "14-18" French prune has proven a great success in that locality. C. McEwen grafted on one tree the ordinary run of French prune, one Coats "14-01" and Coats "14-18." The first proved to be a little blue "sticktight," the second a large pear-shaped prune, and the third, the true "14-18," four times the size of the first and double the size of the second. Mr. McEwen states that he would rather have 5 acres of the "14-18" prune than 25 acres of the ordinary French prune.

The Students interested in fruit growing who are attending the College of Agriculture of the University of California, will have a fruit exhibit about the third week in November in Hilgard Hall, on the Campus of the University of California, Berkeley. The show will give an opportunity to assemble and exhibit a great variety of representative fruit from growers of various sections. Any grower has the privilege of exhibiting. No cash awards will be offered. Ribbons, however, will be given to the first, second and third places of each variety and class, name and address of grower will be attached to each exhibit.

Knightsen, Contra Costa county, shipped the first carload of almonds last week. The car was consigned to a dried fruit firm at San Francisco.

A wine grape vineyard located at Kerman, consisting of 40 acres, has been sold to a Fresno vineyardist for $65,000, the seller keeping this year's crop.

Fumigation tents are scarce in San Bernardino, and for this reason many citrus growers are spraying for scale, as reported by Horticultural Commissioner J. P. Coy.

Fire destroyed an evaporating plant containing 40 tons of dried fruit near Campbell, a few days ago. The loss was aprpoximately $20,000. The plant was the property of F. O. Bohnett.

Such is the demand for California plums, not only in the American cities but in foreign lands, that the latest call for California's famous production comes from Havana, Cuba, where a car of Kelsey Japan plums were shipped from Pomona.

The September government crop estimate on citrus fruits in California and Florida: California—Oranges, 18,000,000 boxes. Florida—Oranges, 8,500,000 boxes, against 7,000,000 boxes last year; grapefruit, 5,000,000 boxes against 5,500,000 boxes last year.

Twenty-eight violations of the fruit and vegetable standardization law were reported in one month recently in Los Angeles county. Several violations of the apple act were reported and two carloads held up for proper marks on the boxes. Four arrests were made.

The "Turlock Tribune" tells us of the generosity of F. M. Merritt, a vineyardist of the Turlock district, in decorating the office of the Tribune with five-pond bunches of Malaga grapes. We are not jealous of the Tribune's popularity, but we would contribute space for like decorative purpose in the office of the Pacific Rural Press.

According to the Bureau of the Census, Fresno county, has made great gains in the matter of irrigation during the past decade. In 1910 there were 633,652 acres under irrigation; in 1920 acreage to be irrigated by works either completed or under construction, 957,780 acres. Acreage available for settlement to be supplied with water by works either completed or under construction, 93,735 acres.

Director Hecke announces that the first installment of beneficial parasite material from E. W. Rust, Field Entomologist, Cape Town, South Africa, has been received at the California Insectary. The material consists largely of parasites of the black scale, so destructive to citrus trees, and will be reared at the Sacramento Insectary for future distribution in the citrus groves of California.

New refrigerator cars now being built to carry California fruits and vegetables East are designed on plans worked out after investigations by the U. S. Department of Agriculture, according to Asst. Mgr. E. G. Dezell of the California Fruit Growers' Exchange. They are well insulated, have solid bulkheads, basket bunkers permitting air to circulate around the ice, and have more effective ventilation.

Acting on the request of organization committee of the deciduous fruit growers in the Hemet region of Riverside county, F. N. Bigelow of the State Market Directors' office met on September 25th, with the growers of that locality for the purpose of forming a deciduous fruit marketing association. They adopted a tentative constitution and will meet again in the very near future to perfect their organization. The name under which they will conduct their business is the Riverside County Deciduous Fruit Growers' Association. They expect to handle 20,000 lbs. annually.

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RALPH NEWMAN - - - - - Dairy

EDITORIAL

OUR RARE OLD BIRDS.

"Those rooks, dear, from morning till night
They seem to do nothing but quarrel and fight
And wrangle and jangle and plunder."

—Mulock.

"The croaking raven doth bellow for revenge!"

—Shakespeare.

When we stepped out upon the pathway of editorial reform by welcoming readers to self-determination of one-half of that which these columns should contain, we certainly expected that such a pathway would lead beneath umbrageous trees and among flowery shrubs, and that the air would be full of the voices of thrush, lark, canary and bobolink, and that our editorial life would certainly be fifty per cent more worth the living, because of the joyful associates who would share it with us. Now, thought we, there will come relief from the dismal outpouring of dreary economies to which our own thought seems prone, because at least half the space will be filled with paeons of praise for life and work in California and of thanksgiving to Mr. Ford for making his self-moving orchestrions so cheap that the wayfaring man, though a tramp, need not lack the fill of his ears with melody. What a disappointment it is to us to find that the feathered songsters along our new editorial highway are nearly all crows, and we have to present our readers croakings worse than we, by ourselves alone, could ever have pulled from the sky.

FEDERAL BANKS TOO "RESERVED."

To the Editor: I am nearly out of patience with the recent action of the Federal Reserve Board in forbidding member-banks to make loans to farmers on any terms whatsoever. I have dairy cows which I have kept duruing the famine years. My nearest neighbor has hay but no cows. I need the hay. I can buy better from him in the shock. The hay is better because of less loss of leaves, and cheaper because he is saved the expense of stacking and baling—baling costs $5 per ton and stacking $2. I go to the local bank to borrow enough money to buy that hay in the shock. Butterfat is high. I want only a four months' loan—banks like short loans. I offer as security four times the amount of the loan. I am well acquainted at the bank. The cashier tells me that it is not a question of security; that a year ago he would have loaned me the money on my unsecured note, but that owing to the action of the Federal Reserve Board he cannot make the loan. Thousands of farmers all over the county are in the same situation I am in. Last week's daily press stated that a hundred of the largest packers and bankers were en route to Washington to protest to the Federal Reserve Bank this policy, which is destroying the livestock industry of the country. If our farm organizations, with their millions of members, had a political policy like the labor unions, they could strengthen that protest a thousand fold. It is humiliating to find that we who are the bone, sinew and life blood of the nation, and whose offspring maintain the population of our cities, must depend for salvation upon the efforts of packers and bankers.—R. D. K., Richland.

We judge from the published accounts of their policies and transactions that the Federal Reserve banks have been squeezing everybody to prevent undue expansion and to bring the country through a readjustment from war to peace without a panic. We understand that they have claimed to be dealing with farming more gently than with commerce and manufacturing, and they have pointed with pride to their accomplishment in providing funds for harvesting and moving crops so that the farmer need not lose his crops after he has made them. Perhaps that is about as far as one could reasonably expect old-fashioned ideas of financing industries to go in their first jump toward better things, but of course it does not go far enough. They keep telling us that the welfare of the country and the world depends upon greater food production at lower prices, and yet their sight of food production seems to include only the tail of it. Possibly your neighbor could have secured a loan to stack and bale his hay and get it to market, because that would belong to the category of "moving crops," while your idea of buying the hay and cutting out the cost of baling and handling and hauling it to your cows to enable them to pour out cheaper milk would not be "moving crops," but would be buying crops and therefore furnishing money to commerce and not to production! Of course such a policy as you describe in your experience is economic ignorance and folly, and defeats the very ends which it claims to serve. You ought to have been helped to buy the hay so as to save the cost of handling and enable you to come nearer to getting back the cost of your milk. This is only one of a thousand instances to show that the agricultural point of view is not represented adequately and understandingly in our financial institutions and that proper methods of financing farming are not yet provided, but they are surely on the way—as the next letter will show.

GRANT HEARING ON RURAL CREDITS.

To the Editor: Owing to the numerous requests which have been made on me by live-stock associations, farmers' organizations and the farm press for a judicial hearing on bills to be presented by them to the special Short-time Rural Credits Committee, created by the Agricultural Appropriation Act at the last session of the 66th Congress, for the purpose of establishing certain economic truths, I hereby give notice to all that any personal rural credits bill which may be presented on or before October 25 to the House Committee on Banking and Currency, will be presented by me to said special committee, and I will use my best efforts with the other members of said special committee to grant such requests for a judicial hearing, and if granted I will see to it that all parties filing bills as above indicated receive advance notice of hearings.—L. T. McFadden, Chairman, House Committee on Banking and Currency and Ex-Officio a member of special committee on Short-Time Rural Credits, Washington, D. C.

One of the bills which Congressman McFadden of Pennsylvania will present to this committee is his own bill, which we outlined and approved in our issue of March 27 and the occasion for a judicial hearing on all such personal credit propositions for farmers is that which we declared to be eminently desirable in our issue of September 4. It is immensely important that these measures are on their way. If farmers, by the organization of local credit societies, can lay their own pipes directly to the great reservoirs of capital, which the old line of traders in money are dispensing to them by indirect methods, which are exceedingly expensive, or withholding from them to serve other interests, there would no longer be any doubt that R. D. K. could buy his neighbor's hay (in the "shock," as he says, or in the "cock," as they say where we came from), and his cows would be eating more hay and less trade and transportation. High interest, trade-profits and transportation and denial of working capital at any cost, are discriminations which are giving our farmers a rough deal.

UPHOLDING THE LOAN ASSOCIATIONS.

To the Editor: I was very glad to read your editorial in this week's issue on "Farm Loan Associations Held Apart." I have always felt that the associations are the foundation and strength of the whole system, and that it would be a great mistake to obliterate them for the purpose of expediting business. Sometimes apparent efficiency is only gained at the expense of safety—better a little "red-tape" than hurried and arbitrary action in such important transactions. The desirability of the bonds as a gilt-edged investment under the association system is not only obvious but proven. I look upon our land banks, especially the federal land banks and the State Land Settlement Board as the two most potent factors today in settling up and improving our land and consequently in strengthening the backbone of the nation.—J. J. F., Berkeley.

There may be a little doubt as to how far the district land banks are discouraging the loan associations from joint action. We have seen a circular of the Berkeley land bank in which it is said: "For a long time past we have had under consideration the proposition of organizing the associations within each State into a federation, believing that some benefit might be obtained through such an association. * * * We have not believed that much good would come from a federation of the associations until after the Supreme Court shall have rendered a decision regarding the constitutionality of the farm loan act and the tax-emption of the farm loan bonds." Our idea of that would be that postponing action until after that time would leave the borrowers unorganized just at a time when they should be active in prevailing upon Congress to do to the law whatever the court decision may show to be necessary. The private mortgage bankers, who are fighting the land banks, will not be so polite. They are already organized and waiting to sand-bag the law as soon as it emerges from the supreme court. Our nation is that if the organized associations are not ready with restoratives, the sandbaggers will knock the remains into the crematory before even the coroner's jury can "view" them.

LITTLE BROWN JUG IN FARMING.

To the Editor: A neighbor of mine makes wine and sells it by the jug to my hired men. Is that against the law? Is he allowed to sell wine by the jugfull to anyone? I would like to put a stop to it if I could.—Subscriber, San Jose.

We do not know. We are more befuddled over such questions than we ever have been by direct action of the stuff itself. We read of wineries where "business is as usual"; also of "shipments to empty cooperage in time for new crop." At the same time we also read of raids, seizures, fines and what not. If wine-making is going on under permits for ceremonial uses, some people must be swimming the Red Sea instead of passing over on dry ground. How do you know that your hired man is not buying grape juice with less than one-half per cent of the needful? In that case your neighbor might be within the law, and if it takes your man as long to do an errand as usual with hired men, the stuff might show a pretty good bead by the time it gets to your bunk-house. You are up against a pretty hard proposition. Some would probably settle it by lying in wait and taking the jug away from the man, and we presume that by advertising you would have no trouble in subletting that contract. Otherwise you might appeal to your Uncle Samuel—or notify your neighbor that you will unless he stops selling to your men, which, however, might make you accessory. We are rather glad we do not know much about it; it is a connection in which it is unsafe to seem too wise!

"BACK TO THE LAND BUSINESS."

To the Editor: My judgment is that farming is a good thing for a woman to let alone—unless she is a genius, which I am not. But, of course, having started, one must try to do the best one can. Your stand on the "Back to the Land" business is all right.—W. R., Napa.

Some one has defined genius to be hard work, but we do not accept that definition; "hard work, well directed," may do as a definition, for then one knows what he is working for and how to do it. The trouble with the back-to-the-land promoters is that they forget to mention both the work and the necessity of knowing how to do it. And you are right about staying with it after starting, if you can see any light ahead. You are of course getting wiser all the time, and you may prove to be a genius after all. California has many women who

are and some of them had to learn how to be.

EVOLUTION OR REVOLUTION?

To the Editor: Lest you should become obsessed with the notion that your exudations on industrial and politico-economic questions are acceptable to all your readers, I want to say you are badly mixed in some of your recent editorials, or intentionally reactionary.—A. L. H., Fair Oaks.

Yes; it may seem that way to one who desires to embark mankind upon a cloud and set sail for the base of a rainbow. It is such a one who is obsessed and cares naught for law nor experience nor common sense. To such a one the effort to build the new upon the wisdom of the old, seems "mixed," and so it is, for the new should be an outgrowth from the old and reveal features of both; also to one who dreams of revolution and scorns the true progressive process, which is by evolution, it seems reactionary.

QUERIES AND REPLIES

By the Editor.

Inquirers Must Give Full Name and Address
Answered Questions also on other pages.

Slip-Propagation of Sweet Potatoes.

To the Editor: I am told that planting tips or cuttings of the sweet potato vine is more desirable in growing sweet potatoes for seed than to plant rooted plants from the hot-bed. Is this true, and if so, why?—F. S. H., Turlock.

To the Editor: Can you tell me how to keep sweet potato vines or slips through the winter for next season's plants? I have the Nancy Hall variety.—B. W. M., Cloverdale.

The recourse to slip-propagation is for the purpose of getting away from diseases of the plant stem and tuber, if possible. The slips are taken from the growing plant, which seems to be free from these diseases. These slips are started in sterilized hot beds and induced to grow after late planting out, small tubers from which disease-free sprouts can be grown in the usual way at the usual time—they also being induced to grow in new or sterilized hot-bed soil without contracting disease, and finally planted out at the right time to make a commercial crop. In this way it is hoped to escape carrying the disease into the field with the rooted sprouts at planting time. The reason then why planting sprouts from slip-grown seed-tubers rather than from tubers not grown from slips is desirable, lies in the chance of escaping disease. It is not a sovereign remedy, but it may do a lot of good where disease is prevalent and destructive, and it is being tried out in your region under the auspices of potato shippers who have much confidence in it, as stated by Mr. Kieffer in our issue of May 1 last.

As to carrying over sweet potato slips we know no way to do it except by rooting them in a hot-bed or green house and keeping them all winter out of the frost in this way until the frostless season returns next spring when they can be planted in the open ground. This, of course, is not commercially possible, and therefore slips are made early in the growing season, rooted and planting out early enough for them to make small tubers which will carry over, as stated above.

More Experience with Corn-Ear Worm.

To the Editor: I sprayed about one-eighth of an acre of corn with powdered arsenate of lead when the silk first appeared, and then after four or five days, when the silk opened further, I sprayed again, with the result that only about ten per cent of the ears showed any signs of worms when gathered. The poison did not affect the corn. Spraying, however, would not be practicable except on a small scale.—S. R. N., Fair Oaks.

The above, confirming the experience previously published in these columns, ought to settle the corn-ear worm for this year. Now who is going to forget all about it and start us off on the same old category next spring. There is no successful treatment for field crops, but there is for garden or seed-corn areas.

Tobacco Stems as a Fertilizer.

To the Editor: I have about a ton of dried tobacco stems, which I have been told are very good for a fertilizer on a vegetable garden. Is this true? If not, is it good for a fertilizer? Is it good for spraying trees? I have been told that the San Francisco florists use a great deal of it.—F. E., Stockton.

Yes; tobacco stems are good as a fertilizer for their content of two or three per cent of nitrogen and six to ten per cent of potash, but they have to be ground to reach commercial form. For digging into the soil, they should at least be shredded or crushed and applied early enough to decay in advance of planting to escape the drying effect of coarse rubbish in the soil. They are useful in apple or pear orchards if buried in the soil near the base of the trees so that rains or irrigation may leach out the juice to kill root aphis. They are largely used by florists everywhere for fumigating green houses to kill leaf pests, and they pay about 4c per pound for them in 50-lb. bales. The quantity you have is rather small to bother with in the trade, but some seedsman and florist's supply dealer might use them or some Stockton florist get his supply your way.

Rib-Grass Questionable.

To the Editor: What do you know of "rib grass" as a summer forage plant? I am told it is planted quite extensively in Humboldt county. I have some good hill land, burned over this summer, that should raise feed, but I do not want to plant Johnson grass, as it would be a poor neighbor.—C. M. M., Hopland.

Yes; rib-grass, commonly called "plantain," has had many friends in Humboldt county for many years. It is a persistent weed in lawns and gardens, but it is good forage otherwise. It roots strongly and it has a broad leaf, which condenses much fog and pours the water down on the central rooting of the big rosette which the plant makes on the surface. The seed stem is full of rich seeds, which are relished by both cows and canary birds. It grows in California more luxuriantly than in any other place where we have seen it. But in spite of these facts rib-grass can not be counted an acquisition and its weedy reputation persists, for it is believed to reduce the carrying capacity of the range considerably by displacing better plants, and it is perhaps a question whether it is worth having. It comes late in the summer, but there is not sure to be much of it. It would be safer to try rye grasses, red top and mesquite, alfileree, and bur clover, to see which will serve you best to supplement the native grasses which will volunteer. You need not worry about Johnson grass; it would not stay with you long on uplands.

Canada Thistles.

To the Editor: I have only been able to cultivate my Canada thistles once a month and between times they have made some growth. Also, after cultivation, two or more plants grow where there was only one. Can the thistle be killed by preventing all top growth for one year, or will it take longer. I have heard that putting kerosene or gasoline on the stems will do it. How about that?—C. H. F., Fortuna.

You should not "cultivate" thistles; you should "weed-cut" them with a flat knife, which decapitates them below the surface and does not stir up the roots and make new plants. If you have kept the plants from going to seed you have done something to prevent spreading, however. Now start in weed-cutting whenever the plant shows green leaves and keep at it once a week—not waiting to see any more green from them. This ought to do them in a year. You can kill single plants by dosing the stem with gasoline, and if you only have a few plants you can do them that way.

Roots for Phillips Cling.

To the Editor: On what root do you advise budding the Phillips Cling? Is it better to start with Phillips pits?—V. C. K., Lincoln.

We know of no experience with Phillips Cling seedlings; perhaps some reader will tell us results. Theoretically, we might doubt the desirability of Phillips as compared with a stronger grower, more robust tree, like the Salway, for instance, which is quite widely used.

Manuring Around Fruit Trees.

To the Editor: I am putting some old manure around my avocado tree. Some people tell me I should not do that because this manure will burn the tree. Is this a fact?—A. L. C., Sanger.

Manure should not be heaped up around any kind of a fruit tree. It may heat and burn the bark, or it may injure the roots and make the tree sick by leaching out too strong a liquid. Manure should be spread over the ground so that it shall nowhere be thick enough to get hot by fermentation, both because of danger of injury to the tree and of losing the goodness of the manure. Besides most of the feeding roots of the tree are away from the base of the trunk.

Termites and Loose Bark.

To the Editor: I send some small white bugs found under the bark of a prune tree where there is also some sticky substance. The bark is loose and I fear the young tree is done for. I discovered the trouble when whitewashing the trees; perhaps I did not whitewash down far enough if sun-burn is the cause of the trouble. When I saw them I added a very little disinfectant to the whitewash, and looking at the trees today, I find that the sticky substance coming out of the bark seems much less and the bugs have been killed. I only noticed them on the trees where the bark was loose. Can anything be done for the trees after the bark has become loose all around?—L. S., Glen Ellen.

The insects you send are "termites" or "white ants" (though they really are not ants at all), and they do just the work you describe. Though widespread they are fortunately not abundant enough to be considered a great pest. They like dead wood and may have followed sun-burn, but do not hesitate to keep going into live wood also. You have apparently given them a good treatment. A rag or cotton soaked in carbon-bisulphide is good special treatment, for the fumes follow their burrows and kill them where they are beyond touch of liquid applications. There is no cure for loose, diseased bark. If the tree has enough life above and below it can be saved by bridge-grafting.

Beets on Alkali.

To the Editor: I desire to know what to plant or to do to get the best of some alkali on about 3 acres. I am advised to plant sugar beets and to use them for cow feed.—A. C., Bakersfield.

Your advisor has a level head on the plant which will turn most alkali into cow-feed, but he is a little a-slant on the kind of beet. Do not put in sugar beets which are small and grow underground. Plant mangel wurzels or yellow tankard beets, which grow so tall above ground that you can push them off their pins instead of plowing them out. If the alkali is very strong you will not get beets or anything else. If it is mild you will get beets. Plant after you have had rain enough to carry down the surplus surface alkali. Cultivate well and feed the beets as you need them next spring and summer.

Peach on Apricot.

To the Editor: I have about 400 seedling apricot trees now ready to bud. I am told that budding peaches upon apricots does not make good peach trees and they will only live about two years. I intended to bud Phillip clings upon these apricot trees.—V. Y. D., Corona.

Your information is about right. Practically no peach trees are grown on apricot roots, though it works well the other way round and many apricot trees are growing on peach roots. Aside from the general desirability of having the freer grower below rather than above, if you aim at longevity, the fact that the apricot root is cake to gophers while the peach root is medicine, may have something to do with it.

Pruning Emperors.

To the Editor: Should Emperors be pruned long or short? J. F. P., Upper Lake.

Emperors should be pruned long—in spite of the fact that they have been pruning them pretty short in Europe since 1914.

CALIFORNIA WEATHER RECORD

The following rainfall and temperature record is furnished the Pacific Rural Press by the United States Department of Agriculture Weather Bureau at San Francisco for the week ending October 4, 1920.

Station—	Rainfall Past Week	Rainfall Seasonal To Date	Rainfall Normal To Date	Temperature Highest	Temperature Lowest
Eureka	.31	3.21	1.65	84	52
Red Bluff	.00	.35	1.00	98	50
Sacramento	.00	.01	.48	96	50
San Francisco	.00	.13	.38	86	53
San Jose	.00	.02	.46	92	44
Fresno	.00	.14	.38	96	50
San Luis Obispo	.00	T	.57	94	48
Los Angeles	.00	.04	.10	84	53
San Diego	.00	.02	.10	74	54
Winnemucca	.00	.30	.76	84	34
Reno	.00	.48	.70	84	38
Tonopah	.00	.95	1.28	78	44

The Market Question Presents Several Angles.

CO-OPERATIVE MARKETING IS A SUCCESS.

(Written for Pacific Rural Press by W. S. Killingsworth.)

The increasing popularity of co-operative marketing is evidenced by the rapid and substantial growth that is being made by one of the youngest of the horticultural co-operative organizations in the State—the California Prune and Apricot Growers, Inc. The business of this organization has increased to the extent that the directors are continually increasing the capacity for storing and handling the products in the various prune and apricot producing sections of the State.

Two Enormous Packing Establishments.

The latest in the line of housing improvements is the completion of two of the largest dried-fruit packing-houses in the world. One is located at Santa Paula, Ventura county. This house was constructed for the purpose of handling apricots exclusively. This massive structure is of steel and concrete, the dimensions of which are 150 feet wide and 254 feet long. The other plant is located at Visalia. It is also constructed of steel and concrete, the dimensions of which are 205 feet wide and 235 feet long. The association now boasts of 24 packing plants, all of which are equipped with the latest improved machinery and conveniences. In addition to these buildings, owned solely by the association, there are 15 packing companies in various parts of the State that pack for them. In the erection of this vast number of packing plants, it was done for the purpose of keeping ahead of the increased tonnage of both prunes and apricots that will naturally take place as the increased acreage comes into bearing.

General Manager H. G. Coykendall put it aptly when he said: "Estimates which have been made within the past year, predict that the present average annual yield of about 200,000,000 pounds of prunes now credited to California will be increased from 50 to 75 per cent within six years when thousands of acres of recently planted orchards will come into full bearing. When that time comes, it means that, instead of being faced with the problem of selling the 200,000,000 pounds of prunes now being produced each year, California growers will have to find a market for prune crops totaling anywhere from 300,000,000 pounds to 350,000,000 pounds." These estimates are carefully compiled facts that should not be looked upon as mere buncombe but expressions of friendly warning by those who have made it their business to keep in touch with the situation, that the patrons of the association may know what is being produced, the manner in which it is handled at the various plants and the system by which it is marketed. On that point Mr. Coykendall had this to say: "In anticipation of these tremendous crops, Americans today are being taught, by carefully planned national advertising, to eat millions of pounds more prunes and apricots than they ever ate before. But even with a greatly increased domestic demand, a large part of the huge crops due to be packed in a few years must be bought by foreign markets, or the domestic market will be swamped. So far, most of the work of the Sales Department in developing these foreign markets to a point where they can be counted on to buy millions of pounds of prunes and apricots year after year, has consisted in laying a firm foundation for these future sales."

Capturing the Markets of the World.

While the California Prune and Apricot Growers, Inc., are now enjoying the confidence of the trade that they have drawn to them from all parts of the civilized world, even portions of "Darkest Africa," British Guiana, Burma and India, this was not accomplished without competition unparalleled in the history of the horticultural industry of this State. However, the time arrived when the prune and apricot growers were confronted with disaster, and when inquiry was made as to the cause of the great stagnation in trade, the answer came, "Overproduction"—"the supply exceeds the demand." There was no organization: there was no relief for the individual grower. When his fruit was ready for market, he was offered so much, take it or let it alone, with the choice of a further decline—not in the market so much, but in the mind of the buyers. If it was "overproduction." Then when the market, as we vividly recall it, was around 2½ to 3 cents per, pound base for prunes, what should the market be at the present time when the production is far in excess of what it was then? Barring this visitation of unusual prosperity, the price of prunes would be today what they were five years ago but for the California Prune and Apricot Growers, Inc. Who made the fight of their lives, the result of which no searchlight is required to reveal the manifold blessings bestowed upon the growers who entered this fight under fire of the enemies of co-operation.

Extension of the Co-operative Spirit.

So deeply imbued is the association with the spirit of co-operation that they are constantly extending a helping hand to those who have been slow to join their ranks. The latest act is shown in the matter of caring for those prune and apricot growers who are non-members of the California Prune and Apricot Growers, Inc., the growers' State-wide co-operative marketing association, who stood to lose hundreds of thousands of dollars on their 1920 crops through their inability to find immediate buyers for their fruit, will be permitted to sell their 1920 crops through the association under terms of an arrangement made public whereby the association will handle their entire product. A second pool will be formed and the association will take care of the prunes and apricots these growers deliver, and a first payment will be made to these growers equal to the collateral value of their fruit in the warehouses of the association. Growers taking advantage of the association's offer will sign the regular crop contract and become members of the association. The present members of the association, according to H. G. Coykendall, general manager, will be protected by the non-sale of a pound of prunes and apricots received under the new arrangement until it had made a complete settlement with its old members for all the fruit they delivered this fall. Hundreds of outside growers were left stranded last August when the association refused to handle crops for non-members after it had named the price it would pay its members for their fruit. The independent packers, finding these outside growers at their mercy, have been declining to buy their fruit except at prices several cents under the existing market quotations."

CONSUMERS SHOULD KNOW MARKET PRICES.

(Written for Pacific Rural Press by Gilbert B. Daniels, State Market Director.)

The dealers in and distributors of food products evidently have not yet realized the changes in methods of merchandizing as have the American Woolen Mills, Henry Ford, Amoskeag Cotton Mills, Sears, Roebuck & Co., Montgomery, Ward & Co. and others, who understand that, in spite of the fiction maintained by the present United States Administration, the war is over and we should get back to somewhere near pre-war conditions. Prices in general are being reduced and it is time that the consumers of food products should receive at least a part of the reduction in price paid to the growers for the products of the fields and orchards.

The prices now charged by many of the dealers in foods are outrageous, and the fact that this is possible is only explained on the theory that the people have the habit of paying high prices for what they eat, and do it without giving a thought to the matter.

High Price Habit.

The following incident is an evidence of how firmly this habit of paying high prices is fixed. Last week, because of a very large catch of salmon, the State Market Director was enabled to fix the retail price of salmon sliced at 20 cents per pound. This price was published, not only in the commercial pages of the newspapers, but display advertisements were placed in all of the newspapers around the Bay, stating that the price for salmon sliced in the markets of San Francisco, Oakland, Alameda and Berkeley was 20c per pound, and urging the consumers to pay no more. In spite of this our inspectors reported nine dealers selling this fish for more than the price fixed by the State Market Director. In fact, the prices ranged in these cases at 30c, 35c and as high as 40c per pound, and the customers apparently paid this increased price without a complaint.

The State Market Director has power to, and does, punish the fish dealers caught overcharging, but the dealer in other food supplies has only his conscience to restrain him, and that is not always in good working order.

The consumer is certainly entitled to as low a price when there is a plentiful supply as a fair profit over the price paid to producer will permit, and he is not getting it at present, at least, from all dealers.

Prices Are Unreasonable.

Potatoes are now selling as low as $2.25 per 100 pounds on the wharf at San Francisco, and in Los Angeles Burbanks are sold as low as $2.50 per hundred pounds in car lots. In spite of this potatoes are retailed in the Bay cities at 4 pounds for 25c, 5c per pound, and as high as 2 pounds for 15c. There certainty can be no reason why the retailer for simply moving the potatoes from the wharf to his place of business and weighing them out in small quantities should receive twice as much for this service as the total cost of growing, gathering and shipping to San Francisco.

The tomato situation is still worse: because of a slump in the market for canned tomatoes, the difficulty of canners to get money to operate with, and the high cost of cans, labor, etc., tons of tomatoes in the Santa Clara Valley are likely to go to waste with growers willing to sell them for from $10 to $15 per ton. Yet, in the markets of the Bay cities they are being sold at 5c per pound and 2 pounds for 15c. This is at the rate of $100 to $150 per ton and only 50 miles between grower and consumer.

Dried apples, such as the producers a year ago were receiving from 21c to 23c per pound for, are now being of-

(Continued on next page.)

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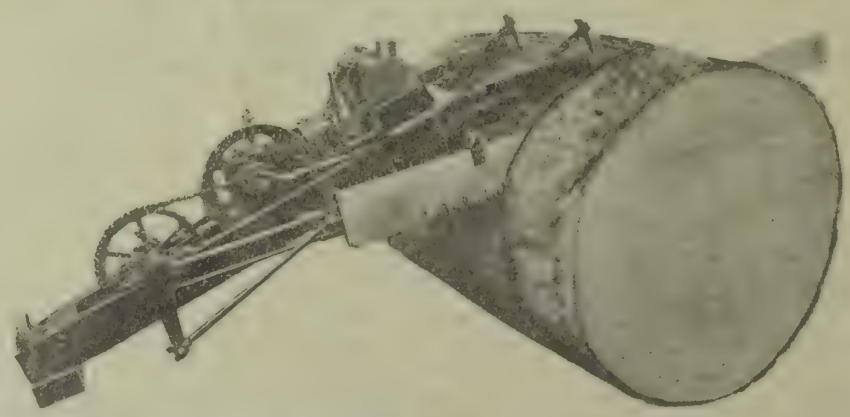

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Los Angeles Stock Show Was Amply Justified

(Written for Pacific Rural Press by R. E. Hodges.)

What does it mean that the greatest livestock exhibition ever held in the Southwest should be the Los Angeles Livestock Show, October 2 to 10, 1920, when most of the livestock men acknowledge that the markets for meats and dairy products are unsatisfactory in their present relation to costs of production? We believe that one of the exhibitors struck the keynote of hope, which justifies a drive for greater production of livestock when he announced the belief that prices of livestock products will go up if they do not remain as they are, but prices of feed will be down to the point where feed producers can scarce afford to sell, and where livestock men can well afford to feed. The pork market has perhaps been least satisfactory of all during the past year; and breeders of registered hogs have felt the resulting slackened demand for stock, yet more than 600 entered at the Los Angeles Livestock Show indicates not only that breeders are awake to an approaching revival, but that the number of progressive breeders is on the increase. Likewise, the dairy cattle exhibit, in which over 500 head were entered, is a striking testimony of the faith breeders have in the future of the dairy industry in spite of the fact that many dairymen are now losing money if they figure their time at its value as common labor.

Perhaps another angle is equally well illustrated by the magnificent Los Angeles Show. Whatever the price of feed and labor, but especially when it is high, it should be applied to the most economical producers. Thus it is that the breeder of purebred animals should be in the strongest position when feed and labor prices most nearly equal the prices of finished products. Then only the most efficient producers can pay profits.

As this is written the first day of the Show, no statement as to financial success or attendance can be made, except that practically all exhibits were installed on time and a good crowd attended the opening day. The facts that entries actually closed nearly a month before the Show opened, that a large number of pens and stalls had to be built after it was thought that enough accommodations were ready, that many herds entered from outside States, yet that most of the animals in the show are from southern California herds, are all significant of the magnitude of the purebred livestock industry.

Not so significant are the relative numbers of animals of various breeds shown; yet the thoughtful man will wonder why the exhibits of certain breeds were not much stronger. If the show were a fair criterion, one would judge that Holsteins, Percherons, and Durocs had found southwestern conditions more favorable to their breeds than to others. However, there is plenty of diversity in conditions and tastes to justify the permanence of practically all breeds exhibited. Holstein dairy cattle numbered practically as many as all others combined. Herefords outnumbered any other beef breed because of the fourteen fat steers and thirty bulls of that breed shown in separate classes from the individual exhibits. Shire horses almost equaled Percherons in number and there were a few Belgians and Clydes. Heavy horses were much more numerous than lighter breeds in the competition; but light horses were much more in evidence.

As we have watched the fairs this season, Duroc hog exhibits have outnumbered other breeds so that the blocky red hog seems to be riding a wave of general popularity. At the Los Angeles Show they almost equalled the total of all other breeds. One entire barn was filled by seven members of the San Fernando Valley Duroc Breeders' Association.

Goats of several milk breeds filled a triple line of pens with some of the liveliest exhibits in the show. There is certainly a keen interest among the ladies of California in these small intelligent milk producers. Sheep were notable by their scarcity, the chief exhibit being four or five Cotswolds. The poultry tent covers an acre, more or less, but exhibits are not supposed to arrive until after this is written.

Five hundred and nine individual beef and dairy cattle, forty-nine heavy horses, eighteen jacks and jennets, twenty-three horses of the light breeds, and approximately 600 different hogs were actually entered and catalogued at this show. The writer has observed carefully all that were on exhibit the first day, and we feel safe in saying that not a breeder need feel ashamed of any animal shown. On the other hand, many a breeder has learned the weaknesses of his own stock and will improve them.

A wonderful improvement in average type and quality is noted and credited to the lessons learned at previous events of this kind in California. If the pleasure and premiums and advertising of purebred stock were not sufficient justification for permanent continuation of the Los Angeles Livestock Show, State, District, and County Fairs, most certainly the improvement in the State's livestock is alone ample reward for the undertaking.

CONSUMER SHOULD KNOW MARKET PRICES.

(Continued from preceding page.)

fered to dealers at 10c per pound and even less, yet the retail price is held in many of the local stores at from 25c per pound upward.

Beef, mutton, pork, barley, rice, beans, onions, and in fact almost everything the farm produces except eggs and dairy products, are bringing the grower less returns than a year ago, and yet the retail prices seem to be fairly well maintained. While it is perfectly proper for the dealer in food stuffs to be paid for the service he renders, yet the householder should also get a square deal.

If the consumer will consult the market pages of the daily newspapers, he can know the wholesale price and market conditions surrounding most of the things he eats, and if he will insist on knowing why there is so much difference between the price to the grower and the price he is charged, he will at least accomplish something in reducing the prices.

The consumer should not ask for 25c worth or 50c worth of an article, but insist on knowing the price per pound, and then if this price is excessive, demand to know why. The cost of the necessaries of life are unquestionably being reduced in price and it is up to the ultimate consumers to see that they "get theirs."

ONE GOOD HIGHWAY.

To the Editor: While looking up highways you should see the four or five miles south of Lancaster and meet Jerry Allen of Lancaster, who built it. This road has been pronounced by some experts to be the best in the State.—T. J. True, Lancaster.

A certain citrus tree spray recently advertised and used for scale has been found injurious to lemon trees and fruit in Los Angeles county. Its sale has been discontinued. The injury is blamed on a small percentage of soluble arsenic and the warm weather which prevailed during spraying.

Fifteen Years of Tractor Progress

FIFTEEN YEARS ago the Harvester Company set its resources and its unrivaled farm engineering and field knowledge to work at solving the farm-power problem. For fifteen years it has been placing practical tractors on the farms of the world.

One result of this long period of development and accomplishment is the **International 8-16 Kerosene Tractor,** which has all the refinements and perfections of these progressive years of endeavor. In the factors of durability, economy, reserve power, comfort, ease of control and general satisfaction this tractor is recognized as the standard by which others are judged.

The **International 8-16 Kerosene Tractor** is particularly popular among fruit growers because of its adaptability to orchard service as well as general farm operation. Its compactness, light-weight and flexibility of control make it easy to handle among trees, and the fact that all moving parts are enclosed or amply shielded prevents injury to low-hanging branches. Its three speeds—1¾, 2½ and 4 miles an hour—meet the requirements for cultivation, pulling a power sprayer, road work and general farm service. A most advantageously located pulley provides power for all forms of belt work.

Another factor: prompt after-sale service is always available through International dealers everywhere and the Harvester Branch Houses at Los Angeles and San Francisco. This means much to the tractor owner. May we send you literature descriptive of the **International 8-16 Kerosene Tractor**.

INTERNATIONAL HARVESTER COMPANY
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Branch Houses
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And in 90 Other Cities in the United States

Timely Work in the Orchard

(Written for Pacific Rural Press by W. S. Killingsworth.)

Remedy for Limb Splitting.

Some weeks ago we happened to be passing through a French prune orchard that was heavily loaded with fruit. The trees were eight years old, growing on excellent soil that was constantly irrigated. Under those conditions they had taken on a rapid growth, demonstrating the fact that they were well grown for their age, and with this heavy crop the trees were put to their test in holding up under the burden. As a matter of fact, there were a number of the trees that were showing the effects of the strain they were under by the limbs where they forked at the base, splitting away in some instances. The tree was beyond "repair"; however, we suggested to the orchardist that he immediately proceed to apply the one remedy in cases of this kind, which is to draw the limbs back to their natural position, and with a brace and bit bore a hole through the body at the point of bifurcation, and insert a ⅜-inch bolt with a 1½-inch washer on each end, allowing the bolt to protrude just enough that the nut and washers will take up the space. When this is done right there will be no further cause for fear that there will be future parting at that point. It will be but a year or two until there will be no sign of this performance as the tree will have grown to the extent that the bolt and washers will have been covered. We are familiar with an orchard in the State where there are several thousand prune trees that were treated in like manner more than twenty years ago and the operation was a success. Done while the trees are young and small it does not require a long bolt, and it matters not how large the tree grows, the limb would break at some other place before it would at the point where the bolt was inserted. Such is inexpensive when compared to the loss of a portion of a prune tree at the present price of prunes. As a matter of fact, any fruit tree may be treated in the same way.

Dig Out the Dead Trees Now.

It may seem a little strange that we should advise the digging out of dead trees at a time when the ground is so dry and hard. We admit that it will be tedious and at the same time rather expensive; however, the prospect of some inconvenience and a slight additional expense should not be considered in a matter of as much consequence as this is where young trees are to take the place of the old ones. Of course, if the space is to remain vacant it is of little consequence how, when and by what process the dead trees are disposed of. In the process of digging out, should the roots as well as the body of the tree be found to be badly infected with any one of the numerous diseases they are heir to, care should be exercised in not allowing any portion of the diseased wood to remain that can possibly be removed, as in the course of time the young tree, taking the place of the old, will contract the disease, resulting in another death in the horticultural family. As the earth is taken out it should be well scattered, and after the tree is out the hole should remain open, and later on when it is filled the top soil should take the place of that taken out. The great advantage in taking out trees when the ground is dry, is that it is not packed, which always makes it disagreeable to work up when plowing and general cultivating is being done the following summer. Some orchardists remove the dead trees by blasting, which is a successful way when properly handled at the proper time, which is, when the ground is moist to the depth the roots penetrate; if not there is danger of leaving the major portion of the roots, which will subsequently have to be dug out. However, too much care cannot be exercised when this work is to be done regardless of the manner in which it is carried out. Some prefer pulling the trees with cable and block, which also proves successful when done when the ground is wet.

Some Varieties Might Be Pruned Now.

We often hear the question asked, "When should I begin to prune?" The answer to that question depends somewhat upon the location and the variety of trees to be pruned. For example, all varieties of plums grown in the interior sections, and especially those grown on the elevations, where irrigation has not been practiced, may be pruned now, as they have dropped their leaves, which naturally exposes all portions of the tree, making it more convenient to get at, in order that the requisite amount of brush may be cut away; also it enables the pruner to sytematically shape the tree. Several reasons may be advanced why it is to the grower's advantage to begin pruning at this time: (1) The days are comparatively long and the weather is good, which will assist in the performance of a good job, provided, however, it is not contract work in the hand of a crook; if so, the length of the day and condition of the weather will cut no figure. (2) The ground is dry, which will enable the pruner to get around much easier and quicker, and the brush can be much easier picked up, there being no weeds or cover crop to interfere. These suggestions may seem of little value to those who have never attempted pruning until after the winter rains set, but we are imparting this information from many years of experience, and we found that it was by far the best in the end. We recall many seasons having finished pruning, the brush picked up and burned before the winter rains set in. Under these conditions it was clear sailing when spraying time arrived, as no trees should be sprayed until they have been pruned, not that it would injure the tree, but it is a loss of spray material on brush that is to be cut away. Any variety that has shed its leaves can be pruned now without the least injury to the tree.

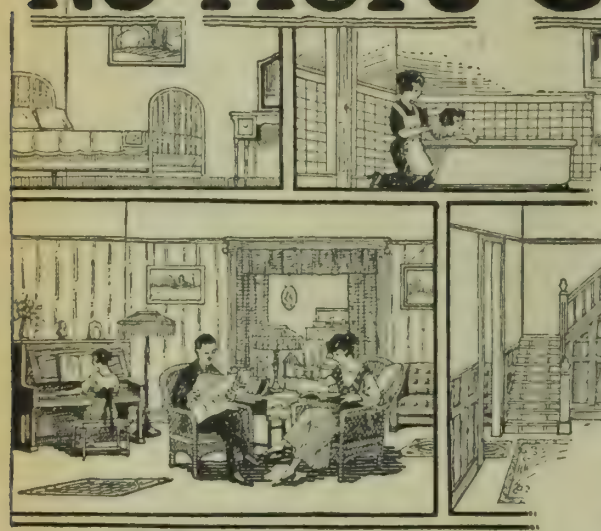
To Fight Wire Worm.

A pest doing incalculable injury to many field crops, and one almost impossible to reach with destructive remedies, is the wire worm. However, the United States Department of Agriculture, through its many experiments, according to Stewart Lockwood, Entomologist, has found that cultivation to get the ground black as soon as the crop is off will have a much desired effect in checking its work. "The female wire worms will not deposit their eggs on bare soil," says Lockwood, "but will on all stubble fields. These wire worms live for three years in the ground and for one year as beetles above ground, and because of the fact that they feed on corn and potatoes, as well as small grains, crop rotation is not as good a check as it would be if they subsisted on only one kind of food." In controlling the wire worm it can be seen at once if they can be kept from laying their eggs in the fall, they can in a large measure be checked. This suggestion is well worth trying.

I. D. Hutchison of Yucaipa, San Bernardino county, believes that apples may be successfully grown in that district without irrigation. He has on exhibition a box of the Orenco variety, large and beautifully colored, grown without irrigation. However, Mr. Hutchison says that some years, under abnormal conditions, irrigation would have to be resorted to.

Rialto will ship 100 cars of grapes this season.

No More Shivering



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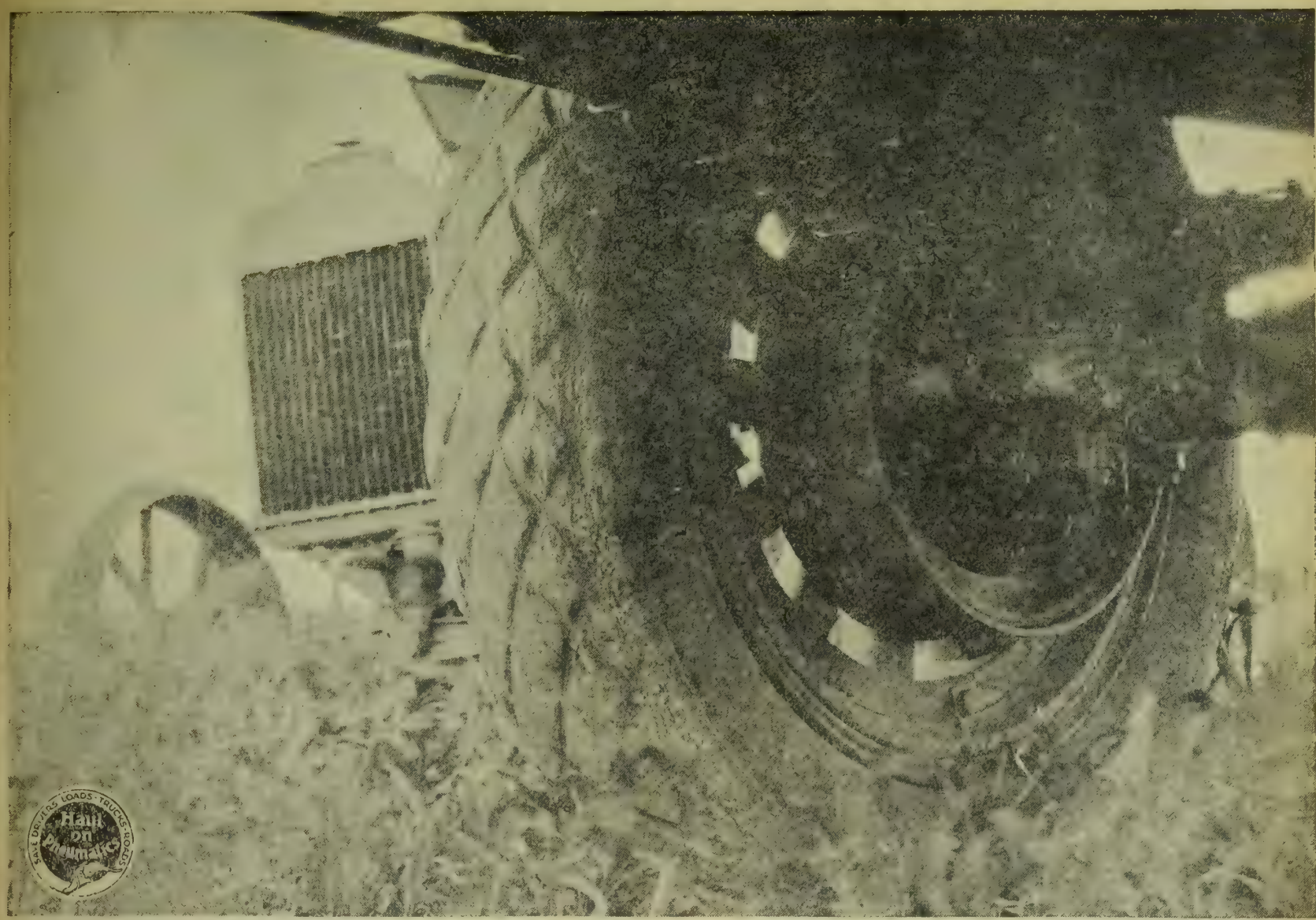

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MANY a resourceful farmer, like this one, now saves labor, time and money by doing his farm hauling and market hauling on Goodyear Cord Tires.

He hauls steadily through plowed fields, barnyard mud, sand trails and melting snow because these tractive pneumatics grip firmly as they go.

He hauls eggs, fresh vegetables, delicate fruit and shrinkable livestock with utmost safety because these are cushioned properly on the big Goodyear Cord Tires.

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Developed with the manufacturing care that protects our good name, the hardy strength of their Goodyear construction is repeatedly expressed in mileages of exceptional length.

Detailed information, concerning pneumatic-tired farm trucks and general farm motorization, will be sent promptly on request by The Goodyear Tire & Rubber Company, Akron, Ohio, or Los Angeles, California.

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The BLASTER says=

"I use GIANT
It gets them out cleaner"

Professional blasters know explosives. They have tried all the different makes. Many of them say "Giant gets the stumps out cleaner." John Zurr of Santa Rosa, Cal., writes:

"From the beginning of the time I have been using powder for stump blasting and other agricultural work, I have found the powder made by The Giant Powder Co. to be the most satisfactory. Each certain percentage of Giant Powder is exactly what it is represented to be."

Tell your dealer you want the genuine Giant Farm Powders—Giant Stumping or Eureka Stumping. The Giant trademark on every box is your sure protection against imitations.

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FOR FRUIT TREES, ORNAMENTALS, ROSES NOW

WRITE FOR OUR NEW PRICE LIST

There will be a decided shortage of Fruit Trees again this year. We therefore advise our customers to place their orders as soon as possible in order that the stock may be reserved for them before the supply is exhausted.

We wish to call particular attention to our Improved French Prune and the New Double X Prune.

California Nursery Company

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Order your TREES now

Make Sure Next Season's Planting

Many Varieties Will Be Scarce

Any delay in ordering may mean a year's delay in planting

WE ARE ALWAYS PLEASED TO ANSWER QUESTIONS REGARDING BEST VARIETIES TO GROW, SOIL, IRRIGATION, PRUNING, ETC.

ROEDING TRUE TREES FRESNO, CAL.

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HERE AND THERE IN THE FRUIT BUSINESS

Refrigerator Cars More Plentiful.

Restoring traffic through the damaged tunnel at Tehachapi has greatly assisted in relieving the car situation in the San Joaquin Valley. The railroad officials feel that the danger point in a more serious car shortage is now past. This shortage of refrigerator cars has been the cause of hundreds of carloads of grapes going East in any old car—box, ventilator and cattle car. The same story—"any port in a storm." However, the shippers have managed to get by with this chaotic order of things without serious losses, when one would naturally look for such with as perishable a product as grapes. A number of carloads arriving in the eastern markets in cattle cars have been reported as being in good condition, so much so that some cars were reshipped from Chicago to Pittsburg, where they sold at splendid prices. This unavoidable shortage of cars may yet be the means of demonstrating that there is not the necessity for so much refrigeration. That might work with grapes and possibly some other varieties of tree and vine fruit, but we would not advise one to experiment with cheries, early peaches, plums and apricots.

Northwestern Apples Move Slow.

According to the Bureau of Markets, U. S. Department of Agriculture, the northwestern boxed-apple market season at this time last year was well advanced, and a large proportion of the crop had passed from the growers' hands, principally to dealers on a cash basis. Credits were easy, and money could be borrowed to finance the purchases. This year, according to a survey made by agents of the Department, the situation is practically reversed. Very few eastern buyers have arrived at the northwestern shipping points, and practically no purchases from growers were made during the early part of the season. The restricted credits, the heavy losses sustained by operators last year, and the reports of a very large apple crop throughout the United States have combined to make apple dealers cautious regarding purchases and have reduced speculation to a low point. Shipping organizations handling apples for the growers' accounts have under contract a fairly large proportion of the crop, but it is safe to assume that approximately three-fourths of the production is still in the growers' hands.

Control of Walnut Codling Moth.

The Department of Agriculture has issued a "To Whom It May Concern," which is to the effect that "all persons dealing or trifficking in walnuts during the season of 1920-21 will be governed by the same rules and regulations pertaining to the control of the walnut codling moth which were in effect during the past season, except such changes as were made, according to "Amended Statues, 1919, page 256, of the State of California." Until further notice all communication with reference to the rules and regulations will be with the Pest Control Service, State Department of Agriculture, Room 507, Union League Building, Second and Hill street, Los Angeles, California." As this codling moth (Laspeyresia pomonella) is rapidly increasing in its depredations in many walnut sections of the State, the enforcement of the law, as a preventive, will be carried out to the letter, therefore it would be wise for all dealers and traffickers to familiarize themselves with it, that may be easily done by applying to the Pest Control Department for a copy of same."

Drastic Steps Taken on Car Shortage.

The Refrigerator Department of the American Railroad Association—Car Service Section—are doing all in their power to relieve the refrigerator car shortage. With a shortage in California of 1249 refrigerator cars and the demand in other states reported as increasing rapidly, all local railroads have been notified to serve notice on

Sulphur

It has been proven and so recommended by the University of California that if you sulphur your grape vines and orchards 6 times they will not be affected by MILDEW or RED SPIDERS.

ANCHOR Brand Velvet Flowers of Sulphur, also EAGLE Brand, and Fleur de Soufre, packed in double sacks, are the fluffiest and PUREST sulphurs that money can buy; the best for vineyards; the best for bleaching purposes, LEAVING NO ASH.

VENTILATED Sublimed Sulphur — Impalpable Powder, 100% pure, in double sacks, for Dry Dusting and making Paste Sulphurs.

For LIME-SULPHUR SOLUTION, use our DIAMOND "S" BRAND REFINED FLOUR SULPHUR. We can furnish you this sulphur at such a low price that it would pay you to mix your own solution and net you a profit equal to the amount paid out for labor in spraying your orchard, even if you pay your men $5 per day for making the solution and applying same.

To create additional available plant food, and prevent smut in grain, drill into the soil 110 pounds per acre of TORO BRAND SPECIALLY PREPARED AGRICULTURAL SULPHUR or our DIAMOND "S" BRAND REFINED POWDERED SULPHUR. This soil treatment has increased various crops up to 500 per cent. Send for Circulars Nos. 6, 7 and 8.

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Ask us for prices for Carbon Bisulphate, the surest remedy for destroying ground squirrels.

Healthy Grain

Seeds grow faster and mature into healthy grain when first freed from smuts by using *Formaldehyde*. This powerful disinfectant also destroys all grain rust and fungus growth.

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390 acres of the Choicest Cache Creek land—under irrigation from wells.
300 acres in Bartlett pears, prunes, almonds, apricots, alfalfa, etc.
Buildings and improvements value $35,000.
Implements and equipment value $20,000.
Price $210,000.00.
Or will subdivide.
Inquire on premises, or at
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Get Rid of Them Now With

CRESOLITE

A few ounces applied now in the hot weather to a stump will paralyze and kill it in a week. Sample can of 13 lbs. $2.15. Money back if it fails. Bbl. lots at 12c. per lb.

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Start Right

Buy your trees from a nursery of standing. Why take any chances when you can do business with a nursery that has enjoyed the confidence of growers for many years?

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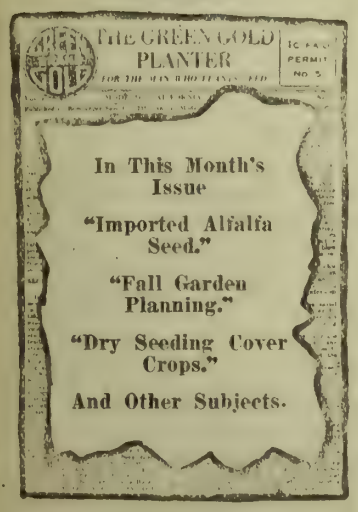

This big September issue of our Green Gold Planter contains information every planter should know about ten timely subjects.

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PLANT NOW—September, October and November are the best months to plant. Growers who planted last July and August have already harvested over 15 tons per acre, netting $1,000 eleven months from planting. For further information, write J. B. WAGNER, Rhubarb Specialist, 1550 East Villa St., Pasadena, Cal.

dealers that those having shipments held in excess of five days will have an embargo placed against further business for their account until they make satisfactory arrangements to dispose of their shipments promptly and release equipment. This action is taken to prevent the few who are so disposed, from holding equipment to the detriment of the majority of shippers who load and unload promptly.

Beware of Fake Nursery Agents.

Director Hecke warns against a fake scheme being worked by parties canvassing in the East and Middle West, with the possibilities of their invading the Pacific Coast. Nursery stock is being offered for sale as low as $35 per hundred (plus one-half of the fruit the fifth year), agreeing to spray and prune the trees for five years. The scheme looks well on paper. There being "a sucker born each minute," these crooks will no doubt reap a harvest wherever they play their nefarious game. However, there is no experienced orchardist that will strike at such a deceptive bait. Where is the cherry or pear orchard that is of commercial value, as a producer, at the age of five years? In many instances not until seven years are reached, and then what assurance has the orchardist that the trees will produce the variety purchased. These are splendid inducements to let alone.

The English Apple Market.

Reports from the American Agricultural Trade Commission in London, September 20, quotes sales on American apples in the Covent Garden Market: Extra fancy and fancy grades sold at $15.22 per barrel conversion being at $3.54 to 1 pound sterling rate of exchange. Wasty stock ranged from $6.55 to 8.32. At Liverpool, apples, various varieties, United States barrels, $7.08 to $14.16. California Gravensteins, $5.31 to $6.20 per standard box.

FIG RIPENING IN SAN FRANCISCO.

To the Editor: An acquaintance of mine claims to have a white fig, large in size, setting but one crop per year and ripening about Aug. 1st; quality good; ashen white outside and inside when ripe. It is growing near Bay shore in San Francisco and never fails to bear. What is it? Have you heard of such a fig?

(Answered by G. P. Rixford, Fig Expert U. S. Dept. Agriculture.)

Your correspondent did not give sufficient data to make identification of the variety possible. Leaves and twigs are just as important for the identification of some of the more than a hundred or more fig varieties in cultivation in California as is the fruit. I therefore got into communication with the writer and he accompanied me to the location where the trees are growing. An examination of the trees and fruit showed the variety to be the one described by Dr. Eisen as growing on the coast of Brittany near Croisic, which he calls Croisic. The fig is peculiar in having characteristics of the Capri fig, being provided with a cluster of male or staminate flowers just within the eye. The fig is large, glossy green in color, sweet and good quality and interesting, as the three trees now twenty years old are growing near the Bay shore, one of the windiest and bleakest spots in San Francisco, and still ripens its first crop perfectly, and sometimes the second crop. The fig is a little watery, but of good quality, the only objection being the small cluster of dry stamens which has to be rejected in eating it.

A very similar fig, and perhaps identical, is mentioned by Eisen as growing near Cordelia, Solano County. I have located a number of the same kind in Alameda and Oakland. The owner of the Oakland trees tells me that he received cuttings from which his trees were grown from a friend who brought them from Genoa, Italy.

The olive crop in Tulare county will make a fair average from present prospects. Buyers are not as yet ready to make offers but growers are asking from $100 to $200 per ton.

FAGEOL WALKING TRACTOR

This sturdy walking tractor is small and compact, weighing little more than a team. It turns in a small radius, walks in and out amongst trees and low-hanging branches, and readily goes through a small gate or door.

The motor is built for economy, and is thoroughly protected against dust, as is also the transmission.

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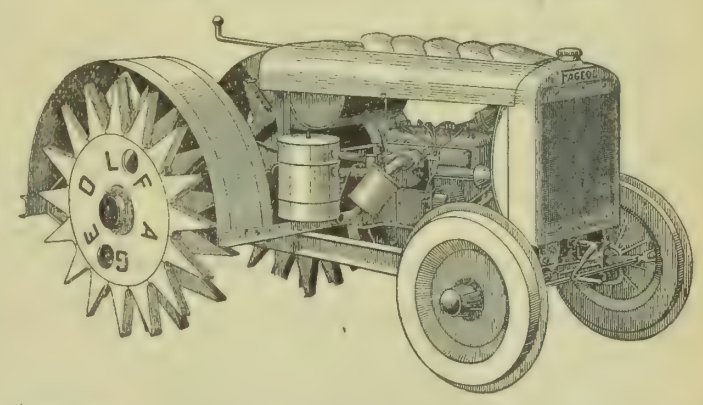

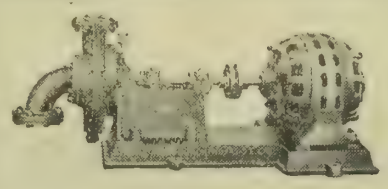

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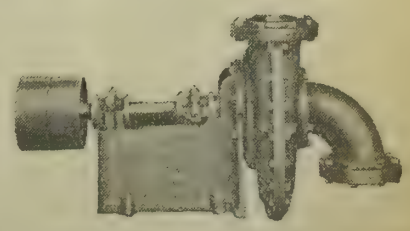

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Significant Agricultural Pointers

Light Yucaipa Apple Crop.

The apple crop of the Yucaipa district in San Bernardino county is light, according to Horticultural Inspector R. L. Brooks; but the apples are all of high quality and highly colored. King David and Delicious lead in yield around Yucaipa, and Rome Beauty around Oak Glen. Very little red spider (clover mite) has been noted this season, but a few growers have sprayed for this pest; and the arsenate sprays used against codling worms wash many of the spiders off anyway. Not yet has it been possible to enforce complete and timely spraying for worms in all orchards, partly on account of the expense in a season of light crop and partly on account of non-resident owners, whose tendency is to neglect or postpone spraying. There are not enough spray rigs in the territory anyhow. There are about 4,800 acres of bearing and 500 acres of non-bearing apple trees here now, including about 300 acres planted last spring. Two new private packing houses are being built. The growers' association has formed a sort of co-operative agency to get all the apples available for cider, most of which is to be canned sweet.

Will It Pay to Hold Hay?

Joe Valpredo and a neighbor of San Bernardino county are holding 150 tons of baled oat and barley hay because they are offered only $18 per ton for it. They believe they will get $30 by holding until Thanksgiving. We asked them how much it would shrink by that time. They estimated ten to fifteen pounds per bale. If we figure eleven pounds shrinkage per 110-pound bale (bales average 105 to 120 pounds each) the total shrinkage will be 15 tons. If they had sold September 25 they would have received $150x18, or $2700. By holding 60 days and selling 150-15 tons at $30, they will receive $4,050. Interest at 6 per cent on $2700 for 60 days will have to be deducted, netting them $4,023. The advantage in holding 60 days is $1,323, which will have to cover insurance against fire, rain, thieves, excess shrinkage, and the chance that they may not get $30. It is worth the gamble in this year of short hay crops.

Orange Tomatoes Moving.

Green and pink tomatoes individually wrapper and packed in 30-pound lug boxes, were, late in September, going out about two carloads per day to Texas and New Orleans points from the Fullerton, Orange county, packing sheds of the American Fruit Distributors, Inc., who are acting as shippers for the Orange County Produce Growers' Association, as stated by District Manager A. H. T. Osborne. They were netting 65 cents per box f. o. b. to the growers in spite of warm rainy weather in the markets. The prices rise later in the season when frosts kill northern vines and Association tomatoes go to Chicago, Philadelphia, New York, etc. That is generally after October 15. Quality was never better than now. There will be about 150 carloads to ship from this point. All ripe tomatoes are being sold to Los Angeles canneries, netting growers $14, according to Mr. Osborne. Plenty of labor, cars, and shook are reported.

Johnson Grass Outlives Millet.

A Riverside county farmer planted 20 acres of millet about five years ago. Johnson grass came up with the millet; though Johnson grass had never been on the place before. Ever since that time the owners of that field have been spending good money fighting the weed. Last season four men were employed at once digging it out by the roots. Alfalfa planted one year was smothered promptly. Beans and barley have been grown since them. Several hundred dollars' actual loss has occurred and a great deal more of potential profits have not been made, all because the man who planted the millet did not have it tested and properly described before planting. If a seed law would prevent such loss, let's have the law; for most any of us is likely to get stuck on one crop or another.

Lemon Situation Improving.

The lemon situation is brightening a little, as observed by Asst. Manager E. G. Dezell of the California Fruit Growers' Exchange. The old Sicilian crop was about off the market the last of September and the new Sicilian crop, which is not overlarge, will scarce reach this country before Thanksgiving. There is generally a rather satisfactory demand for lemons at this season to go with oysters and to doctor colds, among other uses which have been developed considerably by advertising. Mr. Dezell observes that the grower who would play safe on the markets today will not gamble much on the future, but market his lemons in a steady stream as they become ready.

Tomatoes Irrigated Late.

Many tomato growers abandon their vines after picking commences, except to get the fruit off. A grower in Los Angeles county was observed the last of September, cultivating his vines after a recent irrigation. As they sprawled all over the ground, a couple of men were employed to lay their ends back over the ridged-row to make room for the cultivator. These tomatoes will be producing prime fruit late into the winter, and its artificial exposure will perhaps help it to ripen. The irrigation seemed not to have damaged even the ripened fruit.

Antelope Valley Pears.

Pear shipments from the Little Rock district in Antelope Valley closed about September 4 with a total of about 144 carloads, including those shipped by motor trucks, according to Los Angeles Horticultural Commissioner H. J. Ryan. Fifty carloads went East, but the Little Rockers are proud of the ability to store their fruit into the winter. Thorough spraying resulted this season in exceptionally clean fruit and few culls.

The Silent Alamo
—furnishes electric light and power for the country home. Runs without vibration. Write for catalog.

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The all-round water system for the household. Furnishes water under pressure at small cost. Send for catalog.

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—enable dairy farmers everywhere to add hours to the day for other duties. Write for catalog.

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Horizontal pumps, Vertical pumps, Deep-well pumps, Direct-connected Outfits, etc. Write for catalog.

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Get 25 per cent more milk, save feed, and save labor, by making your cows comfortable with Louden Equipment. Write for catalog.

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We can furnish you with any kind of an engine in any size you require. Write for catalog.

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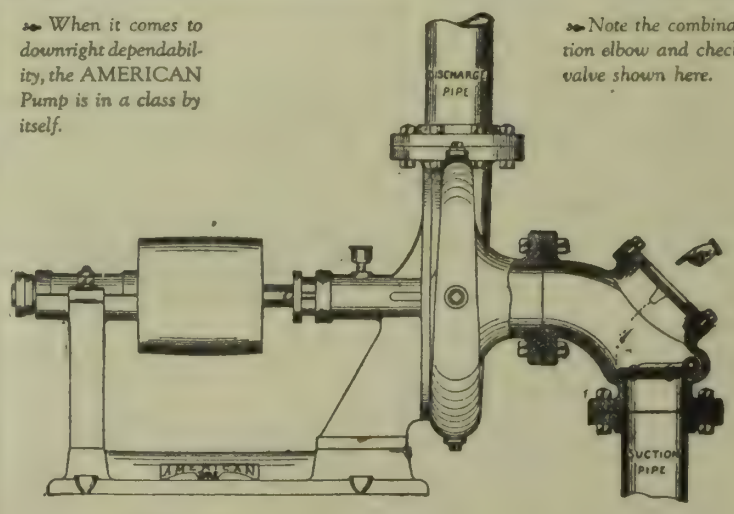

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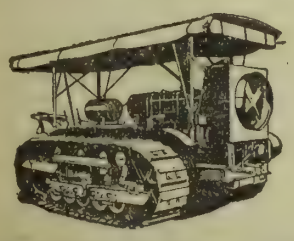

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SOUTHERN CALIFORNIA FAIR.

(Written for Pacific Rural Press by R. E. Hodges.)

Nothing dead about anything that grows 100 per cent in a year! That's the Southern California Fair to be held at Riverside, October 13 to 19, 1920. Exhibit space has been doubled for hogs, cattle, and horses. Permanent improvements costing $12,000 are being completed at this writing. Last year $4,000 was put into permanent improvements. This was just an equal amount to that appropriated by the county, so the Southern California Fair at Riverside paid its own operating expenses in full last year with no help from the outside! This is remarkable in the history of fairs in California. Room is provided for 500 hogs, and the directors are discussing whether more of the cool palm-thatched sheds shall be built before the opening day. Boys' pig clubs from various counties will be there strong.

Four new sheds provide 196 pens in addition to the old sheds. Three new cattle sheds contain 92 stalls in addition to 72 in the old cattle building. Ninety-six horse stalls are provided for exhibits besides those for the big schedule of horse racing.

The goat exhibit is increased and is arranged directly under supervision of the goat breeders' association. Poultry has a special tent under auspices of the poultry association; and the rabbits, of which there are 170 entries, will occupy an entire new barn. A new feature is the dog show here under auspices of the American Kennel Club the first time this year.

Industries and Manufactures.

Local industries and manufactures will crowd a tent probably 102x300 feet. In another tent, 102x356 feet, five counties will have competitive agricultural and horticultural exhibits, and Riverside county, barred from this competition, has gathered sixteen community exhibits. A bearing date-palm is being brought entire to the fair, and it will be surrounded by California dates in many packages for sale. Several of the California co-operative organizations will have exhibits of ther own. The seven southern County Farm Bureaus will have their own exhibits and a special Farm Bureau Day, October 18. The State Department of Agriculture and the State Board of Forestry will have their State Fair displays at Riverside, and there will be a big bee exhibit.

No livestock sales are scheduled, but meetings are to be held by the California Dairy Council and by breeders of Jerseys, Durocs, Hampshires, and goats. A special effort has been made to induce new breeders to enter their best rather than to encourage extra-big exhibits from fewer breeders. Attendance was 70,000 in the five days of the Fair last year, and Secretary W. W. Van Pelt, as well as President J. E. Wherrell are expecting **fully 100,000 during the seven days of the greatly enlarged 1920 Southern** California Fair. Let's go!

CALIFORNIA APPRECIATED IN AUSTRALIA.

We have seen a letter written by J. J. Hall, editor of the Farmers' Advocate of Melbourne, concerning Dr. Elwood Mead's work in this State, stating that the review in the Pacific Rural Press of Dr. Mead's book indicates that he has been even more active than he had imagined, and he is reproducing the review in his paper, as it will interest great numbers of cultivators in Victoria and New South Wales, and particularly in the irrigation districts. He says the irrigation districts organized by Dr. Meade are progressing well and will be monuments of Dr. Meade's labors in that part of the world.

We also learn from another source that California farming enterprises are attracting many of the younger Australians to settlement and investment here. Some of the returning soldiers who went home via California have already returned to this state, preferring to grow up here rather than south of the equator. They are a good lot and there is room for them.

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When the ground is dry and hard in the fall it can be loosened and mellowed with small charges of

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From three to four shots placed around each tree just outside the foliage line will break up the hard soil and prepare it for the winter and spring rains.

Try Hercules Farm Dynamite this fall. Its use will insure a good spring growth and a heavy fruit crop next summer.

Send for "Progressive Cultivation". You need this book for it tells you all about the uses of explosives on the ranch or in the orchard—how to plant trees, cultivate bearing orchards, clear land, subsoil, and do many other things with the help of Hercules Farm Dynamite.

Send in the attached coupon *today*—and this book will be sent you free of charge.

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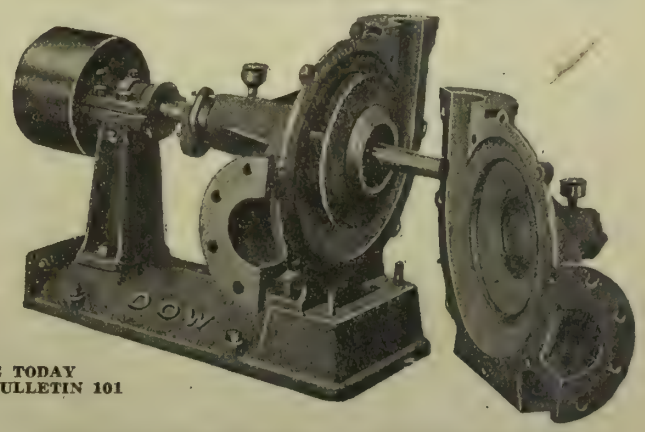

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The price for wine grapes at Lodi has been fixed at $75 a ton, though the large new co-operative plant there has its entire prospective output disposed of at a price that will net the grower about $90.00 a ton.

The Fitch Four-Drive tractor is now handled all over California by A. T. Burch of San Francisco and his local dealers. Mr. Burch has relinquished the agency for Indiana two-wheel tractors.

SEED WHEATS AND BARLEYS

From Farmer to Farmer

BUNYIP, BAYAH and DART IMPERIAL SEED WHEATS

Hard White Australians; California acclimated; best milling; higher price for products

MARIOUT and BELDI SEED BARLEYS

Large yields; quick growth; early maturity; more drouth resistant than other varieties known to us.

There is in California a very limited quantity of choice wheat and barley seed of these varieties. All our seed grown on new soils one irrigation only. All water from deep wells; no Bermuda, Johnson or Morning Glory. Orders booked as received, shipments following consecutively.

We also have limited quantities Early Baart, Sonora, Diener's Hybrid-Baart and Diener's Hybrid Sonora Seed Wheats. This is our first year with last two varieties and data not yet sufficient to permit our making definite conclusions or recommendations. Both tiller well, permitting light planting, and neither shatters so badly as Sonora.

In our judgment Bunyip, Bayah and Dart Imperial wheats and Mariout and Beldi barleys yield more on less soil moisture and shatter less in wind than any grains we have grown.

We are also now booking cotton seed orders for late fall and winter delivery. Pure strains, Durango and Mebane, grown by us in selected, hand-rogued fields. We do our own ginning, carefully avoiding seed mixing.

We invite trial of our seeds for results with less moisture.

Write for prices, stating quantity desired.

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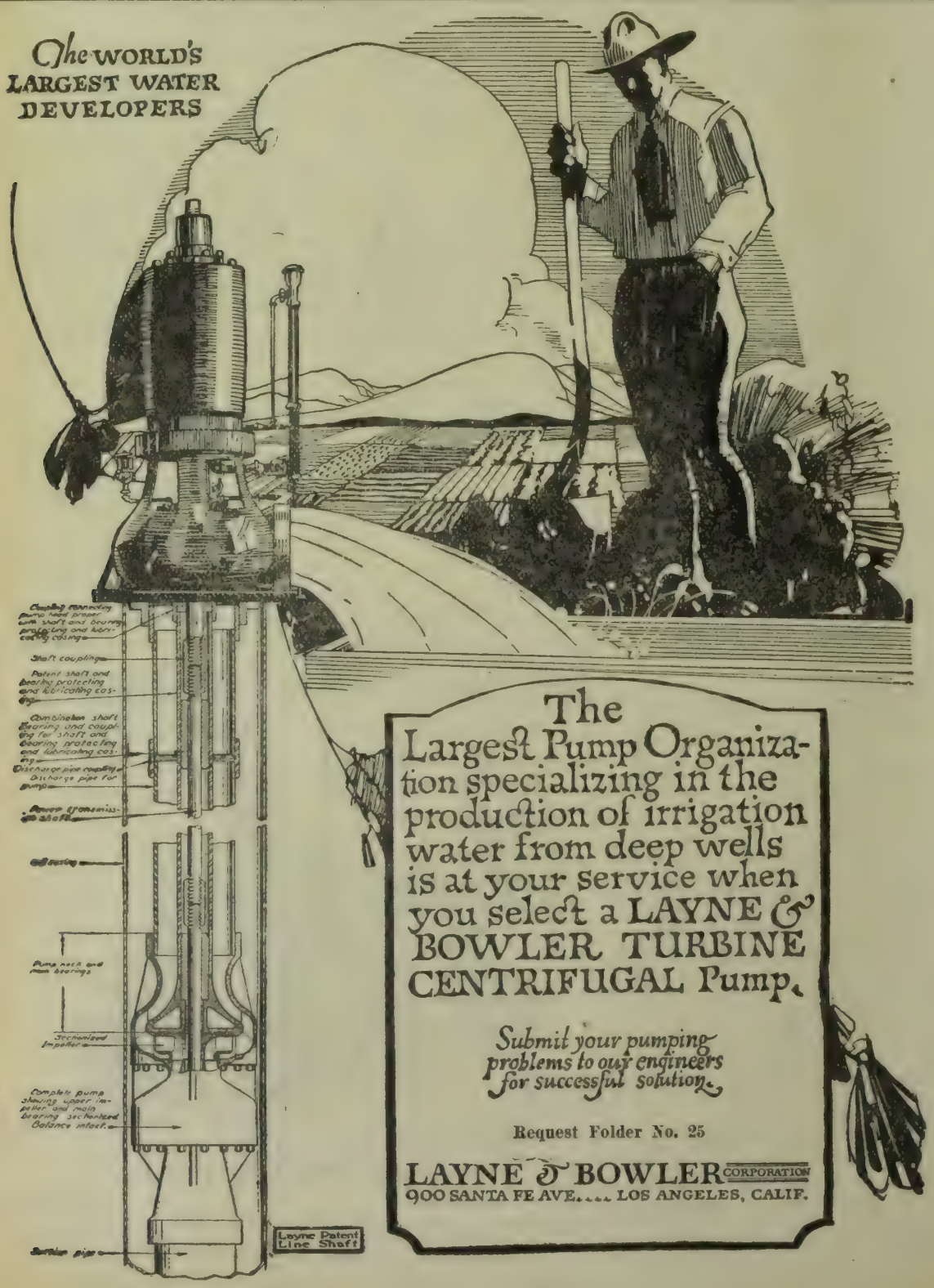

Agricultural and Mechanical Queries

California Grain Varieties.

What kinds of wheat and barley are grown in California, where do the different varieties predominate, and what are their characteristics?—A. E. S., San Joaquin county.

(Answered by Prof. Geo. W. Hendry, University Farm, Davis.)

The principal wheat varieties cultivated in California are White Australian, Club, Early Baart, Sonora, Defiance, Propo, and Turkey Red. White Australian is grown principally in the Sacramento and San Joaquin Valleys and is adapted to average conditions. Club Wheat is cultivated chiefly in the Sacramento Valley; and because of its short straw and retentive chaff is adapted to windy conditions where shattering is apt to be bad. It is of low milling quality. Early Baart has been grown extensively in all of the grain districts. It is early maturing and of prime milling quality. Its chief defect is some tendency to shatter. Sonora is grown extensively in the Tulare Lake Region and in Southern California. It is adapted to hot dry regions and limited rainfall. It is of poor milling quality. Defiance wheat has been grown in the coast districts of southern and central California. It is similar to White Australian in appearance, and is resistant to rust, and withstands the humid coast climate better than other varieties. Propo is a bearded wheat grown to a limited extent in the coast regions of central and southern California. It is of only average quality, and is not a high yielder. It is being replaced by other more productive sorts. Turkey Red is a winter wheat, which resists cold freezing weather, and is grown in the mountainous districts of northern California. One other variety, Bunyip, has recently attained considerable prominence in this State. It is an early maturing, beardless wheat of high milling quality. It is being grown extensively in the Stockton region, and distributed by the Sperry Flour Company. Over 90 per cent of the barley grown in this State is of the Common (coast variety). In addition to this, Mariout barley has recently been introduced by the experiment station, and 40,000 acres of it were grown during the past season. It is earlier than common barley, and better adapted to hot, dry situations. A third variety, Tennessee Winter, has been distributed by the experiment station and has been grown extensively tributary to the Sacramento River. It has the property of withstanding cold, wet soils better than common barley. It must be planted early in the fall to secure the best results. Beldi barley has also been grown to a limited extent in the central valleys of California, and for all practical purposes is identical with Common barley. Four Thousand barley is a pedigreed strain of common barley, developed by the California Experiment Station. It has yielded ten per cent more than common barley over a period of several years. It is identical with common barley in appearance. There is a small acreage planted each year to Chevalier barley, principally in the Salinas Valley. This is a two row type used for pearling. It is not as productive as common barley.

Cotton on Unplowed Desert.

Twelve thousand one hundred acres of Pima cotton are to be planted next spring on virgin greasewood soil without plowing it. This is part of a 100,000-acre cotton project to be completed in 1922 in Arizona, being supervised by E. Story. Mr. Story produced the cotton in Imperial Valley in 1911 on which his then employer, H. S. Reed, won honors in an eastern show. He has studied cotton as few others. How, then, does he expect to raise a crop on greasewood land without plowing? The big new automatic adjusting Killefer tractor disk, whose disks are set with wider spacing than in old models will knock down the greasewood. It will then run crosswise to chop it up. Mayhap this will be repeated, for the chopped brush is eventually to become humus. A giant subsoiler of eleven standards will then open the sediment soil four feet deep, if possible. Then gravity water will flood part and pump water will flood another part until the open ground is full and water stands over the surface. This will soon be disked at least four inches deep and a big float followed by a harrow will fill up any slight depressions and smooth off the surface. No other leveling will be needed. As soon as possible, the cotton will be planted flat by a four-row seeder, and it will be neither cultivated nor irrigated until the plants shade the ground. Then it will be frequently enough watered to keep the surface soil from drying out. The object of this procedure is to permit and enable the cotton rootlets to fill the surface soil where most of the humus and plant food are supposed to exist. Drying or cultivation would spoil those rootlets. The deep subsoiling and heavy irrigation before planting will supply all the moisture required from planting until irrigation is resumed. An eastern man is seeking now to buy the entire crop.

LODI GRAPE SHIPPERS APPEAL TO WASHINGTON.

So grave has the refrigerator car shortage become at Lodi, and that immediate relief be had, the Lodi Shippers Association have wired the Interstate Commerce Commission and the Car Service at Washington, D. C. for particulars. A reliable estimate places the number of carloads of table grapes to be left in the Lodi district, at 7,000 which must be moved within the next thirty to forty days. In order that this may be done it will require 175 to 200 refrigerator cars daily. At the present time there are only 50 to 60 empty cars arriving daily. It may readily be seen from that, that if immediate relief is not furnished the growers stand to lose hundreds of thousands of dollars. George W. Ashley, a prominent grower and shipper makes the statement that there are 115,500 tons of table grapes yet to be moved from the Lodi district, and other districts are proportionately as bad off for cars. As a whole the situation is a most serious one, and to add further, the losses would be incalcuable should rain set in and then be followed by cloudy weather, no one but those who have been caught in such a predicament could calculate such a loss. The railroad authorities tell us that every effort is being made to rush cars to points suffering most, and it stands to reason that the refrigerator car people are doing all in their power to relieve the situation. It was thought that shipments made in ordinary box cars of the ventilation type would arrive in a reasonable condition, while a few of the first shipments arrived in fair condition, as a whole they have not proven satisfactory. With the present splendid demand for table grapes, there is little incouragement in producing them at the present high rate of labor.

FAKE CITRUS DRINKS

The citrus growers are very much exercised over the action on the part of fakirs in advertising imitation orange and lemon drinks. As a result of their complaint municipal authorities are compelling soft drink places in many cities, which are advertising "orange juice" to post notices that the product was artificial. The California Fruit Growers Exchange is spending hundreds of thousands of dollars annually in legitimate advertising. Making a nation-wide campaign in order that the public may be assured of no fakes in the matter of citrus productions. It is their intention to vigorously oppose all fakirs, in protecting the consumers against imitation juices. It may be argued by some that the sale of imitations does not hurt the citrus market, Whether they do or do not they cause dissatisfaction to be wrongly charged to the natural fruits because the imitations have no food value. Again, the ingredients used in the manufacture of this "dope" are more or less of an injurious nature that might bring about complications should one become addicted to their use.

CLING PEACHS HOLD THE RECORD

Apparently it has taken the Levi Cling Peach to smash all records, anything better will have to be reported from the "days of old, the days of gold", when peaches sold in Sacramento at $1.00 each. That of course was to be expected as there were but few peach trees in the entire state. In the instance we shall refer to, it was the sale of not a few peaches but a carload shipped from Penryn, Placer county, on September 7th, sold in New York, September 23rd, grossing $3,522.00. The range in price was from $2.85 to $5.00 per box of 18 pounds of fruit net. The boxes that sold for $5.00 contained 45 peaches, from that one may readily see that the peaches sold at wholesale for 27½ cents each, equivalent to $555.00 per ton gross. By the time those peaches found their way into a cut glass bowl on the rosewood table of a high-toned New York hotel or restaurant, let some one of our readers cipher out how much of his weeks salary would be left when he paid for the peach and tipped the waiter in an institution of that sort.

Up in Forbestown, Butte county, are two girls, Bertha and Helen Roberts, 15 and 13 years old, who are establishing a Holstein dairy, the proceeds from which are to pay their way through college when the time comes. They now have six cows, do all the work, and expect to raise all the heifer calves. When college time comes they expect to own a dairy that will foot their bills. They will make it for they are good "dairymen."

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AN IDEAL SCRAPER TO DO YOUR LEVELING

It is light draft and operated by driver from the tractor seat.

MADE IN 3 SIZES FOR SMALL OR MEDIUM-SIZED TRACTORS.

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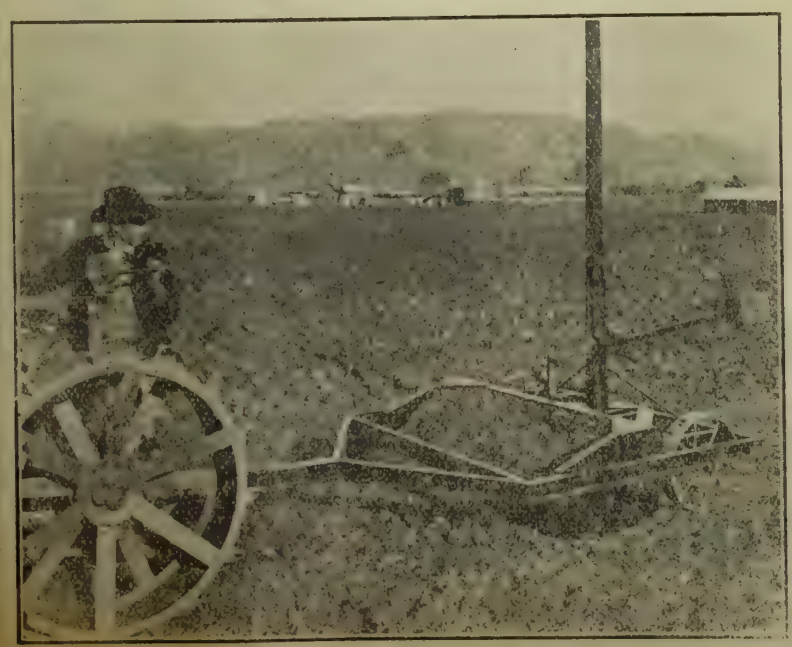

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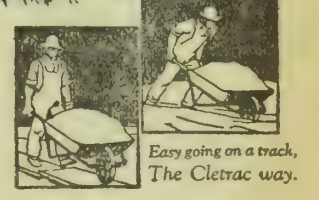

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The Cletrac will do it for you. It will speed up your plowing and discing—working 24 hours a day if necessary, 7 days a week. The Cletrac is the all-purpose tractor—adapted to all conditions. Used alone or in "fleets", it is the right size and type for almost any ranch.

Laying its own endless track, the Cletrac travels over the ground with a light, sure foot and a steady, powerful pull. The Cletrac is economical, too. Operates perfectly on kerosene, distillate or "gas".

Soft or sticky soil does not interfere with the Cletrac's performance. The endless track takes care of that. No danger from the Cletrac sinking in or packing the soil. The Cletrac does not miss the corners either. Turns short, swings back to the furrow quickly without loss of time or power.

Don't wait until the rush hits you—be ready for it. Buy your Cletrac at once and get prompt delivery.

Write for that interesting booklet, "Selecting Your Tractor"—it's free.

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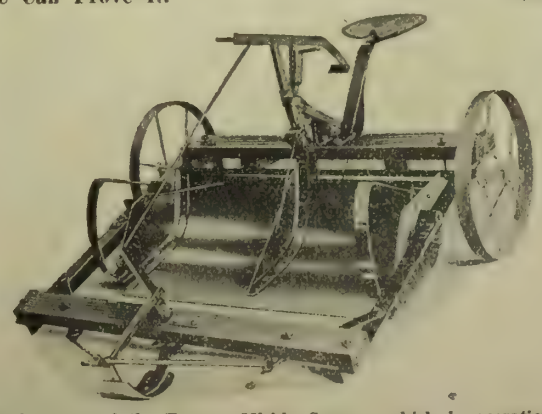
And We Can Prove It. Write for Circulars.

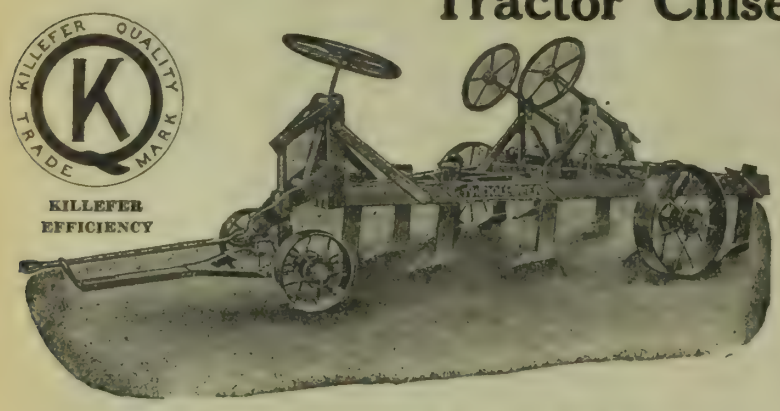


The above is a cut of the Famous Miskin Scraper, which in operation, easy draft, greater capacity, and better work, has many advantages over common Fresno and wheel scrapers now on the market. Ask your dealer to have one sent you on approval. Made in 8-horse, 3-horse, and 4-horse sizes, can be operated by small tractors from the tractor seat by tractor driver, and guaranteed to take twice as much dirt per trip with same horse power.

SEND FOR DESCRIPTIVE CIRCULARS WITH PRICES. WE PAY THE FREIGHT.

MISKIN SCRAPER WORKS, UCON, IDAHO

8-Feet Extra Heavy Tractor Chisel



Now is the time to commence deep chiseling and subsoiling. Do it in time to prepare the ground thoroughly to receive the benefit of the winter rains. Break away from the old habit or mistaken idea of scratching the ground and expecting to harvest a crop.

Plow pan, although frequently referred to as mechanical hard pan, should not be confused with natural hard pan. However, so far as crop production is concerned, the effects of plow sole and hard pan are the same. Both must be destroyed before proper cultivation can be had, and the only difference in the two that will be considered here is in the method required for their destruction.

Plow sole offers less resistance to the available methods of breaking it up than hard pan, and, with the tractor and tool of sufficient strength now available for tractor use, it can be broken up and subdued, bringing the land back to the point where a full yield may be expected.

Plow sole offers less resistance to tillage implements than does hard pan; both are in many cases impervious to horse teams and ordinary plows, and in some instances are difficult of handling with tractors and modern implements. Yet before a full yield may be expected this condition must be subdued, and to date the only satisfactory means is by use of the chisel or subsoiler.

Send for Catalog and Prices.

The Killefer Manufacturing Co.

2209-21 SANTA FE AVE., Box 156, Arcade Station P. O., LOS ANGELES, CAL.

National Tractor Show Very Successful

(Written for Pacific Rural Press by R. E. Hodges.)

Each time we report a tractor and implement show, we truthfully say it is bigger and better than any that have preceded it. This is fitting, for it is exactly that way with the industry it represents. Again, so soon after the splendid exhibition of farm power machinery, at the State Fair, we are ready to say that the tractor and implement part of that greatest show to date is surpassed in area by the First National Tractor and Implement Show of the West, held near Glendale in the week of September 20 to 26.

The show at Glendale was a delight to the visitor from the time he came in sight of it until he had inspected it in all its details. The exhibits and the narrow aisles between them cover practically 100,000 square feet of the soft turf shaded by big beautiful trees. Simple, tasteful decorations add to the beauty of the many-colored implements in this woodsy setting. The charge of 25 cents per person turned a few people away after they had come to the gate, but practically everybody who cared anything about selecting the best tractor or implement for his particular farm gladly paid the two bits and was glad the others were kept out. As the writer lingered about the various exhibits, it was notable that every man in charge was busy pointing out the superiorities of his machine to dealers and farmers.

Early Exhibit Entries.

There were 98 different exhibitors entered before the first day was over, and some of them had many different makes of machinery. Each of two had over a dozen different makes. Over 30 different makes of tractors were shown and a large proportion of them had several models each. At least a dozen makes of trucks and half as many of trailers were mixed in. Accessories were a greater feature of this shown than any previous. They included magnetos, carbureters, paints, drawbars, lighting systems, a dynamometer, manganese steel tractor parts, ball and roller bearings of many kinds, pistons and rings, wheel lugs, spark plugs, mechanical rubber goods and belts, various tractor motors, batteries, governors, air-cleaners, transmissions and seven different brands of oils and greases.

Implements were there of all kinds, from threshing machines and the enormous gopher-subsoiler to the tiny cultivators that follow the smallest tractors made, the Macultivator and the Merry Garden. Pumps of many kinds, electric lighting plants, land levelers, potato planting and digging machinery, hay machinery, silage cutters, feed grinders and what-not. Surely 'twould be a hard man to please, who could not find what he wants in this show.

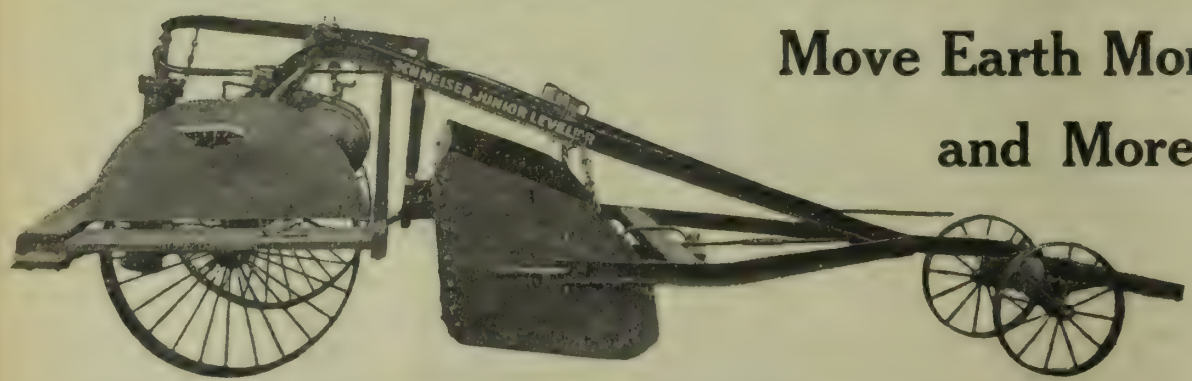
Many New Ones.

In spite of the numerous makes and models of tractors shown for the first time at the State Fair, there were nearly as many at the National Show which had never been exhibited publicly before, even at the State Fair. Several of those shown the first time two weeks ago were also at the National show. The rancher who studied the tractors, trucks, trailers, accessories, implements, etc., at the First National Tractor Show of the West is far better equipped for the coming year's work than he would have been; and it cost him much less than the pleasure of it alone was worth.

The J. T. tractor is to be distributed in California and Arizona by F. T. Briles of Los Angeles. Officials of the J. T. Tractor Co. of Cleveland, Ohio, came to Los Angeles for the National Tractor & Implement Show. A carload of these track-type 40 h.p. tractors was shipped for the Show but arrived late.

Schmeiser Land Levelers

Move Earth More Efficiently and More Economically



There's a Size for Every Tractor.

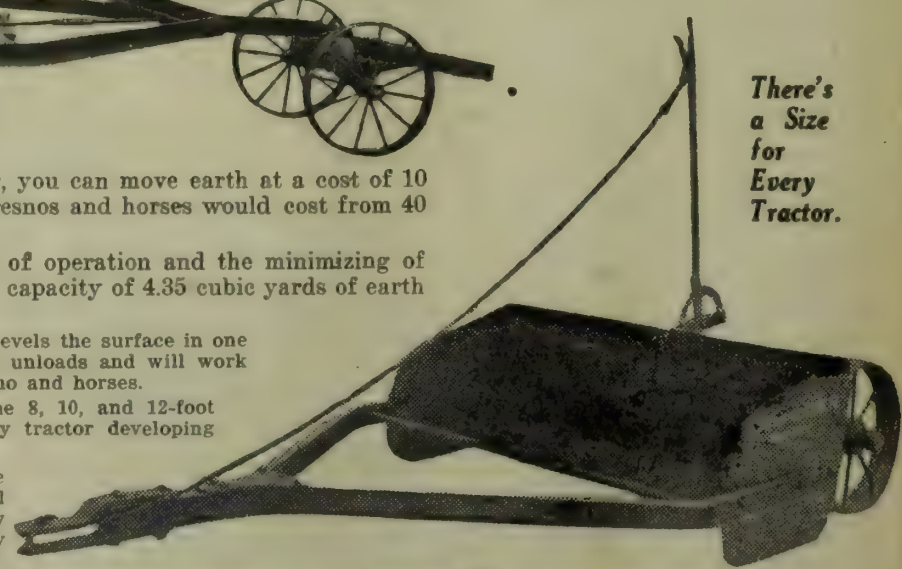
With the Schmeiser Land Leveler and your tractor, you can move earth at a cost of 10 to 25 cents per cubic yard, where the same work with Fresnos and horses would cost from 40 to 50 cents per cubic yard.

This saving is effected through the increased speed of operation and the minimizing of operating costs, a Schmeiser Giant Land Leveler with a capacity of 4.35 cubic yards of earth equalling the capacities of nine Fresnos.

In addition, the Schmeiser Land Leveler dumps its load and levels the surface in one operation, pulverizes the soil and settles the fill each time it unloads and will work on ground so hard and rough that it is impossible for a Fresno and horses.

There's a Schmeiser Land Leveler for every size tractor. The 8, 10, and 12-foot sizes are operated by compressed air and are suitable for any tractor developing from 35 to 120 H. P.

The Schmeiser Baby Land Leveler, as illustrated below, is made with a 5, 6 or 7-foot bucket, and is especially designed for all small tractors. It is operated either by the tractor driver or by an operator on the Leveler, and will move more earth in a day than three Fresnos.



SCHMEISER MANUFACTURING COMPANY

INCORPORATED

AGRICULTURAL IMPLEMENTS

WRITE TODAY FOR DESCRIPTIVE FOLDER A

SCHMEISER LAND LEVELERS AND ALMOND HULLERS

FACTORY AND OFFICE
DAVIS, CALIFORNIA
(12 MILES FROM SACRAMENTO)

PORTABLE AUTOMATIC DERRICKS
ALFALFA AND RICE LAND CHECKERS

TRACK TRACTOR FOR BEETS.

A 30-18 h. p. track-type tractor has pleased Tom Saito, a beet grower of Los Angeles county during the year he has used it. Three fourteen-inch plows behind the tractor turned about seven acres a day thirteen or fourteen inches deep, using 1½ gallons of distillate per hour and one-half gallon of oil per day. Six hundred acres were plowed this way. The tractor springtoothed about 30 acres per day. For irrigation the tractor was run into a hole in the ground and belt-connected to a pump still deeper. This delivers 120 miner's inches. One irrigation run was 45 days steady. On an 800-pound beet plow the tractor digs five acres of beets per day at a cost for distillate, oil, and grease of 37 cents per hour.

MECHANICAL PRUNE PICKER.

A machine which picks up a box of prunes in two to three minutes under average conditions will be a boon to the industry if it fulfills its promise. It has been demonstrated at the home orchard of the inventor, P. H. Lint of Santa Clara county on the Los Gatos and San Jose highway near its junction with the Almaden road. The machine, which weighs less than 100 pounds picks up prunes by impaling them on fine needles as it rolls over them. The greatest trouble with this is likely to be excessive loss of prune juice.

MOTOR VEHICLE REGISTRATIONS.

On July 31, the California Motor Vehicle Department had licensed 450,-155 automobiles, 31,195 commercial trucks, and 17,750 motorcycles. The net receipts for these licenses totaled $4,646,529.23. From Los Angeles county alone, 132,145 automobiles were registered. Licenses were issued to 3,199 auto dealers and 219 motorcycle dealers.

NEW SWINGING DRAWBAR.

A drawbar for Fordson tractors, which swings a considerable distance to either side and pulls from a yoke fastened under the transmission case, was exhibited at the State Fair by the Zimmer Mfg. Co., both to allow greater freedom of movement for implements on turns or side draft and to counteract any tendency of the tractor to turn over backward when climbing over steep grades with a heavy pull. The drawbar is supported near its rear end between two heavy bars forming a yoke bolted to the regular attachment for implements on this tractor.

NEW STEAM TRACTOR.

A new steam tractor is being boosted for use of fuel oils such as are not explosive enough to use in internal-combustion engines. It is called the Bryan Light Steam tractor. The boiler has 34 small-diameter water tubes, any one of which may be removed or plugged without affecting the rest. Its makers, the Bryan Harvester Co., claim that it can heat cold water to 100 pounds steam pressure in one minute and can raise steam pressure from 400 to 500 pounds in 14 seconds. The appearance of this tractor at a short distance is like the common wheel-type gas tractor.

The show was a success, as was the demonstration we made using Kerosene in our Fuel Converter on a Tractor motor designed to burn gasoline.

Kerosene when used in the Ensign Converter is not used as a liquid fuel, but is converted into a dry fixed gas, which does not condense and wash the cylinders.

Altho this was the first exhibition we have made of this device, we have been marketing the converter for the past three years.

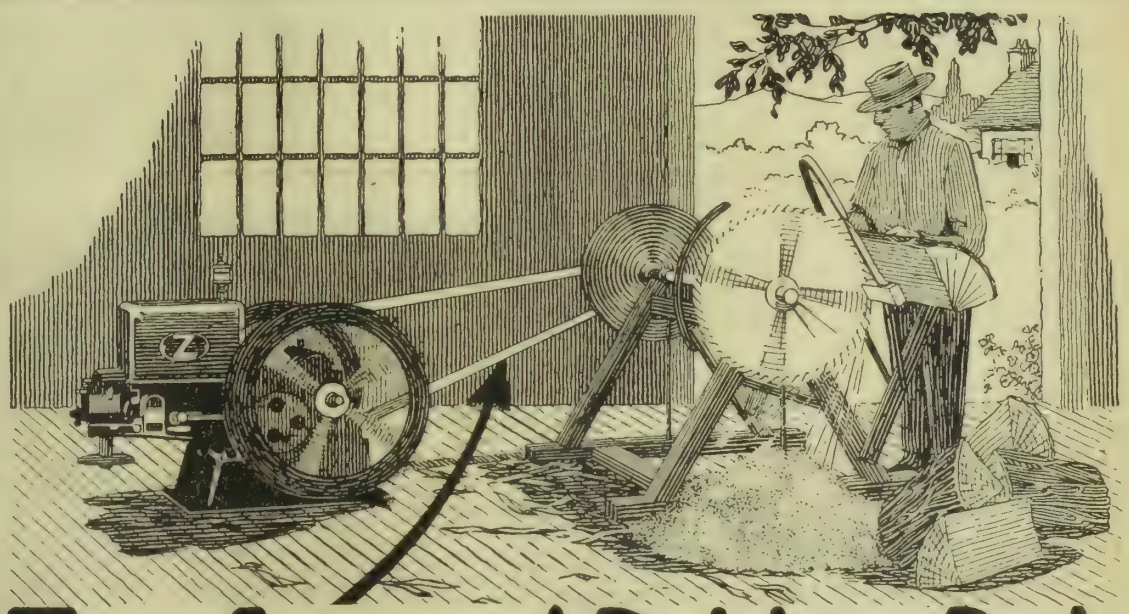
We have equipment for practically all standard tractors.

Office at 217 E. 17th St., Los Angeles.

IRRIGATING PUMPS

Single Stage Motor Driven Pump

KROGH PUMPS absolutely hydraulically and automatically water balanced. No end thrust whatsoever.
Also DEEP WELL TURBINE PUMPS for bored wells 10-inch diameter and up.
Write for Bulletins
KROGH PUMP & MACHINERY CO. 149 Beale St., San Francisco, Cal.



Test Special Rubber Belt

There are dozens of odd jobs about the farm where the "Test Special" shows its real worth.

On the long, hard pull or on the fast, short drive it stands unexcelled.

It is a rubber belt of real merit and guaranteed to give longer and better service than any other if used under same conditions.

See your Dealer.

Any Dealer anywhere can buy "Test Special."

WRITE TODAY, giving the R.P.M. and diameter of the driving pulley—also driven pulley and distance between centers of same; also give the rated horsepower of your motor or engine, and name kind of machinery you are operating. We will reply immediately giving you our recommendation as to kind of belt to use.

Write today.

(12)

NEW YORK BELTING AND PACKING CO.
519 MISSION STREET, SAN FRANCISCO
HOME OFFICE: NEW YORK

POWER NOTES.

The Kardell Utility Tractor Company has adopted the Midwest Engine Co. motor for all of their tractors to be built in the future.

A new feature of the Cletrac tractor is the seat, whose back is roomy and high enough to help prevent backweariness in the operator.

Height of the seat on orchard model two-wheel Allis-Chalmers tractors is adjustable. The bars which support the seat rest on a coil spring.

The Caterpillar 75 engine, with its five big bearings for the crankshaft and its slow speed was separately built as a stationary engine for pumping.

It requires 40 minutes to remove the entire track assembly from the Henneuse 40 tractor and put wheels on the axle for fast road work. This machine has a front tiller wheel, but it is planned to make a muley type also.

The little Merry Garden 2-1¼ h.p. tractor may be used for belt work by taking off a wheel and putting a belt wheel in its place. Headquarters for this newly introduced tractor in California will be at Los Angeles. Plenty of deliveries are promised.

The entire output of the Stockton Tractor Co. for the next five years has been bought by A. B. Johnson of Sacramento. The output is to be at the rate of 800 per year. The factory is moving from Stockton to West Sacramento and will be operating there right after the holidays.

J. M. Conley has sold out all interest in the J. M. Conley Co. of Stockton, dealers in Waterloo Boy and Bates Steel Mule tractors, John Deere implements, etc. Mr. Conley is now selling the new Throop land levelers under the name of the Conley Machinery Agency of the same city.

The new Pierson motor, a small gas engine designed by the inventor of the Cushman engine, has been recently proving popular on rice and grain harvesters and potato diggers, according to Wm. Abildgaard, who has been selling large numbers of them in the Sacramento valley.

A previously shown Kardell utility tractor with plows slung onto the frame under the driver's seat has been abandoned in favor of a more standardized model built for all purposes. The latest model is of 12-25 horsepower and only 40 inches wide. A 10-20 model also is available, extension controls being provided so the driver may sit on the implements drawn. Burns kerosene.

Monarch tractors are henceforth to be distributed in California under direction of Robert H. Green of Los Angeles. Most dealers heretofore handling the Monarchs will continue to do so, and a stock of repair parts valued above $30,000 will be kept in Stockton. Capacity of the factory at Watertown, Wis., is five per day and will shortly be eight per day. Roscoe Anthony is General Sales Manager for California.

In pumping water through 1¾ miles of underground pipe with a rise of 134 feet, the California Orchard Company realized there would be an immense kickback, said by Supt. W. E. Goodspeed, to eaqual a 75-ton blow. to cushion this, an air-tight tank was connected into the line near the pumphouse. This is half-full of water normally. Air in the other half is compressible under the shock without damaging the line.

Engineers have been in the mountains since June making preliminary surveys for the Madera Irrigation District. They expect to complete their report showing plans and costs so it can be sent to the State Engineer about December 1st for his approval. Soon after that is received, the bond election will be called. Final figures on the assessed valuation of the district are $24,758,760.

Great expansion of the L. M. Railsback Company of Los Angeles is indicated by the recent announcement that they have undertaken distribution of All-Work tractors in California, Arizona, Nevada, and the Philippines, the complete line of implements handled by the Oliver Chilled Plow people for Los Angeles county, and Killefer tractor implements in the same territory. Former experience selling farm implements and Allwork tractors in Southern California is the basis for this expansion.

A tract of 12,500 acres south of Livingston, Merced county, is being subdivided under the management of A. C. Dallock, and sold only to people outside of California who have enough money so they will become permanent owners and desirable settlers. The land is fixed for irrigation from pumps, and is being sold at $300 per acre.

Knows a Good Thing When He Sees It.

Editor Rural Press: It is difficult to express proper appreciation of such service as your paper affords, but it is what makes the Rural Press worth far more than we could hope to pay for it in dollars and cents. If thanks and boosting are worth anything to you, you sure have them. And please keep the front cover of the Press the same business-like black and white it has always been. I can be proud of the Press in any company of trade papers in which it might find itself.—C. M. Bertch, Tulare Co.

The Fitch Four-Drive tractor will henceforth be handled throughout Southern Caliofrnia by the Wm. F. Lutz Co. of Santa Ana. This firm has sold many of this make in Orange county as a local agency.

Your Soil Needs Humus and Nitrogen Bacteria

Melilotus Indica Supplies Both

Now is the time to plant it. Buy only seed that has a quality test tag on every sack. It protects you against seed of low germination.
Buy from your local dealer or from

Aggeler & Musser Seed Co.

Look for the Tag LOS ANGELES, CAL.

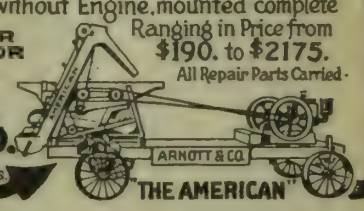
BEAN THRESHERS THE TWO STANDARDS

Built Especially for California Conditions

Past the Experimental Stage
Eleven different models, with or without Engine, mounted complete
Ranging in Price from $190. to $2175.
All Repair Parts Carried

Guaranteed by "The House of ARNOTT"
Ask The Grower Who Owns One
Write for Folder, Specifications, Prices Etc.

ARNOTT & CO.
BEAN THRESHER HEADQUARTERS
112-118 So. Los Angeles St. Los Angeles



HYATT

ROLLER BEARINGS

For Ensilage Cutters

THE farmer must handle his silage at the right season and have a dependable machine that will get the job done in time.

Hyatt Bearings in ensilage cutters make for more dependable operation. They require far less time for oiling, provide more economical operation, decrease the need for repairs and add greatly to the life of the machine. They never need to be adjusted.

And this is the kind of service that Hyatt Bearings also give in tractors, trucks, plows, threshing machines, grain binders, wind mills and other farm machinery.

Send for the Ensilage Cutter booklet.

HYATT ROLLER BEARING CO.
Tractor Bearings Division
Chicago

Motor Bearings Div. Detroit — Industrial Bearings Div. New York City

Hyatt Roller Bearings are used in the following makes of ensilage cutters—Rowell, Holstein and Plymouth.

Livestock at the Fresno District Fair

(Written for Pacific Rural Press by R. E. Hodges.)

A fair in a district well known the world over for the quantity and quality of its raisins, its figs of the kind that made Turkey famous and many other fruits as well could be forgiven if it had an exhibition without any livestock. Such was not the fact, however, as the exhibit in this line was a credit to the management, both in size and merit.

The dairy classes were well filled, especially in the Jerseys and Holsteins, with the Ayrshires only having one herd, but that one the equal of any in the State.

Jersey Exhibit.

The Jersey exhibit was perhaps the largest, although the Holsteins were there in large numbers. Three full herds of the former breed were in line for inspection. J. E. Thorpe of Lockeford won many prizes and championships with Guy H. Miller of Modesto following close after and A. A. Jenkins of Tulare in the money in several places. Thorpe won first on aged herd, Miller first on calf herd, get of sire and produce of dam.

R. L. Holmes of Modesto won many firsts in the Holstein classes, with Harry Hill of Riverdale getting in the money frequently. Holmes won on herd prizes, except produce of dam, which was taken by Hill.

E. B. McFarland won all prizes in the Ayrshire classes.

Milking Shorthorns.

Milking Shorthorns were shown by Chas. L. Weaver of Tulare and G. A. Murphy of Perkins, with Weaver getting the most firsts and championships.

Beef cattle were represented by only one herd, that of H. L. & E. H. Murphy of Perkins.

Swine were there all right. Poland-Chinas and Duroc-Jerseys predominating.

In the Durocs F. B. Ellis of Strathmore won grand champion boar and sow, and J. E. Thorpe of Lockeford first on herd and get of sire.

Stephens & Gatewood of Herndon won grand champion on boars in the Poland classes with Navy Boy, that was junior champion at the State Fair. A. Buckland & Son of Fresno had firsts in the herd, get of sire and produce of dam classes. Chas. McNeil of Fresno had the grand champion Poland-China sow. Among other exhibitors winning in this department was Jos. Caesar of Reedley, Chas. E. Dack of Fresno and Fred E. Grant.

Spotted Poland-Chinas.

Spotted Poland-Chinas were exhibited by J. L. Webster and others from Madera.

The Corriedale Sheep Company of Hollister showed Corriedales, Shropshires, Southdowns, English and Border Leicesters. The Kerman Karakul Sheep Company and A. B. Ingvason had Karakul sheep in the pens.

A livestock report of this fair would certainly not be complete without mention of the contest for the Special Dairy Herd prize. The contesting herds were five in number, including R. L. Holmes of Modesto with Holsteins winning first prize of $200; E. B. McFarland of San Mateo with Ayrshires, winning second, $150; J. E. Thorpe of Lockeford with Jerseys, winning third, $100; Guy H. Miller of Modesto with Jerseys, winning fourth, $50. Each herd consisted of 1 aged bull and 4 cows, 1 bull under 2 years and 3 heifers under 3 years. It is seldom 50 better animals are gotten together, and it was no disgrace to lose in such company. Some adverse comment is heard about bringing breeds in competition, and it probably is wrong, but it has insured an excellent dairy cattle exhibit for Fresno.

Successful Dairyman Prepares to Retire

(Written for Pacific Rural Press by Ralph Newman.)

An ounce of actual experience is worth—well, it is worth a lot as an inspirational force; and the dairy industry needs inspiration now if it ever did. For that reason, from time to time, the writer would like to tell you about successful dairymen he meets in his travels and indicate some of the reasons for the success they have made. Some nine years ago, when twenty years of age, a young Swiss started his career by leasing a large dairy near Galt. He worked like a galley slave, used his head, saved what he made and got ahead.

In that part of the state at that time any old cow would do, and that was the kind this young man had to handle in such a way as to make a profit for the landlord and himself. A lifetime of this sort of thing did not appeal to him. He figured and studied and finally came to the conclusion that the way to get ahead would be to keep a smaller number of higher-producing cows. That meant purebreds. So he quietly began acquiring a few. Then the feed question bobbed up. Dry pasture and grain hay might do for scrubs but not for purebreds that were to use their highly organized machinery to the best advantage.

So three years ago, after six years of leasing and saving, he bought the seventy some acres at Hughson and started dairying on his own hook and that of his wife, for, somewhere along the line he had acquired that very essential element of success.

When he took the place 36 cows went with it. They were averaging nine cans of milk a day. What did this young Swiss do about it? He didn't sell them all to the butcher and incur a life-long debt by plunging in purebreds. He joined a cow-testing association and began weeding out. At the next freshening the 36 had been cut to 25 and instead of 9 cans he was getting 14 cans a day. The weeding went on, but now every time a grade went out a purebred came in and that has been kept up until now every animal on the place is a purebred and registered Holstein. And note this, you fellows with scrub cows! When I was at the Peterposten dairy the other day fourteen cows filled ten ten-gallon cans in one day.

Here is a real dairy herd. A Swiss dairyman Peterposten was at twenty, and still is. He has picked for every day, dairy production. When he could get type he took it, but always first and foremost came ability to fill the milk-pail. His cows have never been crowded for records. They have been fed like ordinary dairy cows and milked like ordinary dairy cows—twice a day. But because of the blood that is in them, they have behaved and are behaving like very extraordinary cows. In fact there are mighty few whole herds in the State that can exceed their performance. For instance, there is June De Kol of Linwood. She is seven years old and has dropped 6 heifer calves and one bull. She gave birth to four heifer calves in eleven months and in 7 months of those eleven, an ordinary feed and twice a day milking, made 402 lbs. fat from 11,574 lbs. of milk. Then there is a granddaughter of Skylark Ormsby Hengerveld who, with her second calf made 340.7 lbs. fat from 10,000 lbs. of milk in ten months. She had nothing but a straight alfalfa diet and was milked twice a day. So we might go on through the whole herd and the heifers coming on bid fair to outstrip their dams.

This dairyman has arrived. How did he do it? By hard work. Yes, but by intelligent work also. He had the vision of success through high-producing purebreds and the courage of his convictions.

You needn't ask him if it has paid. After nine years of good, honest, intelligent work, there is the fine farm home to show and enough coal in the sack so that Mr. and Mrs. Peterposten are leasing their place while they go for a visit in Switzerland.

THE COMING FAIR AT SAN LUIS OBISPO.

Last year, on the spur of the moment almost, some progressive people of San Luis Obispo and vicinity concluded a livestock show and fair would be of much benefit to all in that region. They held their fair and it was a success, both as an exhibition and as an attraction. The expense of buildings and premiums was borne by popular subscription and sale of memberships.

Encouraged by their success in the past they now come forward with the announcement of their coming show.

We quote from a letter received from Hamilton Bassett, western representative of the Horse Association of America, who says:

"On the 19th-23rd we are holding a Livestock Show and Fair here. Our purpose is entirely educational—no hurdy-gurdys, no fakirs, no charges of any kind, but an exposition showing the best of livestock that ranchers may be encouraged to emulate. Our endeavors are entirely financed by voluntary subscriptions. No one is paid for the work performed. We are trying to do with little that for which we should have much."

To those wanting to have a good time and see good livestock, arrange to spend a day or two in San Luis Obispo during the fair.

AGRICULTURAL COMMITTEE TO MEET WITH REGENTS.

Representatives of many of the farmers' organizations will meet with the Agricultural Committee of the University Regents, at the latter's request, on October 13th, in Berkeley, to hear the needs of the various agricultural industries as a preliminary to shaping the budget of the College of Agriculture and Agricultural Experiment Station. The Agricultural Legislative Committee, representing twenty-five organizations, will attend this conference and later make a detailed study of these institutions and present conclusions to the Regents. Many of the industries desire expansion of the present investigation work and appreciate this move on the part of the Regents to determine the farmers' needs.

Five million pounds of butterfat in one year would furnish the spreading for an enormous quantity of bread. Tulare County produced that amount for the year ending June 30th.

Holstein Bull Sale

At Modesto, on Thursday, October 21st

THE STANISLAUS COUNTY HOLSTEIN BREEDERS

Will hold their second semi-annual bull sale, offering about 20 bulls, most of which will be large enough for service. These bulls have been selected for this sale from the large producing herds of the county and are from ten months to two and a half years of age. Some of these bulls are of show quality, well bred and of good type. This is a splendid opportunity for any one wanting a bull, and bull buyers will do well to be on hand to make their selection from so large a number and at their own price.

Sale under the management of the

Stanislaus County Holstein Breeders' Association

which insures buyers a square deal.

Write the Secretary, E. M. MORROW, at Modesto, for information.

GEO. A. GUE —Auctioneers— C. N. CLARK

DISPERSAL SALE

67--Registered Holsteins--67

KOUNIAS REGISTERED STOCK FARMS

On Waterford Road, 3 miles east of

MODESTO, CALIF., THURSDAY, OCT. 28, 1920

One of the best herds in the San Joaquin Valley, including the highest 7-day record cow and the highest yearly record cow ever offered at public sale in Stanislaus County.

A choice lot of heifers, out of high record dams, and by sires of rich breeding and high record ancestry.

A LARGE NUMBER OF YOUNG BULLS,

sure to go at dairymen's prices. Be on hand to secure one of the bargains.

Every animal positively guaranteed to be a breeder; every animal tuberculin tested and sold subject to retest except as announced on sale day.

Catalog free on request

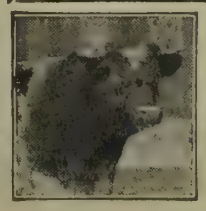
Management

CALIFORNIA BREEDERS' SALES AND PEDIGREE COMPANY

C. L. Hughes, Sales Manager, Sacramento, Calif.

Auctioneers:

COL. BEN A. RHOADES, Los Angeles. COL. J. H. CORLEY, Modesto.



USE A SHORTHORN BULL.

By doing so you will increase the weight of your cattle from two to three hundred pounds at maturity. One advantage of Shorthorns is that they finish readily for the market at any age or may be carried along for a period in case the market is not favorable, and continue to make gains and not lose finish. Week after week Shorthorns top the leading markets and show an excess of weight also which is a double advantage. It pays to grow Shorthorn beef

AMERICAN SHORTHORN BREEDERS' ASSOCIATION

Ask for "The Shorthorn in America." 13 Dexter Park Ave., Chicago, Ill.

"Get down to brass tacks"

THERE'S only *one* reason for using a cream separator—to get the *maximum* amount of butterfat from your milk.

The Sharples Suction-feed gets *all* the butterfat *all* the time — it *skims clean at any speed.* It is the *only* separator that does not lose butterfat when turned "under speed."

That should be the *fact* on which to base your choice of a separator. *Consider it above all others.* Let the Sharples dealer in your neighborhood demonstrate to you that the Sharples *skims clean at any speed.* Let us send you *signed statements* from America's leading State agricultural colleges, further proof that the Sharples *skims clean at any speed.*

In addition, the Sharples has a knee-low supply tank, single one-piece bowl (*no discs to wash*) and once-a-month automatic oiling system — *exclusive* Sharples features.

A fact: It is costing you more to be without a Sharples Suction-feed, no matter what make of separator you use, than it would to buy a Sharples.

One type of Sharples Suction-feed Separator is electrically operated with current from farm lighting system.

Write for illustrated booklet describing the many other advantages of the Sharples Suction-feed. Address nearest office, Dept. 31.

THE SHARPLES SEPARATOR COMPANY
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CREAM SEPARATOR

Skims clean at any speed

JOY-REAMS CO. Distributors.
Los Angeles, Cal.

"There are no substitutes for dairy foods."

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SEPARATORS

98% of the separators used in the world's creameries are De Lavals.
The only separator the creameryman can afford to use is surely the only one the farmer can afford to buy.
De Laval Dairy Supply Co.
61 Beale St. San Francisco, Cal.

LEONARD FARM
JERSEYS
Bulls for sale from Register of Merit Cows. Write for information.
W. J. HACKETT,
CERES, CALIFORNIA

REGISTERED HOLSTEINS
Creamcup Herd offers service bulls and bull calves of 34-lb. breeding. Females offered for foundation stock.
Tuberculin tested.
M. M. Holdridge, San Jose, Cal.
R. D. "A," Box 437
Two miles out North First Street.

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Defeat the Anti-Vivisection Measure

(Written for Pacific Rural Press by Thos. F. McConnell.)

Considerable conversation is being heard and much written on "talking leaves" for distribution both for and against various measures on the iniative ballot this fall. The voters of the State of California will approve or condemn them all at the fall election. It is as least charitable to suppose that all these measures were started with the idea of benefit to all and injury to none. It is also charitable but hardly probable to suppose that all proposed laws had their inception in practical minds. That which is only theoretical and not practical is hardly desirable as one of the rules with which our existence is to be governed in the future.

The above is true in all walks of life and especially so in the livestock business. Only when something is surely determined should it be placed upon our statute books to govern the lives of our farm animals. The writer can well remember the dread of hog cholera in the Middle West some 25 years ago. One farmer at that time had about a carload of hogs large enough and nearly fat enough for market. Cholera broke out and he sold to go to Chicago, reserving 6 of the best young sows for breeding stock. All but one of these died and the one left was worthless. No remedy was known, although it was rumored that the U. S. Department of Agriculture was working experimentally in an effort to perfect a serum that would prevent hog cholera. Very many were skeptical of any success along this line. The final results, however, proved the principle a true one and now that same farmer can protect his herd and save them from destruction and himself from loss by the injection of the preventive serum into the blood stream of each hog. The method is comparatively inexpensive. Thousands of dollars are saved annually to the farmers of the United States by this method, the perfection of which would have been impossible under Initiative Measure No. 7.

Anthrax, a very deadly disease to all kinds of livestock and communicable to man, is brought under control very quickly by the use of the proper vaccine. In former years when a human being contracted the disease he was condemned to die in a very short time. Very recently a veterinarian in one of the principal towns of the San Joaquin valley, contracted the disease, but was quickly cured through the administration of anti-anthrax serum. The preparation of this saving serum would be prohibited under the statute proposed by Initiative Measure No. 7.

Every season numberless young animals of the cattle kind would perish from blackleg, a disease similar in some respects to anthrax but with a different germ causing the trouble. By the administration of a blackleg vaccine under the skin in a very simple way immense loss is prevented every year. This preventive remedy never would have been discovered if a law similar to Initiative Measure No. 7 had been in existence.

We won't go into the subject from that of human medicine at all as that is out of our line, but the proposed law is so all inclusive that if it is to be interpreted literally the simplest feeding experiment to establish the digestibility of feeds would not be allowed and progress along that line be brought to a standstill.

We do not want to be classed with those who believe in vivisection to satisfy mere idle curiosity. Nor do we advocate it from any viewpoint if it is to cause excruciating pain. We suppose there are research workers with minds so dulled by their persistent and constant reaching out for knowledge that they are deaf and blind to physical suffering in animals used experimentally, but we do not believe this to be common. In fact, we know them to be the exception.

Therefore, if you, as a farmer and stockraiser, want scientific investigation and treatment of the diseases of farm animals to continue, the preparation of life-saving vaccines and serums to progress, then vote "No" on Initiative Measure No. 7.

The greatest teacher of advanced ideas of modern times advised students to hold fast to that which they had until it was proven false. We cannot think it best to go back to the wooden plow when so much better implements have been invented and until something better than vaccination treatment for the prevention and cure of such diseass as hog cholra, anthrax, blackleg, etc., is discovered, it would be a serious blow to animal industry to cut off the supply of these remedies.

$6,000 State Dairy Cow Contest, 1920-22

Special prize divisions of purebreds of each breed, and for grade and common cows, almost half of total available for grades and common cows.

The natural lactation period fitting into ration dairy practice. In line with Jersey and Holstein 10 months tests.

Regular semi-official tests answer all requirements for purebreds at no additional cost.

Cow-testing association tests accepted, with two check tests, by University test supervisors, each of one day duration and costing $7.50 each. Interchange of association testers may in certain cases reduce or eliminate this expense. University reserves right to send in check testers as above in any case, however. Where cow test association testing is not available, or owners for any reason desire University test, supervisors will be sent in continuously for each month when requested, and at above rate. Weighing milk continuously is not required in competition of grade cow prizes. Grade cows qualifying will be automatically registered in the California Grade Register of Production.

Applications close April 1, 1921, but all applications for entry should be sent in at once that cows freshening before April 1st, may receive due monthly credits. Ten months records properly entered and made entirely any time between September 1, 1920, and February 1, 1922, will be considered for both individual and herd prizes. For application blanks and circnular with detailed information, address F. W. Woll, University Farm, Davis, Cal.

BODEGA CREAMERY BUYS ONLY FROM MEMBERS.

At the recent annual meeting of the Bodega Creamery, a new set of by-laws was adopted. Hitherto this creamery, like many others of a co-operative nature, has been buying milk from dairy men outside of their membership, but now they have concluded to handle milk only from members. This is along the same line that the Petaluma Co-operative Creamery has been working for some time and makes them a true co-operative concern.

Plans were adopted for enlargement of their plant, which indicates surely a prosperous condition.

Sam H. Greene, Secretary of the California Dairy Council, was present and addressed the meeting, after which his work the past year received a vote of endorsement. Last year the stockholders in annual meeting assembled, directed the management of the creamery to withhold from each member's cream check his pro rata share of the dues in the California Dairy Council. This year this arrangement was continued by a unanimous vote.

Facts in BLACK & WHITE

What Holstein Cows' Milk Means to Mothers

The almost invariable verdict of doctors who have made a serious study of the question of cows' milk has been in favor of Holstein cows' milk. Dr. Hubert Work, Superintendent Woodcroft School for Feeble-minded Children, Pueblo, Colo., says: "In practice I abandoned Jersey milk for infant feeding because I could not successfully modify it for babies. This was suggested to me by the statement that a Jersey cow's milk is not always tolerated by her own calf. **Holstein cows' milk needs no modification for the healthy child.** Although the mentally feeble are always of low physical vitality also, we have never admitted a feeble-minded child who did not take Holstein cows' milk and thrive on it."

Send for "Specialists' Evidence."

THE HOLSTEIN-FRIESIAN ASSOCIATION
230 Hudson Street
Brattleboro, Vermont

HOLSTEIN BREEDERS' ASS'N STANISLAUS COUNTY
A. M. BIBENS, President
E. M. MORROW, Secretary
Modesto, Calif.

"ORMSBY"
Means Quality and Production.
Get a young bull sired by King Korndyke Hengerveld Ormsby 7th
KOUNIAS REG. STOCK FARM
Waterford Road
P. O. Box 296, Modesto

HOLMES STOCK FARM
Modesto
REGISTERED HOLSTEIN-FRESIANS
Prize-winners at all Shows.
Inspection invited and satisfaction guaranteed. Write for prices.
R. L. HOLMES, Prop.

BRIDGFORD HOLSTEIN CO.
Patterson
THE CHAMPION SHOW HERD
The herd of high records.
STOCK FOR SALE.
Visitors Welcome.

WALTER K. ADAMS,
Rte. 1, Box 245, Modesto
BREEDER OF REGISTERED HOLSTEINS AND POLAND-CHINAS

YOUNG REGISTERED BULLS
From High-Testing Dams
E. PETERPOSTIN
Route 1, Box 235, Hughson, Cal.
Dispersal Sale, October 20

R. H. DAVIS
REGISTERED HOLSTEINS
Route C. Box 196, Modesto, Cal.
Animals of both sexes for sale.
Herd tuberculin tested.

BULLS FOR SALE
From 1000-lb. sire and high-producing dams that carry same blood as Belle Faskie DeKol Witkop, the highest prize winner in the Holstein-Friesian Association of America last year.
FREEMAN (E. E.) & EDWARDS
Modesto, Calif.

Gas may form in a silo at the time of filling and for a week or so afterwards. This gas is heavier than air and so will settle in the silo. As soon as filling the silo is started the falling silage will stir up enough air currents to drive out the gas. A good way to determine if there is gas in a silo is to lower a lighted lantern. If it goes out, it will not be safe to go into the silo.—N. Dakota Ag. College.

BREEDING AGE OF EWES.

(Written for Pacific Rural Press.)

Men who understand and have in view as their ideals sheep of the highest efficiency, both from the reproduction standpoint and the growth of body and flesh have found it best not to breed ewe lambs. It is true that some precocious, exceptionally well-developed animals will drop reasonably good lambs when bred during the first year of their lives. This is far from the average, however, and if followed year in and year out will result in a marked deterioration of the flock in size and constitution.

In the first place, breeding at such an early age retards the development of the female parent and ultimately prevents the ewe from becoming of maximum size with accompanying perfection of form. A few may object to this and say that wild sheep reproduce at a very early age, which is true, but we all know that animals under domestication are larger and of an improved type, growing much more rapidly and yielding better returns for the feed eaten.

The Mature Mother.

It is a generally accepted fact that a lamb from a lamb is not, as a general rule, as strong and robust as when mothered by a more mature animal. It has a handicap then to overcome from the start and while it may grow out properly in the end the chances are rather against it, owing to the fact that the milking qualities of the young ewes are not developed. Therefore, a lamb that is born small and forced to live on a restricted diet, will surely be smaller than the average. From this it will be seen that the dwarfing started in the mother is continued in the offspring.

From the foregoing it will readily be understood that deterioration, instead of improvement, is taking place in a case of this kind. It is much better to not breed the ewes until they are approaching 2 years old when they will have arrived at something like mature size. The body economy is such in the mature animal that ample provision is made for developing the embryo before birth and growing the lamb after. In the latter case the youngster gets a good start, keeps growing rapidly and makes the maximum growth in the minimum of time.

GLENN COUNTY FAIR BEST YET.

This is a fair year. The Glenn County Fair at Orland was the best the county has ever held.

The Farm Bureau tent formed the center with the others grouped around it. The Farm Bureau Center displays made the horticultural and agricultural features unusually good. There was a fine Berkshire display, the most notable thing being the presence of the patriarch Star Leader and his successor, Natomas Baron Duke, from the Anchorage Farm. For the first time beef cattle were shown, the herd of Herefords owned by H. H. Gable of Esparto attracting much attention. An open Championship in all classes of sheep brought out a lively competition and was won by a Butte City Ranch Shropshire ram.

PROPOSED TUBERCULOSIS ERADICATION BILL.

The report is out that a tuberculosis eradication bill will be proposed at the coming session of the Legislature to run something as follows:

Counties already free from T. B., or nearly so, will be protected by making it unlawful to ship any stock into those counties until it has passed the tuberculin test. It is rumored that the State Animal Industry Department will back some such bill and the various breed associations are appointing commitees to get in touch with this or any other proposed legislation that may come up.

PROF. WING TO CALIFORNIA.

Mr. J. Henry Meyer has appointed Professor L. W. Wing as manager of Elkhorn Farm, near Watsonville, where a very high-class herd of pure-bred Ayrshires is maintained. For the last three years Professor Wing has been Associate Professor of Dairy Production at the Oregon Agricultural College. Previous to this Professor Wing taught at the University of Missouri for two years, and it was from this institution that he received a Master's degree. He also spent one year a Cornell Universiy taking special graduate work. During the war he was in the Aviation Service of the U. S. A.

Penobscot Ayrshires

Pure bred Ayrshires for sale at reasonable prices. Our herd is founded on imported Canadian stock.

We are nine miles from Auburn. Visitors welcome.

The Penobscot Farm
Cool, Eldorado Co. Calif.

JERSEYS

The Adaptable Cows

JERSEYS thrive everywhere, under all conditions. You could start a Jersey herd in the Canadian Rockies and transplant it to Texas without damage to production records.

The Jersey Information Bureau has been established to answer your questions about Jerseys—the unvarying cows which breed true to type. A book on how to increase dairy dollars will be posted in addition. Address—

THE AMERICAN JERSEY CATTLE CLUB, 324 West 23rd St., New York
An Institution for the Benefit of Every Jersey Owner

BULLARD BROS., Woodland, Cal.
BREEDERS OF
RAMBOUILLET SHEEP
Have for immediate sale
50 Registered Yearling Ewes
50 Non-Registered Yearling Ewes
350 OTHER EWES
WRITE FOR PRICES AND PARTICULARS

HILLCREST STOCK FARM
Shorthorn Cattle
Won at Sacramento Both Championships
7 Firsts and 5 Second Prizes
Shropshire and Merino Sheep
RAMS AND BULLS FOR SALE
Single or in Carload Lots
T. S. GLIDE, Prop. DAVIS, CALIFORNIA

JAVA COCOANUT CAKE MEAL.
Made where the cocoanuts grow.
Carried in modern ventilated steamers.
Sun-dried—not smoky or rancid.
Has your past experience in feeding cocoanut cake meal been satisfactory? Your feed dealer may not have our brand in stock but can obtain a large or small lot promptly.
DEPT. - 10
Java Cocoanut Oil Co., Ltd.
16 California St., San Francisco
Largest manufacturers cocoanut products in the world.

ABORTION IN CATTLE
CAN BE TREATED SUCCESSFULLY AND
YOUR COWS MADE PROMPT, REGULAR BREEDERS BY
STERILOID

TREATMENT: If STERILOID is used at the first sign of abortion the cow will go her full time and have a healthy calf. If your cows or heifers do not come in season, or fail to get with calf, use STERILOID. Cows get with calf after only one treatment. Write today for FREE BOOK. It explains the causes and symptoms of Abortion and tells how to treat Abortion, and make your cows regular, healthy breeders with STERILOID. Also contains letters from breeders who have used STERILOID successfully.

STOP LOSING CALVES

GUARANTEE: We will refund money in every case when STERILOID FAILS to make good. PRICE, $1.00 plus 4c tax. Mailed Postpaid, in plain wrapper.

MARTIN REMEDY COMPANY, Dept. P, 398-408 Columbus Ave., New York City. Reference—Colonial Bank.

Livestock and Dairy Notes

The Dairy.

A man and his wife with 3 units of the Gane Milking Machine recently milked 120 cows in three hours and 20 minutes.

The Shorthorn Calf Club of Shasta County has proven a big success and now the Farm Bureau is organizing a purebred Holstein Club.

A Milking Shorthorn Calf Club is being organized by the Farm Bureau of Yuba County. The calves will be reared in the foot hill country where it is believed the dual purpose animal will make good.

The Boston Chamber of Commerce, after an investigation of 2500 New England herds to determine the herd producing milk at the least cost, awarded the palm to an Ayrshire herd up in the Green Mountains.

Ten head of Guernsey cattle including a bull recently sold at an average of $600 per head at Modesto. The sale was handled by S. J. Strauss, who reports a brisk demand for purebred dairy stock from all points.

T. B. Purvine of Petaluma, reports a brisk demand for his purebred Jersey bulls, Mr. Purvine has developed a fine Jersey herd and has a remarkable good lot of heifers sired by Raleigh Boy 4th imported from New York and whose sire sold for $8400.

Among the well known breeders of Holstein cattle in Stanislaus county, who have achieved more than a local reputation is J. W. Beniot. It is to be regretted that he has decided to disperse his herd in the near future. He has many good ones and he has been influential in getting new breeders started in his home county.

Next week is the National Dairy Show and Sale in Chicago. Consignments from three of the most prominent herds of Holsteins have gone forward to compete for prizes in the show and for bids in the sale. Toyon Farm Association of Los Altos, the Bridgford Holstein Company of Patterson and Allana Farm of Dixon. The quality of these consignments is of the highest and results are expected in both show and sales ring that will add further laurels to California's reputation for raising the best of dairy cattle in the Black and Whites.

At the Orland fair, with an unusually large entry of Jerseys, the Fortini herd repeated their State Fair triumph sweeping everything before them.

Mrs. Annie Donders of Fresno is the owner of Victoria Brunoro Johanna, the Holstein cow under five years that leads the United States in the 7 day division for the first half of 1920. Mrs. Donder's Dara Walker did the same thing last year.

To encourage the use of purebred sires in Riverside County, Holstein breeders offered to trade, even up, a good purebred young bull for any grade bull being used in a dairy herd of that County. At the last report the offer had stood for six weeks without a single taker.

The South is rapidly forging to the front as a dairy country. Raleigh's Corinne, a Jersey breed and reared in Georgia and owned by J. R. Humphries, has just broken the state record with 772 pounds of fat from 13,917 pounds of milk in a year. This gives her fifth place in her class for the breed.

J. A. Glass has taken charge of the Norabel Ayrshire Farm herd at Valley Ford, owned by the Le Baron Estate Company. There have now about 60 head of fine Ayrshires and the Le Barons plan farther improvements by the introduction of the best bulls that can be found. The place is ideal for Ayrshires, is finely equipped to care for them, and Mr. Glass knows and loves the breed.

On the ranch of A. P. Martin up in the Petaluma hills is growing a remarkable field of corn intended as silage for Mr. Martin's Jerseys. The stalks are as large as a man's wrist and from 12 to 16 feet high. There are as many as 13 perfect ears to one hill and one single stalk bears six huge ears. It is California's Wonder—a white dent corn—and justifies its name. The only question is whether or not it will mature before frost comes.

Swine and Swinemen.

One of the coming swine sales of the near future in Southern California that is well to keep in mind if you want Poland Chinas is that of Dr. E. Avery Newton, owner of the Arenal Ranch at Lankershim.

Mrs. E. A. Hardy of Anchorage Farms, Orland, has sold fifteen bred Berkshire gilts to Christensen and Beumester of Williams as foundation stock for a new herd they are establishing. The gilts are all Star Leader breeding.

A recent letter from W. M. Way and Son of Modesto states that they have that great Duroc brood sow Mary Jane Pathfinder in their possession under lease from Elmer Lamb. She has been bred to Lord's Orion Cheery King which mating should produce pigs of unusual merit. The same letter also notes excellent results from their fall litters. Proud Chiefess 2nd purchased at the Winsor Ranch sale last July farrowed 15 pigs which is not bad at all.

H. C. Witherow of Live Oak who judged the livestock at the Shasta County Farm Bureau Fair says,"The hog show at the Farm Bureau Fair at Anderson was the strong feature of the livestock exhibit, especially in the junior pig classes of both the Durocs and Polands and in the senior pig class of the Durocs. W. M. Cutler and Hawes Bros. showed a number of junior pigs that would have looked good in the strong competition at the State Fair. If these pigs are properly grown out Shasta County will certainly be on the map with its Durocs and Polands".

Johnnie Glusing of Winton has gradually been accumulating a tip-top Poland China herd. He stepped into the spot-light this fall by winning grand championship on Poland China boars at the State Fair recently with King George Big Bone. He increased his herd at the McCarty-Shinn-Elliot sale by purchasing 5 of the best sows offered and "The Pirate" a son of "The Pilot" the grand champion at the National Swine Show last year. He has probably as much grand championship blood in his herd as any breeder in California at the present time.

Beef Cattle.

The first cargo of beef cattle from this country to Germany and Austria will leave Galveston, Texas about the 15th of October. The shipment will consist of 1000 head.

A late report from the Experiment Station at the Oregon Agricultural College entitled "Fattening Steers" covers six year tests and carries information of much value to the beef cattle man.

Among the exhibitors of beef cattle from Northern California at the Los Los Angeles Livestock Show are T. S. Glide of Davis with his Shorthorns, the Blackhawk Stock Farm of Diablo with Shorthorns, Romie C. Jacks of San Francisco with Herefords and G. W. Emmons of Danville with Polled Herefords.

Sultan Mayflower the famous Shorthorn sire at the University Farm, Davis, is dead. He was the sire of California Model, the highest priced Shorthorn bull ever sold on the Pacific Coast. He also sired California Marvel the steer that was grand champion at the Chicago International in 1918. This great bull was a grandson of Whitehall Sultan one of the most noted sires of the Shorthorn breed.

Sheep.

A September report coming from St. Paul, Minn., indicates a low market for grade breeding ewes. This comunication states that good ewes changed hands at that time at $4 to $5 per head, depending on age and condition.

The Corriedale Sheep Company of Hollister, with Walter Priddy in charge of the exhibit is making the fair circuit this fall showing Corriedales, Shropshires, Southdowns, Border and English Leicesters.

TOYON FARM ASSOCIATION

WILL SELL AT PUBLIC AUCTION

150--REGISTERED HOLSTEINS--150

NOVEMBER 10-11, 1920

STATE FAIR GROUNDS, SACRAMENTO, CAL.

The herds of Toyon Farm Association, Los Altos and San Francisco, are to be consolidated into one big herd on their Brentwood Farm. The herds now total approximately 350 head, and for the present the owners plan to carry only about 200 head, hence the sale of 150 head at this time.

100 MILK COWS IN THIS SALE

Their first individual offering will include approximately 100 head of cows and heifers in milk of splendid type and breeding, many with large official records and out of high record dams. There will also be about 30 bred and open heifers, and about 20 bulls in the sale.

FEMALES BRED TO HIGH RECORD BULLS

The females in this sale are bred to SIR PIETERTJE ORMSBY MERCEDES 43RD, son of Sir Pietertje Ormsby Mercedes and Aaggie Wayne Peep, whose yearly records for five years exceed the total of any other cow; SIR AAGGIE MEAD, son of Sir Aaggie De Kol Acme out of a 1200 lbs. daughter of the 1142 lb. cow Aralia De Kol; a son of the 33-lb. cow Bonnie Lass Pauline; and a 30-lb. son of Johanna Bonheur Champion.

A HEALTHY LOT OF UNBLEMISHED CATTLE

In this entire offering there are only three cows with blemished udders; no female of breeding age will be offered unless she is believed to be safe in calf; every animal is positively guaranteed to be a breeder; EVERY ANIMAL IS TUBERCULIN TESTED BY A FEDERAL VETERINARIAN AND SOLD SUBJECT TO RETEST BY THE BUYER.

Catalog free on request. Management

CALIFORNIA BREEDERS' SALES AND PEDIGREE COMPANY

C. L. Hughes, Sales Manager, Sacramento, Cal.

AUCTIONEERS: COL. BEN A. RHOADES, Los Angeles; COL. JOHN W. DAVIS, Manteca

MAMMOTH DISPERSAL SALE

ROSAMAINES RANCHO, Owned by A. J. & F. W. Stalder, RIVERSIDE, CALIFORNIA

OCTOBER 19-20-21 1920

Owing to the ill health of the managing owner, Mr. A. J. Stalder, this great Rancho will be sold at public auction and its splendid herds dispersed.

AT 9 A. M. SHARP ON TUESDAY, OCTOBER 19

we will open the dispersal with the sale of the Rancho in two parcels. PARCEL NO 1—Contains 235 acres on which are situated the buildings. 100 acres in finest pasture in California, carrying regularly 100 to 150 head of cattle; 60 acres in fine stand of alfalfa; 40 acres in corn; improvements on this parcel cost over $200.00 per acre at normal costs; buildings in first-class condition, many practically new; all buildings electric lighted and sewered; two motor equipped pumping plants with abundant water.

TERMS ON THIS PARCEL—One-third cash, balance in six equal annual payments, interest at 7 per cent, 2 per cent discount for cash deferred payments.

PARCEL NO 2—Contains 397½ acres adjoining Parcel No. 1 on the north. All first-class vineyard, orchard, or alfalfa land, regularly in crop, and with an abundance of cheap water.

TERMS ON THIS PARCEL—One-half cash, balance in four equal annual payments, interest 7 per cent, 2 per cent discount for cash on deferred payments.

Immediately following sale of Rancho, on same day, we will sell

90 BIG RED GRADE SHORTHORN COWS
50 REGISTERED DUROC-JERSEY HOGS
18 REGISTERED PERCHERON MARES AND STALLIONS
1800 WHITE LEGHORN HENS AND PULLETS
A SMALL HERD OF GRADE DAIRY HEIFERS
ALL THE IMPLEMENTS AND EQUIPMENT

incuding an almost new 12-foot McCormick Combined Harvester; a No. 50 Typhoon ensilage cutter; eight farm wagons; plows, discs, beet drill, mowers, rakes, Osborn binder, harness, and many other items; also a complete acetylene lighting plant.

ON WEDNESDAY AND THURSDAY, OCTOBER 20-21

We will disperse the entire herd of registered Holsteins, numbering 150 head; only nine animals in the herd six years old or over; including 50 females with official records, 43 daughters of King Pontiac Netherland Segis 3d; both herd bulls, KING PONTIAC NETHERLAND SEGIS 3D, son of the twice 34-lb. cow, Gerben Abbekerk Maid, and SIR ORMSBY SKYLARK RAUWERD, a son of Sir Ormsby Skylark, out of a 34-lb. dam; every animal guaranteed a breeder; every animal tuberculin tested and sold subject to retest except as announced at sale.

Catalog free on request. Management

CALIFORNIA BREEDERS' SALES AND PEDIGREE CO.

C. L. HUGHES, Sales Manager, Sacramento, Calif.

Auctioneers—RHOADES & RHOADES, Los Angeles

LIVESTOCK DIRECTORY.

Rate, 4c. per word. Cash must accompany all orders.

SWINE.

Duroc-Jerseys.

DUROCS—BIG-TYPE—HIGHEST QUALITY—popular blood lines. Herd headed by Johnson's Defender, Jr., and Western Pathfinder. Bred sows and gilts and young boars for sale at moderate prices. Greenwood Farm, Witherow & Stafford, Live Oak, Cal.

DUROC-JERSEYS—2 senior yearling sows. Model Colonel and Defender blood. Also several gilts and boars sired by a grandson of Pathfinder. Prices right. Petaluma Duroc-Jersey Club, Petaluma High School, Petaluma, Cal.

BOYANNA BIG-TYPE DUROCS—Buy Durocs now. We offer bred and open sows, gilts, service boars and weanlings—all of excellent conformation and breeding. Write us and get get good ones. J. Boyd Harrold, Dixon, Cal.

BRED SOWS AND GILTS and young stock. Pathfinder and Great Wonder I Am breeding. Monthly payments, if you wish. Derryfield Farm, Capital National Bank Bldg., Sacramento.

BIG-TYPE DUROCS—Herd headed by California Orion King. Am offering excellent young boars at right prices. Inquiries invited. Harvey M. Berglund, Dixon, Calif.

LAMB'S DUROCS—Seven good sows with litters, weaned pigs and choice open gilts ready to breed. Priced right to close out the herd. Elmer Lamb, Ceres, Calif.

DUROC-JERSEYS — Fine big-type gilts, tried sows and boars, Eastern and California bred. H. P. Slocum & Son, Willows, Calif.

WINSOR RANCH DUROCS—Young boars and some top gilts bred to WINSOR'S GIANT ORION—Morris C. Allen, Mgr., Bonita, Cal.

REGISTERED DUROCS — Choice gilts and weanlings, either sex. Breeding and satisfaction guaranteed. H. E. Boudier, Napa.

BIG-TYPE DUROCS — Gilts and boars of Winsor's Giant Orion breeding. Falfadale Farms, Perris, Calif.

FOR THE BEST in Durocs, write June Acres Stock Farm, Davis, Cal.

ROCSTEIN RANCH DUROCS headed by Lord's Orion Cherry King. Breeding stock for sale at all times. W. M. Way & Son, Rt. 1, Box 320, Modesto.

JACK LONDON RANCH, Glen Ellen.—Exceptionally good weanlings. Bred sows and gilts. One good yearling boar and one fall boar. Prices reasonable.

Poland-Chinas.

POLAND CHINAS — Service boars, brood sows. Young boars and gilts. Best quality at reasonable prices. Let me know your wants. Edward A. Hall, Rt. 1, Box 39, Watsonville, Cal.

ELDERSLEY AND SHADY BROOK Farms big-type Poland-Chinas that make money for the Feeder, the Farmer and the Breeder. Prices reasonable. J. H. Ware, Brown's Valley, Calif.

TOHOQUA POLAND-CHINAS—A good tried boar and some choice young breeding stock for sale. Ferguson & McKaig, Orland, Cal.

WAUKEEN HERD POLAND-CHINAS — Home of King's Big Bone Leader. A few service boars for sale. Les McCracken, Ripon.

LAKESIDE STOCK FARM—Large, smooth and big-boned Poland-Chinas. Geo. V. Beckman & Sons, Lodi, California.

REGISTERED POLAND-CHINA SWINE — Prize-winners. Finest stock in the State. Bassett Bros., Hanford, California.

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HERD BOARS—STAR LEADER, Junior and Reserve Grand Champion of the World. The Grand Champion carload of barrows, over all breeds, at the San Francisco Live Stock Show, was sired by a son of Star Leader, NATOMAS BARON DUKE, grand champion of California. For sale, bred gilts, open gilts, young boars and weanling pigs. Write for booklet, prices and list of sows.

BRED GILTS.
Sired by Mayfield Rookwood 2d, a Grand Champion Boar, out of 600-700 lb. sows, and actually bred to "ACHIEVER," our English Blood Boar, the Sire that puts more bone and pork-making qualities into his pigs.
Priced reasonably and absolutely guaranteed.
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The only herd of English Berkshires in the West. Bigger, better, stronger litters. More pounds of meat for less feed. Weanling pig, $35. Satisfaction guaranteed or money refunded at once. Sandercock Land Co., 703 Market St., S. F. In charge Natomas Land Sales.

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HOLSTEINS

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Registered Holstein Cattle
Bulls, Heifers and Calves
of Ormsby breeding
Tuberculin tested
Lewis Building, San Jose

ASEVEDO BROS. CO.
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Breeders of
REGISTERED HOLSTEINS
For Sale
Young bull, sired by King Abbekirk Johanna 24th, and out of a dam making 24 lbs. as a 4-year-old

CREAMCUP HERD — Registered Holsteins. Pontiac bull calves. M. Holdridge, Rt. A, Box 437, San Jose.

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INNISFAIL HERD MILKING SHORTHORNS—Young stock for sale; both sexes. Owned by Alexander & Kellogg Leased by J. D. Rowe & Son, Davis, Cal.

BREEDERS OF REGISTERED SHORTHORNS—Milk strain; choice young stock for sale. John Lynch Ranch, Box 321, Petaluma

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SERVICE JERSEY BULL, bull calves Financial King blood, Chester White boars, prize winners. Best blood, type, production. N. H. Locke Co., Lockeford, Cal

JACK LONDON RANCH, Glen Ellen—Two fine Jersey bulls, one ready for service.

SUNSHINE FARM JERSEYS—"Production counts." E. E. Greenough, Merced, Cal.

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PUREBRED GUERNSEY HEIFERS—Heifer calves and bull calves for sale at reasonable prices and on terms, if necessary. The mothers are wonderfully bred and with high milk and butterfat yields. The sires have made Guernsey history. Also a few purebred Holstein cows, heifers and a herd sire for sale. Prices and terms on application. If you desire to start with purebreds, now is your opportunity. S. J. Strauss, P. O. Box 62, Modesto, Cal.

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SHORTHORNS—The foremost beef breed—Have a limited number of stock for sale, both sexes. If you wish to start a small herd I can probably supply your needs. T. T. Miller, Hollister, Cal.

ALAMO HERD REGISTERED HEREFORDS (founded by Governor Sparks). Herd and range bulls. Reasonable prices. W. D. Duke, Gazelle, Siskiyou county, California.

RANCHO SAN JULIAN SHORTHORNS—Purebred range bulls, unregistered, for sale. Estate Thos. B. Dibblee, Santa Barbara, or Lompoc, Calif. John Troup, Supt.

THE NEVADA HEREFORD RANCH—Jno. H. Cazier & Son Co., Prop., Wells, Nevada. Reg. Hereford cattle. Breeding stock for sale.

CARRUTHERS FARMS, Live Oak, California. Shorthorn cattle and Berkshire swine of quality and select breeding.

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WM. BRIGGS & SON, Dixon, Cal. Breeders of Hereford cattle and Rambouillet sheep.

ABERDEEN-ANGUS cattle of quality and breeding. Lilac Ranch, Escondido, Cal.

SIMON NEWMAN CO., breeders of Registered Herefords, Newman, California.

HEREFORDS — Mission Hereford Farm. J. A. Bunting, Prop., Mission, San Jose, Cal.

REGISTERED HEREFORDS—H. H. Gable, Diamond G Ranch, Esparto, California.

GEORGE WATTERSON — Breeder Registered Herefords. Bishop, California.

REGISTERED SHORTHORNS — Fair Oaks Ranch, Willits, Calif.

SHEEP AND GOATS.

F. A. MECHAM ESTATE, Petaluma, Cal.—Breeders and importers of Shropshire, Rambouillets and American Merinos, both sexes. Also Red Polled cattle. Take electric car at Petaluma or Santa Rosa for Live Oak Ranch

OAKDENE GOAT FARM, Walnut Creek, Contra Costa Co., Cal—Breeder of milk goats. Nubian, Saanen and Toggenburg registered grades. Bred and fed for milk production.

(Continued on page 490.)

Three Big Hereford Days
November 4-5-6
State Fair Grounds Sacramento, Cal.

On Thursday, November 4th
4 5—REGISTERED HEREFORDS—4 5

representing picked tops from leading western herds will be sold. It is planned to make this the banner Association sale to date, and that objective will be kept in mind when the selections are made. Full details of the offering will be available about October 1.

Sale under Auspices of

Pacific Coast Hereford Cattle Breeders' Association

J. I. Cazier, Pres., Wells, Nevada.. J. A. Bunting, Sec. Mission San Jose, Cal.

On Friday, November 5th
NEVADA HEREFORD RANCH

will make their first individual public offering, consisting of

5 5—REGISTERED HEREFORDS—5 5

A feature of this offering will be daughters of Harris Standard 2nd in calf to the $10,000.00 Beau Blanchard 76th, who was Grand Champion at the State Fair just closed. The many buyers who have already expressed a desire to buy these Standard heifers carrying the service of this great young bull will have a splendid selection in this offering. Detailed announcemets will appear in later issues.

Owners: J. H. Cazier & Sons, Wells, Nevada

On Saturday, November 6th

Barngrover and Wright will sell a well bred lot of young cattle consisting of

5 0—REGISTERED HEREFORDS—5 0

including well bred cows with calves at foot, by equally well bred sires, bred and open heifers, and a very few bulls. Details of this offering will also appear in later issues.

Owners: Barngrover & Wright, Santa Clara, Calif.

These three sales unquestionably afford to buyers the greatest opportunity for selection of high class breeding Herefords yet provided by a like event in the breed's affairs in the west. Catalogs of all three sales free on request. All of these sales under management of

California Breeders' Sales & Pedigree Company

C. L. Hughes, Sales Manager, Sacramento, Cal.

Auctioneer, Col. Ben A. Rhoades. In the Ring, John A. Bunting.

CALEDONIA FARMS, WEST SACRAMENTO, CALIF.

Second Public Sale Offering

60—REGISTERED SHORTHORNS—60
50 FEMALES—10 BULLS
TUESDAY, OCTOBER 26, 1920, AT NOON

30 SCOTCH AND SCOTCH TOPPED COWS, 15 of them with calves at foot, superior breeding material of approved breeding and desirable type. **20 SCOTCH AND SCOTCH TOPPED HEIFERS,** growthy, thick-fleshed, well bred, and most desirable as foundation breeding females.

ALL FEMALES IN THE OFFERING, with the possible exception of a few that have recently calved, are bred to the three well-known herd sires—IMP. CALEDONIA, GAINFORD MATCHLESS, and PINE GROVE KING. **10 SCOTCH AND SCOTCH TOPPED BULLS,** especially selected for this offering, including several of herd-heading caliber, and the balance to qualify as the better sorts in range service.

Every animal guaranteed a breeder; every animal tuberculin tested and individual certificates furnished.
Catalog on request. Management

CALIFORNIA BREEDERS' SALES AND PEDIGREE CO.

C. L. HUGHES, Sales Manager, Sacramento, Calif.

Auctioneers:

COL. BEN A. RHOADES, Los Angeles—COL. JOHN A. DAVIS, Manteca

THE BIG QUALITY SALE OF THE SEASON
—OF—
POLAND CHINAS
FROM THE
KINGS COUNTY POLAND CHINA BREEDERS' ASSOCIATION
10th Semi-Annual Sale
—OF—
TOPS FROM ELEVEN OF THE BEST HERDS IN KINGS COUNTY
HELD AT
HANFORD, CAL., WEDNESDAY, OCTOBER 20, 1920
40 HEAD—4 BOARS, 36 SOWS AND OPEN GILTS

Sired by

LIBERATOR
YANKEE JR.
FRESNO BOY
BIG TIMM
KING'S TIMM
THE CALIFORNIAN

KING'S MASSIVE ORANGE
METER
BIG KNOX BOY
COL. GERTSDALE
BUSTER DEFENDER
MODEL JUMBO

For Catalogue and information write the Secretary,

R. L. WALTZ, R. F. D., No. B, Hanford, Calif.

COL. GEO. W. BELL, Auctioneer.

PRE-BREEDING SEASON
Public Sale of Registered
POLAND CHINAS
ON WEDNESDAY, OCTOBER 27, 1920
AT LOOKINGBILL & VELZY'S UNION STOCK AND SALES YARDS
MONTE VISTA and HOLT AVES., POMONA, CAL.
LUNCH SERVED AT NOON
A joint sale of very high-class purebreds from the herds of
E. AVERY NEWTON of Lankershim and H. CHRISTIANSEN of Riverside
40 HEAD
Including PRESIDENT'S MODEL, Grand Champion Boar at Riverside, 1919, and boars and gilts from this famous sire. Get of Grand Champion EL PROFITO and BIG BONE LAD. Also Grand Champion BIG HELEN and other choice sows.
For catalogue address
E. AVERY NEWTON, 1026 Marsh-Strong Bldg., Los Angeles,
or H. CHRISTIANSEN, Arlington Station, Riverside, Cal.

Duroc-Jersey Hogs for Sale
BOARS AND GILTS
BRED SOWS
SOWS WITH LITTERS
DIABLO STOCK FARM,
E. F. PETERSEN, Supt. Danville, Cal.
G. W. EMMONS, Owner, Oakland.
They are the large type and the best blood strains to be had anywhere.
HERD BOARS AND SOME OF THE SOWS
Lucy Orion's Model, California's Defender, Diablo Orion Model, Defender Colonel 70th, Prize of Tulare Belle, Pathfinder's Queen, Great Wonder I Am Gano, Lucy Orion's Mayflower, Twin Oaks Attraction, Lady Defendress 70th and 50 others.
WEANLINGS—$15.00 EACH AT RANCH — A large number always on hand to choose from. Crates $2.50 each, refunded when returned prepaid in good condition
MAIL ORDERS SOLICITED. SATISFACTION OR MONEY BACK.

Llano Vista Ranch Grand Champion Hampshires

JUDITH—No. 126448
Sire: Calif. Lad. 45021. Dam: Mabel, 113078.
This pioneer herd has brought to light the winning blood lines in our big shows and is responsible for the growing interest in the breed. We have furnished foundation stock for many new herds throughout the State. Bred sows, service boars and pigs for sale.
F. A. LANGDON, Mgr.
Perris, Calif.

Early to Market—Full Weight

51 per cent of all hogs marketed in the United States in 1918 were Duroc-Jerseys.
Duroc-Jersey hogs have proved themselves in championship shows as well as on the market.
Duroc-Jersey hogs raise large families and put on weight quickly. They are hardy, easy feeding animals that mature at an early age, and are uniformly red in color.
Write for our Free booklet "*Duroc-Jersey Hogs Are Prolific and Profitable.*"
The National Duroc-Jersey Record Association. Dept. 120 Peoria, Ill.
The largest swine record association in the world—12,000 members

GUASTI BERKSHIRES
Weaned pigs, both sexes, from sows that farrow large litters and raise them. Priced reasonable — they are money-makers.
ITALIAN VINEYARD COMPANY
ALEX. M. WILSON, Supt. Guasti, Calif.

HAVE YOU SEEN THE
Grand Champion Duroc State Fair 1920
HERD SIRE CHOICE WONDER III { Mahaska Wonder { Great Wonder / Grand Lady 20th; Grand Lady 72nd { Grand Model / Rose
Write for yours from the most select herd in California.
Littermate (gilt) topped Ed Kern's Last Sale at $5600
V. F. DOLCINI, JUNE ACRES STOCK FARM, DAVIS, CALIF.

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WESTERN MEAT COMPANY
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El Dorado Cocoanut Oil Cake
for Milk Cows and Chickens and Young Pigs and Hogs. Cheapest food in the market today. If your dealer doesn't carry it, address
EL DORADO OIL WORKS
433 California Street, San Francisco

From Whence Must Come Dairy Profits?

(Written for Pacific Rural Press by Ralph Newman.)

The other day the writer held a long confab with a dairyman who uses his head as well as his hands, and so many gems of hard-headed common sense dropped over the fence where we were seated that I asked him if he wouldn't write an article for the Pacific Rural Press embodying what he had said to me. The suggestion scared him so badly that white actually showed through his tan. When he could get his breath he came back with: "Write it yourself; that's what you are for." Maybe he is right. The dairy section of a farm paper, if it has any reason to be, certainly should give a voice to the thoughts and feelings of actual dairyman who may be too timid to speak for themselves.

So here the pencil is that of the dairy editor, but the thoughts are those of a dairyman who is thinking as many like him are. And they are thoughts well worth recording.

Marketing Problem Foremost.

This dairyman believes that we must not let anything else obscure the fact that we will never get the dairy industry onto a permanently prosperous foundation until our marketing system is revolutionized. The old system is antiquated and has utterly broken down. A real co-operative plan must take its place. He does not believe that dairymen can or should control the price of dairy products, but he does believe that a co-operative plan can be worked out —is being worked out—whereby speculation can be entirely abolished and prices stabilized. He does not believe that this can be accomplished until dairymen control both the manufacture and distribution of their product. Then and then only can gambling be eliminated and the industry placed on a sound and stable basis. Asked if he thought dairymen were equal to the job of marketing their own product he replied, "As I see it, it is a problem of business management. I couldn't do it myself, but I could hire trained men to do it for me and boss them while they did it, and I could mighty soon tell whether they were working for me or for somebody else." And he added: "Progress will be slow for a time for trained men who will be loyal to the co-operative idea are perhaps none too plentiful, but we can raise them and hold them if we try—and, by gravy, a lot of us in this old U. S. A. are trying."

Bookkeeping.

The discussion of business management brought up the question of bookkeeping. This dairyman is keeping books. Not an elaborate system, but simple records that enable him to see what he is doing. He says the dairyman who doesn't know what his cows are producing, what his feed actually costs him, what its market value is, what the product brings, and so on, is a fool—just as much of a fool as he would be attempting to run any other business without records. Asked if many of his neighbors were keeping books he replied, "I am afraid not. The Farm Bureau has gotten out a system so simple that any man with ordinary sense can use it by devoting a few minutes a day to it; the producers' association will send a man to show a fellow how to keep tabs on production costs and will do most of the clerical work for him; and the cow tester will make up the records on what the cows are producing. In the face of all this, probably not one dairyman in ten is keeping books except on the barn door or the back of an old envelope, which is lost when he wants it." He believes that one big job ahead in securing a profit for dairymen is to educate them, persuade them—even coerce them into keeping a systematic record of their business. When a man sees in black and white just where his dairy stands, he will be a mighty sight easier to handle in a co-operative movement.

Four years ago this dairyman was milking sixty untested cows, and when the year closed the books showed a good-sized loss. He went into a cow-testing association, kept close watch on production for a year and then weeded out 12 cows. The second year, with forty-eight cows getting the same amount of feed sixty had had the year before, and after making allowance for variations in the price of products, he found that his loss had been reduced 87 per cent. At the end of the second year of testing, he cut out eight more cows, fed the forty still heavier and just about broke even the third year.

At the beginning of the fourth year, with a crisis on, with feed and labor soaring, with his neighbors going out of business or vainly trying to hang onto their whole herds, this man let the butcher have his ten poorest cows, sold a few more for a song to other dairymen, slipped in a few of his best heifers, turned one-fourth of his dairy land to other uses and gave to thirty cows three-fourths of as much feed as formerly had gone to sixty. What happened? Production per cow has doubled, feed has been reduced one-fourth and one-fourth of the land released for another crop, and labor has been reduced 35 per cent. So, in spite of the desperate conditions of last spring, this man's dairy is now showing a decent profit even when figured as any other business would be.

Better Cows Better Cared For.

I asked if he wasn't over-feeding 30 cows by giving them three-fourths as much as 60 were receiving when he began the weeding process. (All his cows were sleek and in unusually good flesh—almost fat.) He replied: "No, sir! The 30 are not getting too much. The trouble was the sixty were not getting nearly enough." And he is right. For years too many dairymen have figured that if ten cows will bring in so much, forty cows will bring in four times as much, so the forty are put on and the feed stretched till no cow gets enough to enable her to do her best. To this dairyman the moral is perfectly clear. Keep no more cows than you can feed to the limit, and keep only cows that will respond to that kind of care.

High-producing cows fed to the limit of safety, business methods in every dairy process, co-operative manufacture and marketing of dairy products —this is one dairyman's program. He believes that put into practice it will mean dairy profit. He believes the three things must go together. He does not believe that standing alone he can be assured of a permanent profit for himself even if he continues to practice good business methods and breed even higher-producing cows.

SHIRE HORSES
For Size, Bone and Quality
More is required of Horses than ever before hence the need of more size, weight and power. Large geldings never were higher. Shire Geldings usually top the market. Use Shires to raise larger and better horses.
For information on Shires, write W. O. Lynch, Secretary, The American Shire Horse Association, Tonica, Illinois.

POLAND CHINA PIGS
Fine ones that will surely please you.
THERON J. SEITS
Geyserville, California

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Registered Hog Sales a Specialty

America's Pioneer Dog Medicines
BOOK ON DOG DISEASES And How to Feed
Mailed free to any address by the Author
H. CLAY GLOVER CO., Inc., 118 West 31st Street, New York

High-Producing Herd of Jersey Cows

The Pacific Rural Press of September 4th contained a note in the Dairy column stating the production of E. E. Greenough's Jersey herd to average over 400 pounds of fat annually and half of them first calf heifers. One of our subscribers wrote asking how Mr. Greenough cared for and fed his cattle.

A letter to Mr. Greenough brought a prompt reply and he says the cows received good care but were not forced for high records in the extreme manner of the very highest producers. He says further: "I have never fed more than 12 lbs. of grain to any of my cows and they get no green feed, silage or beet pulp. The heifers were shown at the State Fair in 1919. Beauty of Sunshine Farm milked as high as 33.6 lbs. of milk in one day in the senior yearling class.

"They were milked three times a day from September 1st until December 4th when I had to discontinue it on account of field work.

"Beauty and Goldie were fed about 10 pounds of rolled barley daily until it was gone when I changed to the cheapest feed I could find, such as bran, middlings, rice middlings and molasses. The last two were the principal feeds.

"The cows required some time to become accustomed to the rice 'midds,' but with the addition of molasses they soon learned to like it and produced about as well as when on the barley ration. As the lactation period advanced the grain ration was decreased.

"I bred and raised these heifers. Beauty of Sunshine Farm is intensely line-bred with Marigold's Exile King breeding. Her dam is a full sister to her sire's dam, he being a 75 per cent son of Marigold's Exile King.

"While these records are not phenomenal they are entitled to some consideration as they were made under ordinary farm conditions."

CHOOSING DELHI COMMUNITY BREEDS.

Settlers on the Delhi State Land Colony have for several weeks been investigating various breeds of cattle and hogs with a view to choosing one breed of each to be grown in the district in order to make the settlement famous for those breeds. They visited Jersey herds near Modesto and listened to the arguments of Guernsey and Holstein men elsewhere. They have considered several breeds of hogs. On September 14 they held a meeting at Delhi and heard the representatives of the Holstein and Duroc-Jersey associations. All of the associations considered have made offer that their members would turn over to State settlers some of their best cows at a flat low rate. Following the meeting a ballot was sent to all settlers and the vote will be in by the time this is published. There is a wide divergence of opinion as to which breeds should be chosen, according to Supt. Walter Packard.

WHAT ABOUT PUREBRED PORK PRICES?

In re the matter of the McCarty-Shinn-Elliott Poland-China sale of September 27th, we might say that the average of everything sold was higher than that of the Gatewood sale of January, 1919, which was considered a record for the Pacific Coast at that time. The recent Tulare average, according to figures at hand, exceeded that of the Fresno sale of 18 months before by approximately $18 per head. It is true that values commenced to increase shortly thereafter and from that time until the peak was reached sometime later in the year, it was a continued contest as to which public sale either individual, combination or consignment should have the highest general average as well as top price.

We must now take into consideration that the inflation due to war conditions is passing, and all prices will approximate those of pre-war times. Some commodities will be slower than others, but it will surely come for all. When the natural level is reached the percentage of profit will not be so much different from that of peak price periods.

Lambert's
HEALTH FOR CATTLE

Remedies for
COW CLEANING, BREEDING and ABORTION
Scouring Calves, Hog Cholera
An Insect Destroyer
A Poultry Food
LAMBERT STOCK REMEDIES COMPANY
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FACTORY: MODESTO, CAL.
Mail Orders Promptly Filled

GOMBAULT'S
CAUSTIC BALSAM
THE STANDARD REMEDY
HUMAN and VETERINARY

It is generally true that an external remedy that is good for the animal is also good for the human body, and Gombault's Caustic Balsam is no exception to this rule. The many testimonials received from physicians and veterinarians are convincing proof of its merits. Rheumatism, Backache, Neuralgia, Sprains, Strains, Lumbago, Sore Throat, Stiff Joints, in fact any ailment requiring an external application can be treated with absolute safety and the beneficial results produced are all that could be desired.

Soothing and Healing--A Perfect Antiseptic

As a veterinary remedy its curative qualities have been acknowledged for many years in cases of Curb, Splint, Sweeny, Capped Hock, Strained Tendons, Spavin, Ringbone and other bony tumors. A trial will convince anyone that here is a remedy without an equal. Write for any information desired. $1.75 per bottle at druggists or sent by parcel post on receipt of price.

The Lawrence-Williams Co., - - Cleveland, Ohio

Southern California Fair
RIVERSIDE, October 13 to 19, 1920
The Big Agricultural Fair of the State This Year
Great Livestock Show
Wonderful Exhibition of
BLOODED HORSES, CATTLE, SWINE, SHEEP, GOATS, RABBITS
A Comprehensive Agricultural Display in Which All Sections of Southern California will be Represented in Exhibits.
INDUSTRIAL DISPLAY
The Largest Tent Available Will Be Devoted Entirely to Industrial Exhibits.
Biggest Goat Show in the United States.
Poultry Show—Rabbit Show—Dog Show.
Dairy Exhibit and Educational Demonstration.
Attractive Junior Agricultural Department. Indian Exhibit.
Daily Educational Programs with Moving Pictures in All Departments. Women's and Fine Arts Display
GREAT RACING PROGRAM
Speediest Horses in the West This Year.
115 Harness Entries, and Running Events.
Six Big Days of Racing
Free Amusement Features Day and Evening. Athletic Events.
Boxing Bouts. Daily Aerial Exhibitions.
ADMISSION 50c. SPECIAL RAILROAD RATES. FREE AUTO CAMP.

Loan Oak Holstein Dispersal
ON NOVEMBER 6TH AT MODESTO
J. W. BENOIT will sell his herd of about 60 head of Registered Holsteins under the management of the
STANISLAUS COUNTY HOLSTEIN BREEDERS' ASSOCIATION
This is one of the older herds of the Central section of the State and should attract buyers from all sections of the State.
SIRES WITH GREAT PRODUCTION BREEDING
Mr. Benoit has used good bulls from the start and the blood lines of this offering are especially good. There are
15 Daughters of El Pardo Wayne Colantha
a 30-lb. grandson of Colantha Johanna Lad, all of which are bred to Lone Oak Terzol Korndyke, a 32-lb. bull, whose dam also has a record of 21,000 lbs. milk and 900 lbs. butter in 10 months.
17 Daughters of the 32-lb Bull Lone Oak Terzool Korndyke
bred to Lone Oak Valdessa Finderne, another 30-lb. bull, whose dam has a yearly record of 18,377.7 lbs. milk and 790.97 lbs. butter.
49 FEMALES, 2 GREAT HERD SIRES, and 9 YOUNGER BULLS IN ALL.
A splendid opportunity to secure a foundation herd at your own price.
Write to E. M. MORROW, Secretary of the Stanislaus Co. Holstein Breeders' Association, Modesto, for catalog.
Auctioneers:
COL. GEO. A. GUE, Yakima, Wash. COL. CY. N. CLARK, Modesto

THE SHASTA FARM BUREAU FAIR.

(Written for Pacific Rural Press by Ralph Newman.)

Central California and points south may well look to their laurels in the fair line for Shasta has hit the trail. The slogan of the Anderson fair committee was, ,'Let's Go." They went—and the fifteen farm centers went with them to the last man, woman and child.

Many things there were to really marvel at, but perhaps the most striking one was the community co-operative spirit displayed. They are a big, happy, wide-awake, pull-together family up there. The Red River Lumber Company donated the use of their buildings; the farmers came in on Labor Day and wired those buildings for electric lights; willing hands and bright minds transformed them into a series of artistic booths that would have done credit to any fair anywhere, while from impossible distances over impossible roads, the finest and most varied assortment of agricultural and horticultural products poured in to fill them to running over.

Livestock.

And they had a really remarkable display of livestock. Three years ago such a show would have been an impossibility. It looked then as though smelter fumes would drive out the farmers. You remember the protests. Well, the smelters have taken care of the fumes, the hatchet has been buried, all parties are smoking the pipe of peace, and, under the fostering care of the farm bureau, livestock—good stock, too— is going ahead at a wonderful clip. The Pig Club litters were there in contest squealing with the joy of living in Shasta. In this contest the Frisbe cup went to Hawes Bros. The Shorthorn Calf Club was a revelation. The first prize and championship for heifers went to Alta Hufford. Some one congratulated her on her luck. "Luck, nothing," answered the little girl, "I worked hard for it"—and that's the Shasta spirit. There were Rambouillet, Shropshire and Hampshire sheep, a good display of turkeys, chickens and ducks, and Duroc-Jersey, Poland-China, Berkshire and Hampshire hogs.

There were some unique features at this fair, worthy of more extended notice than can be given here, and the writer is going to work the Home Circle editor for more space. We want you to know about the canning demonstration, the children's play day and the school lunch stunt at least.

LIVESTOCK DIRECTORY.

(Continued from page 487.)

FOR SALE—Rambouillet rams and ewes—purebred; the very highest grade of large smooth body; heavy shearers; the wool and mutton type. Immediate delivery of individual or carload lots. You can find none better or of higher grade. Address Glenn, Cal. Location, 8 miles south Hamilton City, 1 mile west Ordbend. Windell Orchards Co.

CLOSING OUT GRADE MILK GOATS—125 head of Toggenburg, Saanen and Nubian—3 to 5-quart milkers. Does and yearlings all bred to pure registered bucks. Does registered ½ to 63/64. Kids for sale. Prices for does or kids, $10.00 to $100.00. Star Goatery, Pomona, Cal.

FOR SALE—165 Shropshire ewes, one, two and three years old; must sell. Price, $10 per head, if taken at once. Denver Hoff, Tehachapi, Cal.

WRITE ME for early Rambouillet ram lambs ready for light use by Sept. 1. Also a few yearlings. Carl Lindheimer, Woodland.

DR. A. S. ALMEIDA, Dixon, Calif., Breeder and Importer of Registered Shropshire Sheep. Write me for prices on Reg. Ram Lambs.

J. R. BLOOM, Dixon, Calif.—Twenty-five years breeder of purebred Shropshire sheep. Rams for sale. Single or carload lots.

FOR SALE—450 Rambouillet ewes to lamb in December; also 200 spring ewe lambs. Address Box 606, Woodland, Cal.

FOR SALE—850 one, two and three-year-old Merino ewes. J. A. Swall, Box 742, Bishop, Cal.

DORSETS—ROMNEYS—Dorset ram lambs for sale. John E. Marble, South Padasna.

SHEEP FOR SALE—1000 ewes. Will sell in lots to suit. Chas. G. Owens, Livermore.

HARVEY S. VAN VLEAR, Lodi, Breeder and importer of registered Hampshire sheep.

CALLA GROVE FARM, MANTECA, CAL.—Breeders and importers of Hampshire sheep.

KAUPKE BROS., WOODLAND, CALIF.—Breeders and importers of Hampshire sheep.

CARL LINDHEIMER, Woodland, Cal.—Rambouillet Ram lambs for light use.

CHAS. KIMBLE—Breeder and importer of Rambouillets, Hanford, Calif.

BULLARD BROS., Woodland, Calif.—Breeders and importers of Rambouillet sheep.

MISCELLANEOUS.

BUTTE CITY RANCH
SHORTHORN CATTLE, SHROPSHIRE Sheep, Berkshire Hogs, Shetland Ponies, Bronze Turkeys, White Plymouth Rocks. Stock for sale at all times. W. B. Dwyer and W. S. Guilford, Box P, Butte City, Glenn county, California.

FOR SALE OR TRADE—Percheron stallion reg. (weight 2000). Will exchange for work horses or cattle. Address Ralph L. Clark, R. F. D. 2 Box 74, Lodi, Cal. Phone 24F4.

Poultry for Profit

SOUTHERN CALIFORNIA POULTRY SHOW.

The Poultry Show at the Southern California Fair at Riverside, which will be held October 13 to 19th, promises to be an event of very great interest to poultrymen. In addition to the fact that there will be a large and varied exhibit of poultry, there will be demonstrational work along educational lines in direct connection with the show, which will prove of great value. The Home Demonstration Department of the Farm Bureau is in charge of this division of the show.

The Fair Association offers a $50 silver trophy to the Barred Rock exhibitor who wins the most first prizes in the following classes: Exhibition cock, hen, cockerel, pullet and pen; Cockerel bred hen, pullet and pen; Pullet bred cock, cockerel and pen. In case of a tie the exhibitor who has the largest entry wins.

A feature of great interest in this show is a poultry judging contest. Ten dollars in gold will be paid to the person picking the best bird in the show, all breeds competing. The awards in this contest will be made Saturday, October 16th, at 12 o'clock noon. In case more than one party picks the winner, the money will be divided equally.

PLUCKING LIVE GEESE.

To the Editor: Please explain when and how you pick geese. How can you tell when the feathers are ripe, and how clean do you pluck them? Do you pull the feathers in the upward or downward direction from which the feathers lie on the goose?—G. L. J., Modesto.

The plucking of live geese is now practiced in America to a very limited extent, and the custom is not as common in Europe as in times past. We have seen it stated that none of the New England goose farmers—where goose farming as an important branch of commercial poultry keeping—pluck their geese, except once a year, just when natural molting occurs. The plucking of geese at any other time greatly reduces the breeding value and in the end results in greater loss than the gain from the sale of the additional feathers. One prominent breeder states: "Goose feathers are an item worth considering, but do not pluck your geese twice a year and expect them to be good breeders. A goose so treated will not lay as early nor lay as many nor as fertile eggs as one that is left alone to go through the change naturally." The once a year method of plucking is carried out as follows: Examine the old geese and ganders carefully for first appearance of pin feathers. When these are well started pen the fowls up for plucking. Provide a clean box or barrel to hold the feathers, an old stocking to muzzle the fowl, and an apron. Draw stocking over head of fowl and hold it firmly in the lap, the head confined between the knees. The soft feathers on breast, back, and abdomen are then quickly removed. Pull the feathers downward as they lay on the fowl, and take care not to injure the pin feathers or to cause bleeding. This method does not seem to result in any real discomfort for the goose if the operator is reasonably careful and patient; neither does it appear to injure the health or breeding value of either sex. Young geese ,those under eightern months of age, should never be plucked alive.

THE BLACK ORPINGTON DEFINED.

To the Editor: Please describe the Black Orpington, male and female, and eggs. Is the black the original Orpington?

The standard weights for Black Orpingtons are as follows: Cock, 10 lbs.; hen, 8 lbs.; cockerel, 8½ lbs., and pullet, 7 lbs. The color of both sexes is black throughout and free from any foreign color, except that less than one-half inch of white in any part of the plumage does not disqualify. The black surface shows a greenish sheen while the under-color is dull. The shanks and top of toes are black, and the web and bottom of toes pinkish-white. The eggs are of a brownish color, varying somewhat in shade with different individuals or strains; and at times the shade is affected by the feed. It is claimed that the blacks were the original color, but the first attempts of Mr. Cook, the originator, resulted in several colors or mixed colors. He anticipated that his matings would result in barred plumage similar to that of Barred Plymouth Rocks, but, notwithstanding many years of patient effort, he was not successful in producing birds that were perfectly barred.

TURKS WITH "BAGGY CROP."

To the Editor: I have turkeys troubled with enlarged crop. They run on stubble and the crop fills up with water and feed till it becomes very much enlarged. When the turkeys are taken away from the stubble and fed soft feed, the crop gradually becomes normal, but as soon as they are turned out again the crop seems to get clogged up. This is only true with young turkeys up to five months.—N. E. L., Sacramento.

The enlarged or "baggy crop" is due to eating too much grain that the turkeys find in abundance among the stubble. This excess of grain causes impaction of the crop and this prevents—temporarily, at least—the passage to the gizzard not only of the solid feed but the water as well. Growing turkeys cannot thrive on a ration of which a large proportion of the ingredients is heavy grain. They require a large share of roughage, green stuff, and insects. When no insects exist commercial meat scraps and fish meal, fed in a light mash or simply mixed with bran or mill run, provide a practical substitute. These mixtures may be fed as a moist mash or dry in hoppers where the poults can eat it at will.

MELONS AS A HEN RATION.

To the Editor: Would ripe pie melons or citron have any ill effect if fed to laying hens? Would the melons take the place of greens during the fall when green feed is scarce?—L. H. H., Ramona.

In limited quantities the melons will benefit the laying hens, particularly if they are unable to obtain all the greens they should have. Judgment must be exercised in determining the quantity that should be fed. The melons should not form a large part of the ration for the reason that they have a tendency to fatten. Laying fowls should be kept in good flesh

The poultry division of the College of Agriculture of the University of California will open its official California Farm Bureau egg-laying contest November 1st. The contest will be limited to 100 breeders of pure bred-to-lay stock.

Poultry Breeder' Directory

Rate, 4c per word. Cash must accompany all orders.

BARRED PLYMOUTH ROCKS — "Nothing Better in Poultry." Wonderful layers. Choice hens and pullets for sale; also fine cockerels that will improve your flock. Now booking orders for hatching eggs. I have made a specialty of Barred Rocks for over twenty-two years. Thanks why our birds win at all the leading shows. Catalog free. Chas. H. Vodden, Box 3, Los Gatos, Calif.

RAISE FALL CHICKS—They are profitable. Write for circular. See why they pay. Checks every week. R. I. Red, Barred Rock, White Leghorn. Also booking for spring delivery. Order now and get a desirable date. Safe arrival guaranteed. Stubbe Poultry Ranch and Hatchery, P. O. Box 67, Palo Alto.

PETALUMA HATCHERY — Established 1902. If you want good fall layers, get chicks in the fall. We guarantee satisfaction. There will be but few chicks hatched this fall. The wise ones are buying. Send for prices. L. W. Clark, 615 Main St., Petaluma, Cal.

RHODE ISLAND REDS—11 years breeding Reds, for dark color and heavy egg production. Get started right. Early hatch cockerels and pullets, baby chicks. Healthy, vigorous stock, hatching eggs. Wm. Larm, 3915 39th Ave., Fruitvale, Calif.

ATKINSON'S PEERLESS ANCONAS lay more and eat less than other breeds. 50 big husky cockerels, $5 and up; 200 pullets, trios, and pens for sale. Hatching eggs. Catalogue free. J. W. Atkinson, Box B, 130 Willard St., San Jose, Cal.

WHITE LEGHORN BABY CHIX from heavy-laying Hoganized Stock. Safe arrival of full count, live, strong chix guaranteed. Price list and interesting literature on application. The Pioneer Hatchery, 408 Sixth St., Petaluma, Cal.

SPECIAL SALE—Barred Rocks, White Orpingtons, White Houdans. Old and young stock. Get your cockerel for spring breeding, $2.00 and up. R. P. Lutzi, 1217 20th Ave., San Francisco.

A THOROUGHBRED PEN of White Quackless Muscovy Ducks, year and half old Drake and seven laying ducks. Bargain for twenty dollars. Mrs. Robert Weinstock, Los Altos.

GOLDCROFT BUFF ORPINGTONS, Columbian Wyandottes and White Leghorns. Heavy laying strains. Breeders and young stock. Samuel Abrams, Box 13, Los Altos.

PULLETS, $2.00 Cockerels, $5.00 each and upward; White Leghorn, Brown Leghorn, White Rocks. Mahajo Farm, P. O. box 597, Sacramento, Calif.

CHICKENS, DUCKS, GEESE, GUINEAS, Pea Fowl, Pigeons. Wm. A. French, 545 W. Park St., Stockton, California. Stamps.

EASTMAN'S "BRED-TO-LAY." Hoganized and trapnested. Barred Rocks. Fall Chicks. Fairmead Poultry Farm, Fairmead, Cal.

GUINEAS, MATED PIGEONS, CANARIES—Good stock. E. A. McKinley, R. F. D., Box 91, Ukiah, Cal.

BOURBON RED TURKEYS—Buff Orpingtons. The Ferris Ranch, R. 2-144D, Pomona Calif.

FOR GREATER EGG PRODUCTION FEED— COULSON'S EGG FOOD FULL PARTICULARS IN OUR FREE BOOK "CHICKENS FROM SHELL TO MARKET" Coulson Co. PETALUMA, CAL.

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UNIQUE STUNTS AT SHASTA FARM BUREAU FAIR.

(Written for Pacific Rural Press.)

There were three of them that rightly belong on the Home Circle page for they were made possible by the Home Demonstration Department of the Farm Bureau.

Canning Club Results.

The tangible and toothsome results achieved by fifteen girls' canning clubs were on exhibition. Every girl in all these fifteen clubs had put up at least 90 quarts of fruits and vegetables, and many of them had become so interested in the work that they had three score cans to their credit. The judges had some job to pick out the best in all this fine array, but finally awarded the Farm Bureau cup to Margree Parsons of the Churn Creek district. In connection with this display three young girls in snowy white gave a demonstration of all the processes involved in the successful canning of fruits and vegetables.

The Play Day.

Saturday was Children's Day and in connection with it Shasta demonstrated that it is right up to the minute. The child's right to play is being recognized.

Last summer a play school was conducted at the University Summer Session—a school where teachers were taught how to go home and show their own charges how to play and how to develop through play. At the Anderson fair a representative of the State Board of Education, using the simple apparatus that any school may easily make, gave the kiddies a ripping good time and their parents a splendid illustration of the vital place play should occupy in the development of the child. All this at a county fair. The world (at least, the Shasta world) moves. Let us give thanks.

A School Lunch.

The third fine stunt was pulled off also on Children's Day. One of the buildings was equipped like a school room—desks and all—and at the noon hour the children were served with a regular hot school-lunch. Children were there from all over the country. The lunch was a dandy one, served at actual cost, the participants entered into it, and it entered into them with vim.

How many converts were made to the school lunch idea? Just as many as there were children present to eat the lunch and adults to see them enjoy it. The chances are good that Shasta will be the ranking county for the number of schools serving hot lunch.

ANOTHER PROSPECTIVE COMMUNITY CHURCH.

(Written for Pacific Rural Press.)

The colonists already on the ground at the Delhi State Land Settlement are moving for a community church. It must be that or none for some time to come, for if denominational churches are attempted now there will be about as many as there are heads of families. An incomplete survey has already uncovered nine denominations: Catholics, Hebrews, Christian Scientists, Congregationalists, Presbyterians, Christians, Methodists, Free Methodists and Holy Rollers.

Sunday morning, September 26, a meeting was held at the schoolhouse, and the subject thoroughly discussed. It seems to be the general opinion that the best thing to do will be to form a community association, emphasizing the great things on which all can agree and holding in the background the things over which men differ and divide. The first step will probably be a Sunday community gathering and some sort of Sunday-school for the young people. Later on, as they get underway, speakers may be invited in to give addresses on vital moral issues.

The spirit of these people is to be commended—they have the co-operative ideal. The movement they are launching has far-reaching potentialities, and people all over the State ought to be, and probably will be, interested in it and glad to do anything they can to help it along.

Home Circle Department

MUSIC IN THE COUNTRY SCHOOL.

(Written for Pacific Rural Press.)

Here and there over the country you find a teacher who believes that the finer, higher things of life are just as important as the "essentials," and such a one all by his lone will make heroic attempts to get some music into the schools. Often it requires heroism to listen to the result, but don't you ever say so out loud for the attempt, feeble though it may be, is altogether worthy of our highest commendation.

There are indications in our State, too, that these heroic efforts are bearing fruit. Two counties, Sutter and Marin, have paid music supervisors giving their time to the development of music in the rural schools. Why only two? Why not all? If there is anything more refining, or that will bring more lasting pleasure into life, than music, we have not heard of it. There is one good topic to discuss at that parent-teacher meeting. If Sutter and Marin can have music teachers for their rural schools, so can the rest of us, if we will.

THE GOAT'S FRIEND BUTTS IN.

An article on the subject of goat's milk, which appeared in the Home Circle department of the Rural Press, issue of September 25, moved an esteemed correspondent, Fred K. Howard of Fresno, to forward to this office the following protest:

"Some of the statements made in that discussion would lead many to believe that you have never really tasted of goat's milk which was produced under the sanitary condition which one would have the right to expect when talking of baby's food, or, for that matter, for any human being. If such is the case the writer would be pleased to arrange for your education in this matter and supply you with the necessary goat'milk, which after tasting would probably permit your conscience to correct the statement in the discussion that goat's milk "has so offensive an odor and so strong a taste that many children will refuse to drink it," in one of the coming issues of the paper. All who are interested in the subject of goat raising are perfectly willing to recognize facts, and I think these people also recognize that the goat has some shortcomings when compared to its better-known competitor, the cow; but I am sure that these same people will resent the printing of statements not exactly true in such a widely read publication as is yours."

We appreciate the delicate irony of Mr. Howard's spirited retort, but submit that neither irony nor imaginative inference has anything to do with the question at issue. In our comment on the communication referred to we had no intention to disparage "nanny," or her lacteal product. We intended merely to amplify and perhaps to modify some statements made by the original correspondent, of which the following is an example:

"It frequently happens in our modern civilization that a mother cannot nourish her own baby as Mother Nature intended that she should. If she understands the action of cow's milk on her little one's stomach, she will hesitate to subject it to the trial."

This statement, if seriously taken, is calculated to mislead uninformed mothers, and is an unjust libel on the all-dependable "bossy" — certainly when bossy's milk is produced under equally sanitary conditions. Such milk—certified milk—will, in the opinion of physicians generally, meet 90 per cent of cases where a baby must have a substitute for its own mother's breast milk—it being understood, of course, that such cow's milk is modified to conform in composition to the human secretion.

Barring the playful sarcasm of our correspondent's criticism, the sole point raised by Mr. Howard is the alleged offensive odor and peculiar taste of goat's milk. We must rest the justice of our strictures at this time on the general consensus of belief to this effect as expressed by both physicians and laymen. The burden of proof lies on the "other fellow" to show that this belief is ill founded. Did space permit, we could cite abundant testimony as to the wide prevalence of this belief. There are means, it is true, of mitigating the unpleasant odor and taste complained of, more or less successfully—as by separation of the sexes, by special feeding, by aeration, and perhaps by other means; but we have yet to learn of any methods whereby these objectionable qualities of goat's milk can be entirely eliminated. However, we are still open-minded on this point.

While we will not deny that the course of tuition proffered by Mr. Howard may be in order, it might be permissible to suggest that such a course embrace the public generally rather than be confined to a special course for this writer's individual benefit; and while Mr. Howard seeks to make this writer the goat in this controversy, he protests that he is neither goat nor anti-goat.

Note.—It is but just to the goat's partisans to say that a quart of goat's milk which was sent to this office since the original article appeared, but which through an inadvertence reached a member of the Rural Press staff other than this writer, was pronounced by the recipient "all right" as to both odor and flavor.

The Necessity of Music Is Met By a Good Player Piano

Music is as essential to the welfare of the mind as is exercise to the body. It rests and relaxes. It refreshes and exhilarates. But in too many homes the piano stands mute, silent—a piece of beautiful furniture, but nothing more.

But you can play the piano. You can summon its voice, govern its moods, select its melodies. Of course, we are speaking of the Player Piano, which anybody can play.

Choose this piano carefully. It will be with you for many years, responsive to your moods a witness to your taste.

We have Player Pianos to suit almost any purse. We carry the Aeolian Co. line (the famous Pianola and the marvelous Duo Art). With the convenient payment terms, which we gladly arrange, it is today an easy matter to own a good Player Piano.

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MAKING IT FORCEFUL.

He was a young lawyer who had just started practicing in a small town and hung his sign outside his office door. It read: "A. Swindler." A stranger who called to consult him saw the sign and said: "My goodness, man, look at that sign! Don't you see how it reads? Put in your first name—Alexander, Ambrose, or whatever it is."

"Oh, yes, I know," said the lawyer resignedly, "but I don't exactly like to do it."

"Why no?" asked the client. "It looks mighty bad as it is. What is your first name?"

"Adam."

WOTTA BREAK, WOTTA BREAK!

Jinks and Jenks met for the first time in years. After falling upon each other's necks and chorusing the usual "Howzzaboys?" Jinks undertook to be polite and conversational.

"And how," he inquired with a show of interest, "is Mrs. Jenks standing the heat?"

Jenks regarded him suspiciously.

"How'd you know she was dead?" he demanded.

MEXICAN RICE.

One cup rice washed and thoroughly dried, 1 tablespoon of fat or oil in the bottom of an iron pot, heated to boiling. Pour in rice, stir constantly until a light brown color. Add 2 small onions, chopped, ½ can tomatoes, well cooked. Cook all together five minutes, season with salt and cayenne. Cover all with boiling water and cover kettle closely. Simmer an hour on the back of the stove.

"To make people laugh is to make them forget. What a benefactor to humanity is he who can bestow forgetfulness."—Victor Hugo.

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Calif.

Write for Catalog 64

LIFE'S TOMORROW.

After the storm must come the calm:
After the rain the sunshine dawning;
Never a night of deep despair
But brings the quiet rest of morning.
What of the future? There must be
A deepening joy in Life's tomorrow.

THE LITTLE HATCHET.

Lucy Chester sat frowning out at the snowy paths. Her brothers and sisters with her best friends were all playing gayly, enjoying the snow to the utmost. Johnny and George were building a fort, Maggie and Kate, adding the last and most artistic touches to a snow man of yesterday's construction, while the others were sliding up and down a slippery incline, shrieking with delight.

Poor Lucy, recovering from a cold, had been told not to leave the house.

Father and mother had given her a new book, profusely illustrated, and two oranges on a pretty plate, but Lucy was tired of pictures, tired of reading, tired of oranges. She wanted just one thing, which was a game with the others out in the snow .

"It's all nonsense," she said crossly. "If I feel well enough to play, I am well enough. A week ago, I wanted only to stay in by the fire. Now, I'm all right again."

Just then, to her delight, she saw the doctor's buggy, stopping at the door. Another minute and he was standing in front of the fire, smiling down at her.

"Oh, doctor," she pleaded. "Mayn't I go out? For just one little run and game?"

He felt her pulse, inspected her tongue, and she watched him anxiously.

"M-m," he said. "Not today, Lucy. The sun is about setting."

"Tomorrow, then?" she went on. "Tomorrow's a holiday, doctor. Please say I may go out?"

"Tomorrow will be all right, after ten in the morning and before three in the afternoon," he said, and Lucy clapped her hands. "That is, if its as fine a day as today—if the sun shines. Good-by."

So Lucy had to be content. When the family gathered round the supper-table, she told with great glee of the doctor's visit and permission.

Only—she didn't tell quite all the truth! She quoted the doctor's words exactly up to "afternoon," and didn't mention the sun!

The next morning, when she woke, she felt rather tired and headachy, but she tried to take no notice of that, for she did so much want to take her place in the finishing of the snow man. As soon as she was dressed she ran to the window and looked out.

Poor Lucy! Gray, gray clouds, and a light fall of snow. That was what she saw.

Then she felt very angry and naughty.

"I don't care!" she said to herself. "I don't care! I'm going anyway!"

So at breakfast, though it wasn't easy, she ate all that mother wanted her to eat, and talked away as much as anybody.

After breakfast, she put on her coat and cap, her overshoes, muffler, and warm mitts.

"Well, you look as if you could defy Jack Frost," said her father, good-humoredly. "Sure the doctor said you could go out, daughter?"

Lucy turned scarlet.

"Yes," she said, defying something inside her which was protesting. "Yes; he said I could go out—after ten, and before three in the afternoon."

On account of the holiday, the family had breakfasted at nine. It was ten now. The others were already out in the snow, and their cries of delight came through the closed window.

"I wonder if he would have said that," suggested Mrs. Chester, anxiously, "if he had foreseen the snow?"

Lucy's heart sank.

"Oh," replied Mr. Chester. "He probably looked at the weather forecast, mother; and it's dry, powdery snow—not a damp, melting snow."

"Well,"—Mrs. Chester was still a little uneasy,—"I suppose it's all right. He's so very careful. Lucy, you're to come in if you feel the least chill, you know, dear."

"Yes, mother," said Lucy, determining not to feel a chill.

She ran away then, down the steps, and out into the white garden. How good the air was! It made her head feel better at once. How delightful the snow seemed! She at once began patting and pinching the snow man's features into a more classic shape.

Then, just as she was beginning to enjoy herself thoroughly, she saw the doctor's buggy.

To hide behind the snow man was the work of a quarter of a minute. To slip from behind the snow man to the back of the house took hardly more. In a trice she had run up the back stairs and into her room, where she shed her wrappings with such speed that she was in the hall, in her warm plaid frock and slippers, as the doctor rang the bell.

He saw her mother, said she looked well, and then turned his attention to Lucy. Her cheeks were scarlet and hot, her pulse so rapid that he looked grave, and ordered her back to bed.

She burst into tears. This only made him firmer, and she had no choice but to obey.

As she went upstairs, sobbing, she heard him say:—

"There's a return of the fever. We must be very careful."

It was then Lucy fully realized the folly of her own deceit. She did not believe there was any fever at all. Just the excitement and hurry had made him think so. She knew quite well it was her own fault that her fun was spoiled, probably for several days. Mother would be so particular now.

At luncheon time, the doctor came again. This time he took her temperature, and was a little puzzled.

"You have some ups and downs of temperature, young lady." He looked at her severely. "What made you so flushed and hot this morning?"

Lucy's father came in at that moment. He had a little parcel in his hand.

"Here's a favor from the dinner table for you," he said, tossing it over to Lucy. "I was on the decoration committee for the George Washington dinner tonight," he explained to the doctor. "I ran round to give a look at things."

Lucy opened her parcel. She saw a little wooden hatchet to which was attached a shining red cherry. The doctor glanced at it with a smile.

"I see," he spoke to Lucy's father, but she listened, "that the comic papers are beginning to make sport

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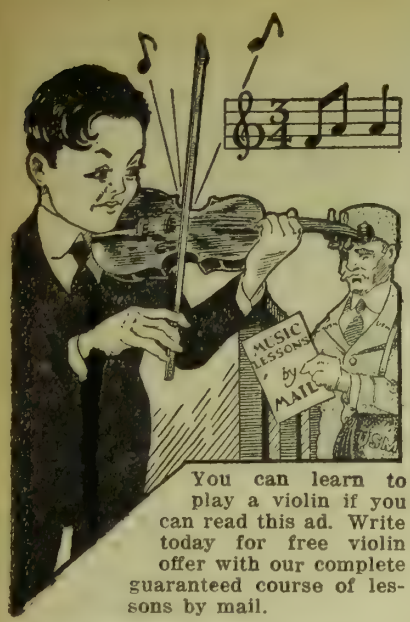

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WRITE TODAY

of these tokens of our classic story, but for my part I hope that every 22d of February will bring to the young people of this land some reminder of the boy who didn't lie!"

Then Lucy spoke quickly:

"Doctor! Father! I did! I didn't tell all the truth; and I did go out, though the sun wasn't shining, to make the snow man's nose a better shape!"

When the doctor understood the whole situation, he said she might get up for supper as there was no fever, but her mother talked to her that night when all the others were in bed. Lucy never forgot the talk.

"And when"—this was how mother finished—"when judges want to get at the right of a matter, that they may do justice, they tell the witness to speak 'the truth, the whole truth, and nothing but the truth.'"

"I'll always try," said Lucy, looking at her wooden hatchet.—Christian Register.

TWO DELICIOUS FROSTINGS.

Orange Frosting.—One cup powdered sugar, piece of butter the size of a walnut, creamed together; two tablespoons orange juice, enough milk to stir, then beat well until smooth enough to spread. This requires no cooking.

Caramel Frosting.—One cup light brown sugar, 3 tablespoons butter, 3 tablespoons cream. Cook very slowly until a jelly consistency, beat until ready to spread, add vanilla and spread rapidly.

FELL INTO FORTUNE.

"Sure, it's Mike that's the lucky man."

"How's that?"

"Why, he just took out an insurance policy for ten thousand dollars and the very next day he fell off the bridge and got drowned in the river."

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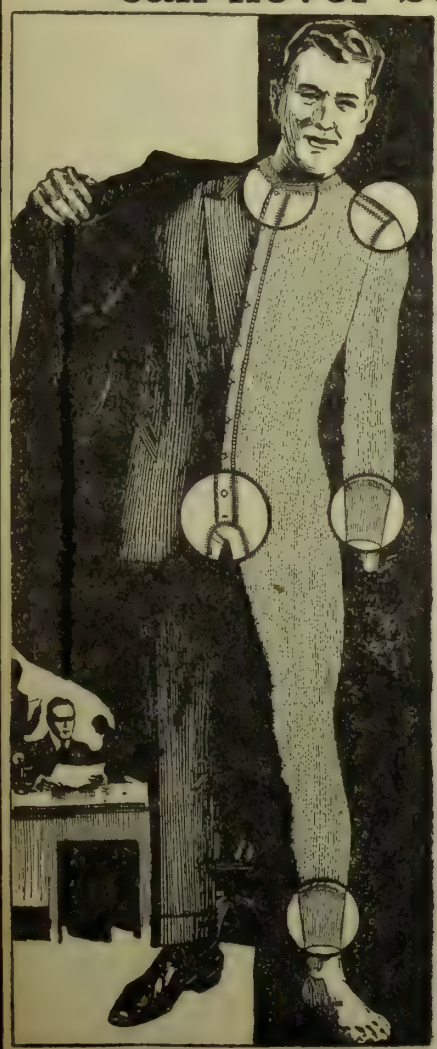

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THE MARKET REPORTS

SAN FRANCISCO.

San Francisco, October 6, 1920.

WHEAT.

Recent downward price revisions on the Chicago market are not having any effect on the local market and the trading here is of a negligible quantity. Local prices are the same. It is expected, however, that lower prices will be quoted next week.

Wheat ..... $3.90@4.00

OATS

There is no demand for oats and offerings are few. The oats market continues weaker than all other grains.

Red Feed, ctl. ..... $2.65@2.90

BARLEY.

With very little spot trading, buyers are offering $1.90 to $2.00, with no offers to sell. Although more samples are being shown recently actual sales are few.

Feed Barley, ctl. ..... $2.20@2 30

CORN.

There is no corn on the market and no offerings of the new crop yet. Quotations are the same

Egyptian, white ..... Nominal
do, brown ..... $3.40@3.75
California ..... $3.80@3.85

FEEDSTUFFS.

The market is in an unsatisfactory condition for both buyers and sellers. Inactivity prevails with a few quotations reduced slightly in price. No. 1 middlings are firm at $80, but offerings are scarce and sales of limited quantities.

Rolled Barley ..... $46.00@48.00
Rolled Oats ..... $50.00@55.00
Alfalfa Products ..... $45.00@52.00
Cracked Corn ..... $80.00@81.00

HAY.

Trading in the local hay market is almost at a total standstill. Prices are still quoted the same because of the very limited number of sales of small quantities. Hay receipts for the past week were 1549 tons. Receipts for the week previous were 1136 tons Concessions are reported in a few instances, especially in the country districts, where sales have also been light. Prices quoted are f. o. b. cars San Francisco, less $1.00 per ton for commission charges. Buyers are still holding off and it is thought they will not buy for some time unless price reductions take place. The unsettled condition prevailing in the grain and other markets is causing havoc with the hay market. Farmers seem equally stubborn in regard to selling at even present prices, claiming that cost of production and a fair profit cannot be met at these prices

Wheat, hay new ..... $26@28.00
Tame, oat new ..... 23@25.00
Wild oat new ..... 17@19.90
Barley ..... 17@20.00
Alfalfa 2nd cutting ..... 21@25.00

RICE.

Prices are lower than last week, but the market is steady. The firm demand prevailing is expected to continue

California fancy (choice $9.50) $7.25
do, choice $6.90
Southern Honduras long grain $12.00
China, No. 1, double mat $10.25
Blue Rose, fancy ..... $ 9.75
Fancy Head, bulk (Philips & Co) $12.00
California Japanese, No. 1 ..... $ 7.25
do, No 2 ..... $ 6.90

FRESH FRUITS.

(Wholesaile prices paid by commission houses.)

Apples are plentiful with an excellent market. Several new grades are on the market. Plums and pears are scarce and are moving well. Prices have gone up on peaches, which are moving slowly in the face of a brisk demand. Large boxes of peaches ar selling at $2.75. Grape receipts have been extra heavy. Prices are the same but declines are expected. There is still a good demand for berries and an increased activity in the market for strawberries and raspberries is noted. Strawberry prices have advanced over last week's figure. Watermelons are about finished; the last shipments will arrive this week probably. Persian melon receipts have been very light this week with a brisk demand. Price advances are expected. Cantaloupe receipts have been big with more expected. Cantaloupe prices are lower.

Apples: Wagner's $2.00
do, Spitzenberg ..... $2.50@2.75
do, Jonathan ..... $2.00@2.50
do, Gravenstein, fancy ..... $1.75@2 00
do, Bellflowers ..... $1.35@1.65
do, Rhode Island Greenings ..... $1.50@1.75
do, Virginia Greenings ..... $2.00@2.75
Plums ..... $1.25@2.00
Peaches, 4 baskets ..... $1.50@1.75
Pears ..... $2.00@4.00
Strawberries, 6 12-oz. boxes ..... $1.15@1.25
do, 6 8-oz. boxes, drawer ..... 90c@1.00
Blackberries, drawer, 12 oz. draw ..... 50@60c
Raspberries, drawer ..... 70c@85c
do, 8-oz boxes ..... 30c@40c
do, 8-oz. boxes ..... 40@50c
Cantaloupes, Standard ..... $1.50@2.00
do, Flats ..... 50@75c
Watermelon, lb. ..... 1@1¼c
Persian Melons, lb. ..... 2@3c
Grapes, large box ..... $2.00@3.50
do, crates ..... $1.50@3.00

POULTRY.

The market is firm and all grades are coming in well All grades are moving well with no rush. Turkeys are scarce and very few squabs are arriving. Prices are up on squabs and Leghorns.

Broilers, small ..... 50@53c
do, large ..... 47@50c
Hens, mixed color ..... 37@38c
do Leghorns ..... 25@33c
Roosters, young ..... 38@40c
do, old ..... 20@22c
Fryers ..... 40@44c
Squabs ..... 60@70c
Geese ..... 25@30c
Ducks ..... 25@30c
do, old 25c
Belgian Hare, live ..... 18@22c
do, dressed ..... 22@25c
Jack Rabbits ..... Nominal
Turkeys, young, large, lb. ..... 50@55c
do, old ..... 50@55c
do, dressed, lb. 60c

BUTTER.

The opening of the market was depressed and continued easy. Numerous condensery plants have closed in the East, but a shortage [illegible] outlook is not encouraging and very little of that grade is being shipped. The market closed firm on the better grades with a slight advance in price for extra. Danish butter is being used in the East in place of "Centralized"

	Thu.	Fri.	Sat.	Mon.	Tu.	Wed.
Extra	63	63½	..	64	64½	64
Prime 1sts	58	57½	..	58½	58½	58

CHEESE.

The market opened this week with a light demand and quiet trading with heavy arrivals from Oregon and Idaho. Trading continued quiet and but little buying interest was shown until the close of the week when unusual activity prevailed While Wednesday's prices remained unchanged, a much firmer feeling prevailed and indications pointed to advances.

Califoria Flats, fancy 31c
do, Firsts ..... Nominal
Oregon Triplets 26½c
Oregon Thirds 32½c

EGGS.

Eggs are scarce on the local market, which is firm, because shipping of large quantities East throughout the week has continued. Pullets are not quite so firm and there is no shipping of that grade. All egg receipts have been light and are expected to be lighter this week.

	Thu.	Fri.	Sat.	Mon.	Tu.	Wed.
Extra	74½	74	..	76½	78½	82½
Ex. Pullets	61	61	..	61	61½	62
Dirties	57½	61	..	62	62½	62½
Undersized	48	48	..	49	50	50

HONEY

The market is weak and receipts are arriving in large quantities. There have been very few inquiries and the honey is not moving. Prices have declined and lower quotations are expected for next week with the falling sugar market.

POTATOES, ONIONS, ETC.

(Wholesale prices quoted by commission houses.)

Potato and onion prices are the same and receipts have been good with an ordinary market. Cucumbers have gone up and all vegetables are arriving well.

Turnips ..... $1.25@1 50
Peas, Halfmoon ..... 12@13c
Beans, wax, lb. ..... 5@6c
do, green, lb. ..... 7@8c
Carrots, per sack ..... $1.25@1.50
Green Corn, sack ..... $2 50@3.00
Lettuce, local, doz. ..... 25@30c
Cucumbers, Alameda, lug box ..... 75c@1 00
Tomatoes, Alameda, large box ..... 75c@1.50
Rhubarb, Strawberry, box 40 lbs $1.50@2.00
Summer Squash, box 35-40 lbs. ..... 57@75c
Egg Plant, box ..... 50@75c
Potatoes, New River, cwt. ..... $2.25@2.50
Onions, yellow, sack ..... 85@1.00
do, Red ..... 75c@85c
Green Onions, box, 25 lbs ..... $1.25@1.50

BEANS.

The market is still very weak and prices have generally fallen with a big drop in Bayos Further declines are likely.

(1920 Crop.)

Bayos ..... $8.25@8.50
Blackeyes ..... $4.75@5.00
Cranberries ..... $6.00@6.25
Red Mexican ..... $8.75@8 00
Pinks ..... $5.60@5.75
Large Whites ..... $4.75@5.00
Small Whites ..... $4.75@5.00
Limas, S. F. prices ..... $8 25@8.50
do, Baby, S. F. prices ..... $7.75@8.00

DRIED FRUITS.

Prices are quoted the same and trading has been reduced to a minimum.

Apricots.

Extra fancy Moorpark lb. 30c
Fancy Moorpark, lb 23c

Growers' Quality.

Growers' quality—Fancy, lb. 26½c
do, lb. 24½c
do, Choice lb. 22½c
do, Slabs, lb. 20c
do, Standards, lb. 18c

Raisins—The following prices have been established as the opening prices of the California Associated Raisin Company for the 1920 crop of raisins.

Muscat, Sun Maid, seeded, pkg, 36-16s .. 21c
do, Fancy 36-16s 21c; 48-12s 16¼c
Bulk, seeded, Baker's Sun Maid, 25-lb. bx, 20c
do, Fancy Sun Maid 25-lb. boxes 20½c
Loose, 1-crown, recleaned lb. 20c
do, 4-crown, recleaned, lb. 24c
Layers, 3-crown, flat pack, 5-lb. box .. $1.30
do, 3-crown, flat pack, 5-lb. box .. $1.30
Clusters, 4-crown, flat pack, 20-lb. box $4.70
do, 4-crown, flat pack, 5-lb. box .. $1.40
Sun Maid, 100-lb boxes $21.00
Thompson Seedless, Sun Maid, recleaned, lb. 20½c
do, Sun Maid, bakers, lb. 21½c
Sultanas Sun Maid, recleaned, lb. 20½c
do Sweat-box, layers lb. 19c

..Figs—Following prices have been established as the opening prices for the 1920 crop of dried figs.

White Adriatic, 12-10 oz. $1.25; fancy, $1.30
do, 12-8 oz. ..... $2.00; fancy, $2 05
do, 50-6 oz. ..... $3.10; fancy, $3.20
do, 70-4 oz. ..... $3.30; fancy, $3.40
Adriatic, bulk, Standard, 50-lb. boxes, lb. 9c
do, bulk, fancy, 50-lb. boxes, lb. 13c
Black Mission, Standard, 50-lb. boxes, lb. 7c
do, Fancy, 50-lb. boxes, lb. 12c
Prices f. o. b. Fresno.

Peaches.—Following prices have been established as the opening prices of the California Peach Growers for the crop of dried peaches.

Yellows, Standard, lb 15½c
do, Fancy, lb. 17½c
do, Extra fancy, lb. 18½c
do, Slabs, lb. 15¼c
Muirs, Standard lb. 15¾c
do, Fancy, lb. 18¼c
do, Extra fancy, lb. 19½c
The above prices are bulk basis.

Shipment: September, October, November. Seller's option. The above prices are guaranteed against Association decline until January 1, 1921.

Prunes—Following prices have been established as the opening prices of the California Prune and Apricot Growers, Inc., for the 1920 crop of Prunes.

Sunsweet Brand, 20-30s, flat, lb. 25c
do, 30-40s, bulk, lb. 16c
do 40-50s, bulk, lb. 15c
do, 50-60s, bulk, lb. 12c
do, 60-70s, bulk, lb. 11c
do, 70-80s, bulk, lb. 10c
do, 80-90s, bulk lb. 9c
do, 90-100s, bulk, lb. 8½c

First half September shipment, ½c premium; last half September shipment, ¼c premium. The above prices apply only to contracts already issued

CALIFORNIA FARM BUREAU MARKETING ASS'N.

Report of Sale.

Visalia, September 28, 1920: 71, 214, $16.05, Joe D. Biddle; 2, 300, $15.55, Joe D. Biddle; 81, 198, $15.80, E. B. Miller; 77, 199, $15.65, E. B. Miller; 1, 510, $12.65, E. B. Miller; 10, 216, $13.65, E. B. Miller; 48, 154, $14.60, Joe D. Biddle; 25, 225, $15 60, Joe D. Biddle; 12, 270, $13.60, Joe D. Biddle. Four cars, 34 consignors.

Tulare, September 28, 1920: 77, 189, $15.75, Virden Packing Co.; 7, 146, $14.75, Virden Packing Co.; 88, 193, $15.50, E. B. Miller; 50, 138, $14.00; J. C. Kendrick; 40, 256, $14.75, Virden Packing Co.; 86, 196, $15.65, Virden Packing Co.; 13, 339, $12.75, Virden Packing Co.; 11, 306, $13.75, Virden Packing Co. Five cars, 17 consignors.

Hanford, September 30, 1920: 72, 211, $16.00, Joe D. Biddle; 79, 195, $15.70, E. B. Miller; 13, 391, $14.00, Joe D. Biddle; 5, 106, $16.00, C. A. Kimble; 5, 306, $15.20, E. B. Miller Two cars, 24 consignors

Wasco, October 2, 1920: 82, 196, $15.80, A. J. McCoombs; 17, 304, $10.25, Bakersfield Market; 27, 174, $15.60, Bakersfield Market; 11, 152, $15.60, Bakersfield Market; 45, 203, $15.60, Bakersfield Market. Two cars, 15 consignors.

Special Livestock Market Report

San Francisco, October 6, 1920.

CATTLE—There is a scarcity of good beef cattle. Desirable stock will command a premium. Other grades are in liberal supply, both by purchase and consignments. Buyers are not laying in any more stock than they are in need of from day to day, so to speak. Very few slaughterers have anything like a normal supply of cattle on hand or contracted for, which shows the market to be of a waiting nature.

Steers, No. 1, 1000-1200 lbs. ..... 9 @ 9½c
do, 1200-1400 ..... 8½@ 9c
do, 2nd quality ..... 7 @ 7½c
do, thin ..... 5½@ 6c
Cows and Heifers, No. 1 ..... 7½@ 8c
do, 2nd quality ..... 6 @ 7c
do, thin ..... 3 @ 4c
Bulls and Stags, good ..... 4½@ 5½c
do, fair ..... 3½@ 4c
Calves, lightweight ..... 10 @ 11c
do, medium ..... 8 @ 9c
do, heavy ..... 7 @ 8c

SHEEP AND LAMBS—There is but little activity in the mutton market as the supply seems to be equal to the demand. Ewes are practically a drug on the market, as the consumers seem to want nothing but the best, therefore lambs are more or less in demand.

Lambs, milk ..... 9 @10c
do, yearling ..... 7½@ 8c
Sheep, wethers ..... 7 @ 7½c
do, ewes ..... 5½@ 6c

HOGS—Receipts of hogs show a marked increase for the week and as a result prices were with difficulty maintained. It is felt among the buyers that as long as the northern market continues to pay a premium for [illegible] of its going lower.

Hard, fat, grain-fed, 100-150 lbs. 15½c
do, 150-225 lbs. 16½c
do, 225-300 lbs. 16c
do, 300-400 lbs. 15c

Los Angeles, October 5, 1920.

CATTLE—The market here remains much the same as a week ago. Offerings continue good both of steers and cows Steers in very good demand, that is good fat ones. Poor and medium dull. Cows still slow sale and weak. Yet they are selling very well compared with the markets of the Central West.

Per cwt. f. o. b., Los Angeles:

Beef steers, 1000@1100 lbs. .. $9.00@10.00
Prime cows and heifers ..... $8.00@ 8.50
Good cows and heifers ..... $7.00@ 7.50
Canners ..... $4.00@ 4.50

HOGS—A steady and firm market continues for all offerings Receipts light—only about enough to supply the fresh meat trade, and in consequence prices are holding up well in the face of lower markets East.

Per cwt. f. o. b. Los Angeles.

Heavy, averag'g 275@350 lbs. $12.00@12.50
do, 225@275 lbs ..... $14.00@14.50
Light ..... $15.50@16.50

Rough docked 20 lbs. piggy sows 40 lbs. and stags 40 per cent.

SHEEP—Plenty are being offered and the tone of the market weak. Lambs and yearlings in very good demand at quotations. Wethers and ewes, however, still dull. Killers taking very few even at present low prices.

Prime wethers ..... $6.00@ 7.00
Yearlings ..... $6.00@ 7.00
Prime ewes ..... $5.00@ 6.00
Lambs ..... $8.00@10.00

LOS ANGELES

Los Angeles, October 5, 1920

BUTTER.

While the demand was hardly so urgent the past week as a while back, a steady market was had, and the receipts, which were only fair, were pretty well taken care of by the trade. The high prices turned many consumers to the use of butter substitutes. Arrivals for the week, 292,800 pounds. We quote:

California extra creamery 65c
do, prime first 64c
do, first 63c

EGGS.

There was a further and sharp upward movement in this market the past week. Receipts light; by rail for the week, only 404 cases. The falling off in the supply and holding up of the demand and firm markets elsewhere caused an advance on the Exchange of 5c on extras and case count and 1c on pullets. We quote:

Fresh ranch, extras 75c
do, case count 69c
do, pullets 60c

POULTRY.

Market steady and demand fair for most offerings. Broilers are coming in fairly well and demand good for what arriving. The same may be said of friers. Not many hens arriving and market firm and demand very good for what coming in. Ducks steady and in very fair demand. Turkeys continue scarce, firm and in demand.

Broilers, 1 to 1½ lbs. 38c
do 1½ to 1¾ lbs. 42c
Friers, 2 to 3 lbs. 34c
Hens ..... 29@35c
Roosters (soft bone) 3 lbs. and up 38c
Ducks ..... 24@25c
Turkeys ..... 40@44c
Geese 25c

VEGETABLES.

There was a more quiet tone to this market the past week. With a big potato crop and the tendency of everything being downward, growers were selling more freely and there was a rush of northern potatoes on the market and prices broke sharply during the week and sales slow at the decline. No one seemed to stock up even at the lower prices and a number of cars had to be carried over unsold at the close of each day. Onions, too, were dull and weak, buyers only taking what needed to do them from day to day, but prices unchanged. Sweet potatoes dull and lower. Peas lower and in fair demand String beans steady and selling fairly Tomatoes in fair demand but a little lower. Summer squash and cucumbers steady and demand fair. Lettuce in very good demand at quotations. Green peppers coming in freely and sale slow. Prices, however show no change. Some cauliflower arriving and meeting with a fair demand. We quote from growers.

Potatoes, local, cwt. ..... $1.80@2.00
do, Northern cwt. ..... $2.25@2.50
Sweet Potatoes, lb. ..... 3@3½c
Cauliflower, large, crate ..... $2.75@3.00
Onions, Stockton, white, cwt. ..... $1.90@2.00
do yellow, cwt. ..... $1.25@1.50
do, Australian Brown, cwt. .. $1.25@1.40
do local crate ..... 60@72c
Lettuce, crate ..... 90@1.15
Rhubarb, per 30-lb. box ..... 80@1.00
Peas, lb. ..... 12@14c
Carrots, bunches ..... 30@35c
Summer Squash, local, lug ..... 50c@1.00
String Beans, green, lb. ..... 8@9c
do, wax, lb. ..... 8@9c
do, Kentucky, lb. ..... 9@10c
Cucumbers, lug ..... 50@$1.00
Tomatoes, home-grown, No. 1 lug ..... 60@70c
do, No. 2 ..... 25@35c
Bell Peppers, lb. ..... 3@4c
do, Chile, lb ..... 4@5c

BEANS.

The market continues much demoralized. There was absolutely nothing doing the past week. Eastern and export buyers still refuse to enter the market. It is said that Michigan navy beans are being offered on the Eastern markets as low as 5c and no buyers. Some Chilian beans are also being received in this country and are being offered very low. Prices below are purely nominal. What few taken by the consuming trade are bringing quotations, but no round lots can be moved at any price.

Limas, per cwt $10.00
Large white, per cwt ..... $5.25@5.50
Small white, per cwt ..... $5.25@5.50
Pink, cwt. $7.00
Blackeyes, cwt. ..... $6.75@7.00

FRUITS.

A fair market was had the past week for most arrival. Receipts were not so good and prices in consequence were generally steady. Apples and grapes made up most of the offerings and brought steady prices and were in very fair demand Peaches were slow sale but unchanged. Offerings quite good. Figs continue dull with an oversupply coming in. Black Dimond plums and nectarines are still coming in in a small way and selling fairly at quotations. Pears steady and selling fairly. We quote from growers.

Plums, Black, Dimond, lb. ..... 8@10c
Nectarines lb ..... 8@9c
Peaches, Freestones, lb. ..... 5@6c
do, Clings, lb. ..... 6@7c
Figs, lb. ..... 3@7c
Crabapples, lb. ..... 4@5c
Grapes, Malaga, lb. ..... 6@7½c
do, Muscat, lb. ..... 6@7½c
do, Conchons, lb. ..... 7@8c
do, Tokays, lb. ..... 7@8c
Apples: Skinner's Seedlings, packed box ..... $2.25@2.50
do, Gravensteins, packed box $2.25@2.50
do, Bellflowers, 4 tier ..... $1.50@1.65
do, Delicious, lb. ..... 5@6c
Pears, lb. ..... 5@9c

MELONS.

The melon season is fast drawing to a close. Receipts of cantaloupes the past week were light and the quality of arrivals only poor to fair. Hence they sold slowly. What melons, however, brought steady prices. Honey Dew melons were also slow sale but what sold brought old prices. Watermelons lower and demand only fair, the cooler weather checking consumption. Casabas steady and selling fairly. After this week we shall drop quotations. We quote from growers:

Home-grown, Tip-top, standard	$1.50@1.65
do, Rocky Ford, standard	$1.75@2.00
do, Pineapple, standard	$1.50@1.65
do, Paul Rose, standard	$1.75@2.00
Honey Dew, standard crate	$1.50@1.75
Casabas, lb.	1@1½c
Watermelons, lb.	¾@1c

HAY.

The break in prices last week failed to improve the demand. Buyers the past week holding back and only taking such lots as needed to do them from day to day. Receipts were light, but at the same time equal to the restricted demand. The market for alfalfa as well as grain hay being extremely dull.

Barley hay, ton	$21.00@23.00
Oat hay, ton	$24.00@27.00
Alfalfa, Northern, ton	$25.00@27.00
Alfalfa, local ton	$28.00@32.00
Straw ton	$ 9.00@10.00

SPECIAL DECIDUOUS REPORT.

Sacramento, October 6 1920.

With the exception of grapes very little is being done in the movement of deciduous fruits. There are a few fall pears being shipped from the Santa Clara district as well as the foothill districts of Placer county. Grapes that are shipped under refrigeration and arriving in good condition are commanding fabulous prices. A mixed car of grapes from Mayhews sold in Chicago, October 4, grossing $1,528. Lady Fingers selling at $5.50 per crate and Tokays $3.55 to $4.50 per crate A mixed car of Malagas and Thompsons from Sanger sold same date in New York grossing $3,203. A car of wine grapes from Fresno, of the Le Noir variety, grossed $3,699, a car of Zinfandels from Weston grossed $5,512, and a car of Alacantas grossed $5,512. Florin had a number of cars grossed from $2,300 to $4,000. Lodi, Reedley, Coffing, Clotho, Woodbridge, Youngstown, Hooper, Folsom and Ceres can boast of equally as good sales. Placerville makes the season's record on Bartlett pears, selling in New York September 30th at $8 per box. The sale of the season, as far as we have been able to learn, was the sale in New York October 4 of a car of half-boxes of fall pears shipped by the Pioneer Fruit Co. from Santa Clara, which grossed $2,496. Some marks of Comice sold at $4.63, equal to $9.26 for full boxes.

SPECIAL CITRUS REPORT.

Los Angeles, September 6, 1920.

The market outside of the large auction centers shows little interest in oranges at this time and as a result diversions to auction markets have been heavy. This has resulted in heavy offerings and a generally lower market. F. o. b. quotations remain on a basis of $6.25 to $7.25 per box. There are no new developments as regards the new crop of oranges now maturing on the trees. Barring mishaps of any kind between now and harvest time, the outlook is for a record crop. The general attitude is better in the lemon market. F. o. b. quotations are on a basis of $2.75 to $3.25 per box.

MARKET COMMENT.

Meat Market a Chinese Puzzle.

"During the world war every line of industry sought increased credit, and over-borrowed. Cattle feeders and operators are, as a rule, heavy borrowers of money. The losses which the cattle industry has suffered since the summer of 1919 have been enormous. One thing certain; the livestock industry has not shared in the general prosperity of the country. Banks and cattle loan companies are not giving their customers much encouragement or assurance as to the extent to which credit will be granted, but they do assure their patrons that higher interest rates will prevail on all loans. When from 8 to 10 percent of the proceeds from one feedlot on herd goes to meet interest charges the seriousness of the situation is apparent."

The foregoing in an excerpt from an article by Jno. G. Inboden, in The Breeders Gazette. A summary of the Eastern conditions may be found in the following: "All prime bullocks have declined 50 cents to $1 per cwt., during the past week; hogs after a continuous advance of more than $3 per cwt. in as many weeks have experienced a logical reaction, and the live muton trade is still wrestling with the vicissitudes of a dead wool market and heavy imports of frozen New Zealand lamb. Feeder trade, both in cattle and sheep, has shown signs of revival, but the countrywide movement is still below normal, maturing of the corn crop not having stimulated interest in beef making to the extent expected. Beef gathering is in full swing in the southwest and is gaining headway in the northwest. October promising heavy movement of grass cattle from everywhere, but the western sheep run has already been sharpely contracted, insuring a light supply of feeders. The wool trade is professing optimism, but little business is actually being transacted. Much of the wool manufacturing machinery is still idle, with little prospect of resumption until after election as the goods market is still unsettled. Boston is selling in small lots of territory half-blood in original bags at $1.30@$1.40, clear basis, equivalent to 32@35 cents in the grease.

Hay Market Inactive.

The general feeling continues that the hay market is not stable and that prices should decline. Even the fact that the fields are practically cleaned up and everything under cover and that storage, and warehouse charges must now be figured against all hay seems to have no difference in the attitude of the buyer and consumer. However, there is a fixed opinion that the market will be weakened from the fact that country trading has been practically at a stand-still. Farmers are endeavoring to sell at prices that will cover expense of warehousing and with their ideas somewhat higher and the buyers ideas very much lower, the result has been no business of any kind. There is apparently a normal supply of hay throughout the state. Alfalfa shares in the general depression. The present slump in feed grains, December corn, around the 85 cent mark and the present unsteady condition of the wheat market, that has dropped below $2, the lowest since 1914, naturally exerts a sympathetic influence over the hay market. In addition to this the general cutting, all along the line, in manufactured commodities has a tendacy to strengthen a sentiment that all commodities are due to come down. As we view it, a summary of the situation is, the present condition is such that it is practically impossible to predict even the immediate future, however, the general impression is that for awhile at least the market will maintain its present status even though trading has been reduced to a minimum.

Last Minute Bean Crop Report.

According to the California Bean Growers' Association, the last minute advices from the various districts in the state as to crop conditions shows practically little change over a month ago. In the Northern District, comprising that section north of Sacramento, there has been some frost damage, estimated at about 10 per cent. Sacramento District conditions have shown little change. Cool weather has continued during the month, causing late beans to load up heavily. Stockton District reports that beans on the island, west of Stockton, are practically as green as ever. In the Blackeye District—Modesto and Turlock— cutting and threshing are going on. It is expected that in the Santa Maria District the crop will be harvested earlier than usual, 50 per cent already threshed. The yield thus far runs from four to fourteen sacks to the acre. Cutting is well under way in the Lompoc District. This section is expected to yield 40,000 to 50,000 sacks of all varieties.

Losses in Wine Grapes.

If reports are true the great flurry in the wine grape market has come to a sad ending—financially. Heavy losses are reported to have been made in the wine grape deal by many shippers. From the beginning of shipments we were of the opinion that there would be breakers ahead, as the grapes were being shipped too green which of course acted against them for wine purposes. Many carloads have arrived at destination and rejected by purchasers on account of the grapes showing a low sugar content, as a natural consequence this fruit was sold for freight charges. As much as several hundred dollars per car has been lost on grapes of this character.

The English Apple Market.

The United States Agriculaural Trade Commission in London reports arrivals at Liverpool of 1583 boxes of California Gravensteins selling at $5.76 to $6.84 per box. New York Duchess of Oldenburg, Maiden Blush and Gravensteins ranged $12.60 to $16.20 per barrel.

Simplifying Alfalfa Hay Grades.

Only four grades of alfalfa are recognized by the Alfalfa Growers of Cal., Inc. These include choice dairy, No. 1 dairy, standard, stockfeed (including foxtail, etc.). In the multitude of commercial grades, and the indistinct lines between them, is a frequently-used opportunity of buying on one grade and then cutting prices for delivery on the ground that the hay delivered is not up to the grade specified.

Sales Dates.

Oct. 20th—E. Peterposten, Holsteins, Modesto.

Oct. 19-21—Rosamines Ranch, Holsteins, Durocs, Percherons, Riverside.

Oct. 20th — Kings County Poland-China Breeders' Consignment, Hanford.

Nov. 4th — Pacific Coast Hereford Breeders' Association, Herefords, Sacramento.

Nov. 5th—John H. Cazier & Co., Herefords. Sacramento.

Nov. 6th—J. W. Benoit, Holsteins, Modesto.

Nov. 6th—H. M. Barngrover, Herefords, Sacramento.

Six cars of Eastern poultry arrived in San Francisco last week. The heavy shipment caused a slump in the market of heavy hens and roosters of which the shipment mostly consisted.

Classified Advertisements.

Rate, 4c. per word. Cash must accompany all orders.

COUNTRY LANDS.

EQUIPPED FRUIT FARM
11½ Acres Only $7250

In high grade commercial orchard section where property held $900 acre; improved road, close depot; 4½ acres commercial orchard, remainder rich soil, heavy alfalfa, long staple cotton; 6-room bungalow, magnificent shade trees, porches, piped water, electricity, cement-floor poultry house, wired runs for 1500 birds, power house with tank and 12-inch case well; quick buyer gets all, including good horse, poultry, farming tools, implements, only $7250, part cash, balance easy terms. Details this and money-making lemon grove, page 91, Strout's Big New Illustrated Catalog Farm Bargains 33 States. Just out. Copy free. STROUT FARM AGENCY, 503FA Wright-Callender Bldg., Los Angeles, Calif.

FOR SALE — Hollister Ranch on Battle Creek, Shasta county, Cal. 316 A—80 A. best bottom land; 50 A. upland. Gravity ditches, perfect sub-irrigation system. Riparian water rights since 1860, together with deed to 666 2-3 inches water additionally. All equipment, horses, mules implements. Face value any issue. U. S. Liberty bonds accepted in full payment. W. W. Hollister, El Nido Rancho, Route A, Box 85, Anderson, Cal.

450 ACRES of that wonderful land in the Linden District east of Stockton; 320 acres splendid bottom land; 130 acres fine grain land; suitable improvements; a splendid proposition for alfalfa, cherries, or walnuts. Price, $90,000; one-third cash will handle it. BALDWIN & HOWELL, 318 Kearny St., San Francisco.

FOR SALE—46 A. alfalfa ranch, good as any in State. Part cash, balance 5 years. Ranch will pay out in five years as dairy. Will sell 60 to 75 tons alfalfa hay with ranch. You must see this place to appreciate it. Full set buildings on ranch. If interested, call or write John Salaberry, Chowchilla, Cal.

FOR SALE—Grape land—one thousand per cent profit in three years—frostless citrus land; walnut and almond land; dairying, hogs, poultry. Plenty easy water. Ideal climate. Close to town—State highway. $200.00 an acre. Why pay more for less value. C. E. Howland, Owner, Fallbrook, Cal.

MEXICAN LANDS—400 acres in American colony near Hermosillo and Southern Pacific Railway. Rich river bottom land; will grow anything; two crops each year. Investigate this opportunity to start big farming at small cost. Owner, 329 Ochsner Bldg., Sacramento, Cal.

FOR SALE—Upper Sacramento Valley, 300 to 800 acres of our grain ranch, especially suited to almonds, olives, figs, grapes. Also other deciduous or citrus fruits. Water easily developed or Iron Canyon coming. A snap for quick sale, $50.00 per A. Good oil prospects. Box 472, Red Bluff, Calif.

FOR RENT — 5000 acre, good stock range in Monterey county. Well fenced. Plenty water. Good buildings. References required. 2429 Martinez Ave., Berkeley, Cal.

WANT TO HEAR from party having farm for sale; give particulars and lowest price. John J. Black, Press St., Chippewa Falls, Wisconsin.

MISCELLANEOUS.

ORCHARD, VINEYARD superintendent; University graduate, best scientific training, experience. Married, two young children. Exceptional references for character, business ability. Will take charge of good property, straight salary or part salary and opportunity to acquire interest. Address, Manager, Care Rural Press.

TO LEASE or on shares, large prune or apricot ranch by experienced party. Louis L. Peebles, Los Gatos, Cal.

REMANUFACTURED PIPE
All sizes standard pipe and wrought iron screw casing. All kinds of fittings. Guaranteed good as new. Write for prices. Weissbaum Pipe Works, 160 Eleventh street, San Francisco.

BERRIES—We can furnish you with first-class plants of all leading varieties. Now is the time to order. Plants will be scarce later. Send for Price List. M. J. Moniz, Berry Specialist, Sebastopol, Cal.

WANTED—A young married man (American) for foreman on ranch in Southern California. Salary and per cent of net receipts paid. Address Miss A. Gorrill, Ventura, Ventura Co., Cal.

WANTED—Genuine J. P. Pierce grapevines and cuttings in small or large quantities. Write at once how many and price. Shipped in January. A. S. Caldwell, Columbus, North Carolina.

ALL SIZES OF PIPE and screw casing, both new and second-hand, dipped and undipped. Guaranteed. Prices right. Shecter Pipe Works, 304 Howard St., San Francisco.

RELIABLE CABBAGE SEEDS—I grow them. You want them. Let's get together. Write for special offer on what you need. Isaac F. Tillinghast, 32 Podel St., Santa Rosa.

APPLES FROM GROWERS—Bulk pack. Bellflowers, $1.50 per box; No. 2 grades, $1.10; Newtowns, $1.75; No. 2, $1.25. Edward A. Hall, Rt. 1, Box 39, Watsonville, Cal.

FOR SALE—Two Monitor Bean Separators, size 5-E; condition as good as new. Call or write, California Almond Growers' Exchange, 18th C Street, Sacramento, Calif.

FOR LEASE — 360 A. mountain ranch, Santa Cruz Co. Buildings, stock and tools. Share or cash. F. B. Plant, 178 Kempton Ave., Oakland.

FOR SALE—40 H. P. C. L. Best Tractor, 1 plow, 4-14, 1 Cutaway disk harrow, 1920 model. Ellis Rancho, Box 224, Gilroy, Cal.

CROLEY'S BALANCED HOG FEED—The cheapest feed to fatten hogs. Write Geo. H Croley, Townsend St., San Francisco, Calif.

WANTED TO OPERATE on shares or lease from 50 to 100 acres of grain land with implements. A. Hartoebben, Los Gatos, Cal.

FOR SALE — Mariout Barley Seed—clean and good quality, weighing over 100 lbs. per sack. J. D. Rowe & Sons, Davis.

FOR SALE—Ranare Raspberry plants. $75 per 1000. Address Otto Burmeister, Box 304B, R. A. Mountain View, Cal.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912.

OF PACIFIC RURAL PRESS, published weekly at San Francisco, Cal., for October 1 1920.

State of California)
City and County of San Francisco) ss.

Before me, a notary public in and for the State and county aforesaid, personally appeared Frank Honeywell, who, having been duly sworn according to law, deposes and says that he is the publisher of the PACIFIC RURAL PRESS, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a a daily paper, the circulation), etc., of the foresaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher, Frank Honeywell, San Francisco.

Editor and Managing Editor, E. J. Wickson, Berkeley, Cal.

Business Manager, Frank Honeywell, San Francisco.

2. That the owners are: (Give names and addresses of individual owners, or, if a corporation, give its name and the names and addresses of stockholders owning or holding 1 per cent or more of the total amunt of stock).

Frank Honeywell, San Francisco.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securites are: (If there are none, so state.) None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders ad security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for which such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the six months preceding the date shown above is— (This information is required from daily publications only).

FRANK HONEYWELL.

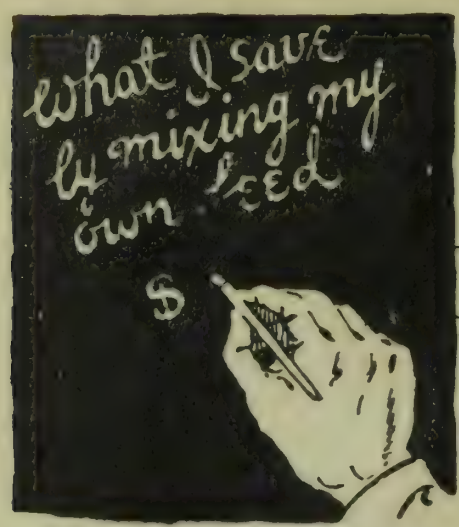
Sworn to and subscribed before me this 24th day of September, 1920.

(Seal) H. F. HOBSON.
(My commission expires June 26, 1922.)

Mariout Seed Barley

PURE UNIVERSITY FARM STOCK.
Clean, heavy, free from noxious weeds and smut.
Carload lots or less. Sample on request.

F. P. WRAY **Davis, California**



It may work out with the PEN

Out

Does it work out with the HEN

Perhaps you figure it this way: "Why should I buy mixed feed? I want to know what my hens eat. So, why not buy the separate ingredients and mix them myself? In this way I know just what goes into the mash. And I save the mixing charges, too!"

We'll admit—it sounds reasonable enough. But—at the end of the year when you scale up your profit-figures, how does it work out? Have you ever compared the results you get from hand-mixed feeds with the results other poultrymen are getting from a uniform, top-grade feed like SURELAY?

After all, the thing that counts is not how much you *think* you save by mixing your own feed—but what the hens think of the feed you give them and what they do with it. Egg-production is the test that tells! Egg-production is what makes many a feeder ask himself: "Just how cheap *are* cheap feeds?"

Seasoned poultrymen who have fussed with this feeding question will tell you that cheap feeds lessen the profits of every hen in the flock. Moreover, our large scale production enables us to manufacture and *sell* the finished feed lower than the average feeder can *buy* the ingredients—to say nothing of the cost and trouble of mixing.

Nor, for a moment, should you overlook this: no matter how careful you are—no matter what methods you use—you'll have to own up that hand-mixed feed is guesswork at the very best. Whereas, when you feed SURELAY, you *know* what you're feeding. You know that every batch contains exactly the same uniform proportion of food-values. Our daily laboratory tests (an advantage the individual feeder cannot have) take good care of that.

If you want to see for yourself why we, as manufacturers and millers, are in a position to mix a uniform quality-feed cheaper and better and quicker than you can—send for the new edition of our booklet, "Makes Hens Happy." Full of practical hints and profit-pointers! It is yours for the asking—simply fill in the coupon and mail today!

SURELAY

"A Sperry Product"

SPERRY PRODUCTS IN EVERY HOME SPERRY FLOUR

STOCK AND POULTRY FEED DEPT. **SPERRY FLOUR CO.** 601 ORIENT BLDG., SAN FRANCISCO

Please send me, without obligation, your booklet, "Makes Hens Happy."

Name _____ *Address* _____

VOL. C—No. 16 Fiftieth Year

THE PACIFIC RURAL PRESS

SAN FRANCISCO OCTOBER 16, 1920 LOS ANGELES

California State Lib 7-1-21

TWO of the Grand Champions at the Los Angeles Livestock Show. It is such animals as these, good enough to go anywhere and win, that is turning the eyes of the livestock world towards the Pacific Coast and adjoining states as the coming breeding ground of champions of the world.

LITTLE SWEETHEART

GRAND CHAMPION Shorthorn cow at the Los Angeles Livestock Show and State Fair this year. Grand champion all along the line last year. Owned, developed and exhibited by T. S. Glide of Davis.

BEAU BLANCHARD 76th

GRAND CHAMPION Hereford bull at the Los Angeles Livestock Show and the State Fair. He is owned by the Jno. H. Cazier and Sons Company of Wells, Nevada.

First—
Miss Shepherd sang: "In the Gloaming." The New Edison stood on the stage by her side.

Then—
She suddenly stopped singing. The New Edison took up her song, and continued it alone.

185 Times-No difference!

This test was made by Miss Betsy Lane Shepherd in 185 cities and towns of the United States and Canada. The 185 audiences aggregated more than a hundred thousand people. Each audience found itself absolutely unable to tell when Miss Shepherd was singing—and when the New Edison was RE-CREATING her voice—except by watching her lips.

This is a most phenomenal achievement. Merely one such comparison makes an extremely difficult test for a phonograph. Indeed, it is so difficult that no other phonograph or talking machine manufacturer dares to make this comparison.

Mr. Edison subjected the New Edison to more than 4000 such tests, with over 50 different artists, before more than four million people, because he wanted to prove that perfect Realism was an everyday performance with the New Edison.

What does this mean to you?

Test the power of this wonderful Realism on yourself!

WHAT is your musical hobby? What kind of vocal or instrumental music "gets" you most quickly?

Is it a sweet voiced soprano?—a soul stirring violin?—a jazzy orchestra?—or what?

If you'll tell your Edison dealer, he'll give you a wonderfully fascinating test—the "Personal Favorites" Realism Test. It will tell you something you've long wanted to know—whether the New Edison brings you those particular beauties and makes you feel all those fine emotions which you experience in listening to your favorite living artists.

THIS test is really a test of the power of the New Edison's Realism. Do you know what Realism is—what it does?

A most interesting demonstration of what the New Edison's Realism can do, took place at Dallas, Texas, on April 26th, 1920, where Miss Shepherd gave her 185th test.

Miss Shepherd, who is a famous concert soprano, stood beside the New Edison and started to sing:

"In the gloaming, oh! my darling—"

With a soft, rounded loveliness, the beloved melody filled the auditorium. Pulsing through its theme was the soul of a great artist. Its message, warm with understanding, old yet ever new, reached the hearts of the hushed listeners and sped their imaginations back to cherished memories.

It was the magic of music!

Suddenly Miss Shepherd's lips went absolutely still. But her lovely voice went smoothly on—

"—it was best to leave you thus—"

The audience was puzzled. Then it awoke. Miss Shepherd's voice was now coming from the New Edison—and no one had been able to tell the difference between the living voice and the RE-CREATED voice.

The power that enabled the New Edison completely to baffle this audience was its Realism.

Edison's Realism had put into the RE-CREATED music all the magic of the living voice with which Miss Shepherd charmed her listeners.

YOU love fine music. You want your home to enjoy it! You want your children to get its cultural benefits. But where you live may not be convenient to the opera and concert centres.

Mr. Edison has long appreciated your desire—your situation. Other music lovers were in the same position. So Mr. Edison concentrated his life's greatest effort upon perfecting the phonograph. He spent seven years and three million dollars in research work.

What he strove for, was recently told by Mr. Edison himself:

"The ordinary phonograph, as we have known it, falls somewhat short of conferring upon its owner all of the pleasure and benefits that can be derived from good music. The greatest shortcoming of the phonograph was its lack of Realism, and it is this shortcoming which I have sought to overcome. The result is a degree of Realism in our present phonograph which is baffling to even the most expert ears.

"I have been quoted as desiring to see a phonograph in every home. What I actually want to see in every American home is music, so realistic and so perfect in its rendition as to be an unending source of benefit and pleasure."

NOW you see what the New Edison's Realism is, and what it does. You're pretty certain that this Realism can bring the magic of music into your home. But Mr. Edison wants you to assure yourself on this point. He wants you to test the power of that Realism on yourself.

Watch for the advertisements of your local Edison dealer in your newspaper. See when he is ready to give the "Personal Favorites" Realism Test. Take the whole family along when you go to hear it.

If you prefer, write us direct and we'll send you a special ticket, addressed to your nearest Edison dealer. This will entitle you to have a private test.

The NEW EDISON
"The Phonograph with a Soul"

THOMAS A. EDISON, Inc.
Orange, N. J.

General Agricultural and Horticultural Review

AGRICULTURAL NOTES.

The cotton growers of Lindsey have organized an association.

W. E. Wance of Proberta, Tehama County, has 240 acres in rice that will have an average yield of 60 sacks to the acre.

The average of oats has been better than expected, and the state's production has been a little over 5,000,000 bushels.

The sweet potato crop of California falls down one point from what it was a month ago. The forecast is 1,208,000 bushels.

By popular subscription, the cotton growers of Tipton, Tulare County, have raised $6000 as a nucleus with which to erect a cotton gin.

The third quarterly convention of the Stanislaus County Farm Union will be held in Oakdale for two days beginning Friday, October 29.

T. Alexander of Pine Log, Tuolumne county marketed 700 crates of tomatoes from 3-4 acres of land that netted an average of $1.15 per crate of 20 pounds.

Eibe and Huffman of Willows, Glen County, have the largest rice crop in the county. It is estimated the yield will average 70 sacks per acre, for about 500 acres.

The state corn crop is estimated at 90 per cent of normal, which is seven points better than last year. On this basis the forecast of total production will be 3,240,000 bushels.

Bureau of Crop Estimates' report shows no change in the condition of sugar beets from that of September 1, being 87 per cent of a normal, compared with 68 last year.

Ten thousand persons, it is estimated, visited the Second Annual Farm Bureau Fair at Anderson, Shasta County last week. The fair was a success in every way.

Forty-five acres of the W. E. Bunker alfalfa ranch south of Newman, Stanislaus County have been sold to Fontes and Gonlart, dairmen, for upward of $1000 per acre.

Potatoes (Irish) crop of California is forecasted at 13,095,000 bushels. The forecast for the United States crop is 444,986,000 bushels, which is over 57,000,000 bushels more than 1919.

More than 200 cotton pickers are at work at Corcoran, Kings County. The first field to be picked was the Mono and Moclin ranch where 33,055 pounds of Mebane cotton was picked from 14 acres.

The yield per acre of barley in California, according to the Bureau of Crop Estimates, has been a little disappointing. Preliminary estimates of the total production of this year's crop is 27,820,000 bushels.

Sierra County's potato crop this year is the largest in many seasons. Many raisers encouraged by the high prices of last winter planted large acreage to potatoes this summer and the yield has been good.

The Farm Lands Investment Company of Arboga, Yuba County, has 2500 acres of its land plowed ready for wheat growing. In addition it has already sown 1000 to Tennessee wheat, more generally known as winter wheat.

The Alfalfa Growers in Nevada are trying to organize a co-operative marketing association. It is stated there are some 100,000 acres of alfalfa in the immediate vacinity of Fallon, where the movement for organization is being started.

One of the largest land deals consummated in Contra Costa County for some time was made last week when a transfer of 800 acres of rich agricultural and fruit land in the Oakley district was made from A. J. McLean to Levoggi and Tiscorina.

It is the common corn ear worm and not the cotton boll-weevil that is responsible for the damage to cotton growing in the Sacramento Valley. This is according to experts of the College of Agriculture of the University of California.

Geo. W. Besbee, president of the Pioneer Vegetable Company of Sacramento, states that shipmens of tomatoes from Placer County this season have proven so profitable that the acreage will be increased to three or four times as great as other seasons.

According to the Agriculture Department, Bureau of Markets, on October 11th, the shipment of Irish potatoes from all districts in the United States were 1520 carloads, Minnesota coming first with 357 carloads. California's shipment was 47 carloads.

The Wheat Growers' Association of the United States, with a membership of 70,000 in Kansas, Oklahoma, Texas, Nebraska and South Dakota, has issued from headquarters at Wichita, Kansas a proclamation to all its members urging them to refrain from selling any wheat after 5 p. m., October 25, until such time as the price of good wheat is raised to $3 per bushel.

Geo. P. Hampton, managing director of the Farmers' National Council states that a conservative estimate of the reductions during July and August in the prices of various farm products cost the farmers of the county $1,750,000,000. The estimate was based on the prices producers received for wheat, corn potatoes, apples, cotton and beef cattle.

Milo and Gyp: One sale of white gyp has been made at $2.91 net to the farmer. White Gyp is being contracted in the San Joaquin Valley at $2.55, which indicates that prices will not be higher than $2.50 to $3. The feed market is, of course, largely dependent on the rains this fall. If we have a lot of early rain, and the feed starts while the weather is still warm, we can look for low prices for grain and mill feeds.

HORTICULTURAL JOTTINGS.

It is estimated that over $250,000 a day is going into Lodi district, results of grape shipments.

On October 11th grape shipments from all states were 890 cars, California coming first with 317 carloads.

A persimmon fair will be held in Auburn, October 27 to 30, inclusive, under the management of the Commercial Club.

The estimated prune crop of the Winters district is 1200 tons, the delivery is now being made by the Winters Dried Fruit Company.

Fred A. Seymour, assistant to President Giffen of the Associated Raisin Co., states that the damage to raisins by the recent storm will be light.

Pineapple quinces grown on the ranch of Mrs. E. R. Stillman of Porterville sold last week at $4.00 per box by the Stewart Fruit Company in New York.

The Livermore Grammar School has closed to enable the school children to engage in grape-picking which is in full blast in the Livermore valley.

The Booth Cannery Co. of Pittsburg have sent a representative into Old Mexico to investigate the fruit industry with the idea of establishing a cannery there.

The Winters Dried Fruit Company have shipped seven carloads of almonds to eastern markets this season, this represents 30 per cent of the entire crop of the district.

The Booth Canning Co. are arranging to put up pickles at their Pittsburg plant. A new recipe, for which the company is reported to have paid a European $50,000 will be employed.

N. E. Vandam, manager of the Shafter Growers' Association of Fresno county says that the association will handle 300,000 Emperor and 50,000 Muscat rooted vines the coming year.

The sixth annual prune and apricot exposition, held at Mountain View, was a most successful affair. A record throng of visitors from many sections of the state were in attendance.

B. B. Meek of Oroville has notified Congressman C. F. Lee, that an adequate tariff on olive oil and Greek olives would make possible the planting of 400,000 to 500,000 acres of olives in California.

According to the Bureau of Markets, on October 11th there were 1199 carloads of apples shipped from all points of the United States, New York coming first with 319 carloads, California shipped 43 cars.

Advices received by the California Department of Agriculture indicates a new market for American apples in Scandinavia which depends largely upon the Holland apple crop, now reported a complete failure.

Vineyard property certainly has aeroplane values in the San Joaquin valley. The latest sale reported to have been made was that of 60 acres near Dinuba to Truxau Brothers for $120,000. The property was bought from C. H. Ramm of Fresno.

The United States Civil Service says that the Federal Horticultural Board, Department of Agriculture, is in need of 25 plant quarantine inspectors for duty in the field or in Washington. Those wanting to stand examination apply to U. S. Civil Service Commission, Washington, D. C.

With completion of construction of the bleaching and grading plant of the Contra Costa Walnut Growers' Association at a cost of $20,000 the plant is to be put into operation this week handling the large nut crops of the county, and other sections of Central and Northern California.

The fruit packing houses at Cutler are now busily engaged packing Emperor grapes. This fruit is being packed in drums with sawdust.

The directorate of the California Peach Growers has been increased from seven to nine, to take care of the enlargement of the association to include the fig industry.

Some rare specimens of figs grown in Merced County will be put on exhibition at the Madera County fair.

The Winters Dried Fruit Company's plant with a force of twenty-five employes are now fininshing the season's peach crop. Six hundred tons of dried peaches and 400 tons of apricots represents a large portion of the season's output in that district.

In an effort to bring tons of fruit, which would otherwise rot on the ground in Michigan, to the poor people of Chicago, Commissioner Burkhardt has arranged with the owners of a number of small boats to haul the surplus fruit to Chicago. The wholesaler, the middleman and the retailer will have no hand in the distribution.

A campaign, led by Jasper Taylor and Emma M. Cline of the Fruit Workers' Union of Fresno, to aid fruit workers of the State in their effort to organize to sufficient strength to obtain from their employers what they consider adequate compensation as compared to the wage scales of other union organizations, was supported by the 21st annual convention of the California Federation of Labor, despite determined efforts.

At a weekly luncheon at the Palace Hotel last week, Geo. W. Pierce, president of the California Almond Growers' Association, spoke at length on the superiority of the California almond. He said that the Pacific Coast almond is the finest in the world and that they were already replacing those formally imported from Europe. Ninety per cent of the almonds grown in North America are grown within a radius of 250 miles of San Francisco.

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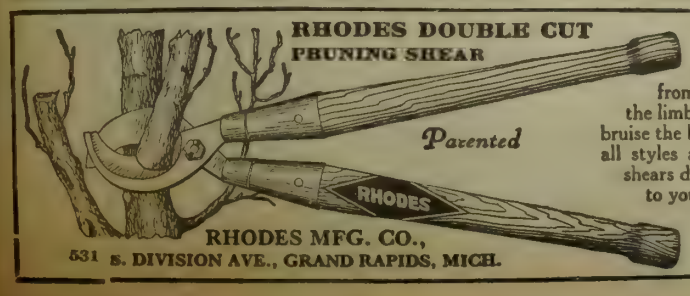

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EDITORIAL

GRAPE JUICE FOR JAPANESE.

To the Editor: Some one rejoices in the Pacific Rural Press over the prospect that the State may steal Sumida's vineyard in Tulare county. Let us turn the light of morality and ethics on the transaction. A white man owns a vineyard on a spur of the alkali land that made Goshen famous. Lacking skill or industry his vines yielded no profit. Along came a Japanese, bent on providing for the future of his American-born children. His experience tells him that the wan and waning vineyard may be cured, restored and redeemed, and he buys it for his children, as their natural guardian. His skill and labor revive the vines. The property under his management rapidly rises in value, and your writer says it is now worth half a million, added to it by hard work and intelligence. Now comes the great State of California, the modern Ahab, coveting Naboth's vineyard and proposes to steal it under the forms of law. Whereat your correspondent ejects great exultation in the previously clean columns of the Pacific Rural Press. The putrid Metropolitan press is already trying this case of Ahab vs. Naboth, and as it is a case in equity the Judge is being notified that his judicial scalp will pay the penalty of a judgment for Naboth. Truly we are a great people, also civilized and likewise Christian. Present by compliments to your writer, and recommend the reading of the 21st chapter of I Kings and from the 30th verse to the end of the 9th chapter of 2 Kings. It may be proper to explain that 1st and 2nd Kings are parts of the Bible, an ancient book which seems to have gone into obscurity along with the Constitution of the United States. And, finally, what about the white man who took the Japanese's money for the vineyard that Ahab wants to steal?—Jno. P. Irish, Oakland.

It is quite characteristic of the tenderness of Col. Irish to keep on trying to pour heart-balm upon the injured feelings of the jilted Japanese whom the American people do not desire either for industrial concubinage or for social marriage into the fabrics of American citizenship. We do not desire them and the next election will be only a referendum which will give a measure of that fact upon which legitimate action can be based in the administration of the popular will. There is no need to apprehend that this popular will will not be carried out with due consideration to all rights which have been honestly and legitimately acquired. Col. Irish would loyally submit if the state should require his house, lot or his farm for the installation of one of Mr. Edison's promised outfits for conversation with the spirit world. It is a proposition for eminent domain, and while we do not know whether it will ever be necessary or desirable to invoke it in such a case of dispossession as Col. Irish foresees, he knows well enough that it can only be applied by the payment of duly appraised valuation. This country does not confiscate anything which is fairly owned; if the public welfare needs it, it is duly paid for. As for the constitution of the United States, it provides for its own progressiveness. As recent amendments have made it prohibit one of the greatest curses, the liquor evil, and have made it provide one of the greatest blessings the country has ever received, the equalization of women—what is the use of apprehending that anything will be done or can be done except in the way the constitution provides. The time has come when selection in citizenship is indispensable in this country, and it must be accepted by all the world. There is no popular desire for injustice to the Japanese. That is only advocated by politicians, and, according to reports from Tokio, the politicians over there are striving to get ahead by the same kind of propaganda against Americans. What is the use of talking about it? The people will vote their will and that will govern this counry in due time and in constitutional ways and in no other.

Col. Irish is very discerning in selecting a vineyard as the line of heart-balm he is pouring out upon the Japanese. When eastern people are willing to pay more than $6,000 for a carload of California wine grapes, as they did last week, it must be conceded that there is some supreme comfort and consolation in grape juice. If our distinguished friend's consideration makes the Japanese feel better, and if it gives them assurance that those of them who are now among us will be fairly treated, his proclamations may serve a good purpose, but they should not change a vote and they will not.

FARM BUREAUS AND POLITICS.

To the Editor: The truth of your editorial last May, in which you criticized the directors of the California Federation of Farm Bureaus for refusing to take any action political whatsoever, has often re-occurred to me. The labor unions, churches, prohibitionists, capitalists and suffragettes all take an active part in politics which has such a great influence on business and national life, but the farmers who own one-third of the wealth and constitute one-third of the population and who are represented in Congress by 8 members out of 554, are either too ignorant or too good to have the record of candidates examined to see how they stand on questions vital to farmers, and hence to the entire nation. It, indeed, seems unfortunate that after adequate and careful discussion the matter was not taken up by straw vote as the Japanese, the "day-light saving" and other questions were. As a member of the farm bureau I protest against such mollycoddlism. I never subscribed to the doctrine that if thine enemy smite thee on thy right cheek turn to him the other also. The National Federation has recently taken the same non-action against such bills as the Nolan bill, which taxes a farm worth $10,000 a hundred dollars a year more than other farms of less value. To the labor union man who lives on the day only, $10,000 is a large sum; to the farmer it is small when the return is compared with union wages. A farmer buys a $10,000 farm and pays $4,000 down, giving a mortgage at 8 per cent for the balance, interest being $480, straight taxes are, say, $100, and these are doubled by the Nolan bill.—R. D. K., Richland.

It is not up to us to say what the California Farm Bureau should do or what its policies should be. That is a matter for you and other members to take up inside the organization and shape its methods and purposes according to your convictions of what is right and desirable from a farming point of view. So far as we can judge from the September "Monthly Record," which we have before us, the State Federation is working mainly along local cooperative lines in production and marketing, but, of course, it may have other objectives which we do not know about. When we objected last May to the Federation's intimation that they would not tackle matters which were coming to a vote, we could not see how they could do anything in any other way than by electing men who would vote right—but we have no faith in a "farmer's party" for two reasons, viz.: first, a theoretical reason, in that it would be a class government proposition, which is un-American; second, a practical reason, because enough farmers will not support a farmers' party to enable it to get anywhere. But farmers ought to align votes enough through all parties to kill the Nolan bill, which is adverse class legislation, because it aims to double the taxes on a farm worth $10,000, while a small merchant can operate with $25,000 worth of stock, or a small bank with $50,000 worth of money, or a laborer at $10 per day is getting as much as if he had $60,000 invested in securities and all of the parties cited operating without extra tax and many of them without any tax at all. But although we do not know what the California Federation is doing about securing farmers' rights by voting, we have reason to believe they are not idle and that the action of the membership will be strongly promotive of measures which will get adequate agricultural representation in determining government action on agricultural affairs, both in legislation and administration, and that, as the Michigan Bureau says, while "it does not contemplate inclusion of requests that may be branded as "class" or "radical" and nothing that basically will not be of benefit to the common weal"—there will be plenty doing by the Bureau, both at Sacramento and Washington.

POOR OLD "POLITICAL ECONOMY."

To the Editor: Mr. Hodges' article in your number of the 25th of September concerning "Price Fixing," etc., is very interesting, but like many others it raises more questions than it answers. Over sixty years ago I was taught that there is a science called Political Economy, whose laws are as fixed as the multiplication table. There was the law of Supply and Demand, which regulated the price of all things, including labor. There was always the "marginal producer," who would fail to make a living if the price of his products were reduced. What has become of that teaching now?—J. P. D., Placerville.

Your poor old teacher, Political Economy, was run over several decades ago by Pedagogical Progress and dismembered and multiplied, not destroyed. Fractions of the old subject, which are called "Economics," "Science of Government," etc., are more alive than the old integral organism ever was—growing out their own heads and tails as some low forms of organic life are said to do—and are more difficult to master than their progenitor ever was. It is that way with "Supply and Demand," which was at one time believed to be the head and tail of the industrial universe. And that began even before Political Economy was blown up because Professor Cairnes, who wrote a book on "Some Leading Principles in Political Economy" in 1874, said: "Aggregate demand cannot increase or diminish without entailing a corresponding increase or diminution of supply; nor can aggregate supply undergo a change without involving a corresponding change in aggregate demand." And so very soon you escaped from college, your old idols were thrown down. And yet, as Professor Cairnes also says: "I believe there is no doctrine of political economy more generally misunderstood, or, to speak plainly, respecting which a more complete absence of all clear understanding of any kind prevails, than this very doctrine." And that is true in the popular mind to this very day. Professor Cairnes could see that supply and demand were interdependent and increased and decreased each other, and did not finally determine values. And since his time, far more, probably, than he ever imagined for in his time trade was comparatively simple, and proceeded upon that which was visible and upon individual desires were not much interfered with. but since his time there has come in speculative gambling, promotive propaganda, hoarding, revelation of invisible supplies by world transportation, financial jugglery, etc., so that demand is multiplied and supplies concealed, or vice versa, according to the games which operators in all kinds of commodities are playing for their own profit. And so the old idea of your youth that prices are fixed by some one great law or principle of automatic action has gone by. Of course, supply and demand are facts of great importance, but they are not determinative because both are capable of variation, and, so far as farming production is concerned, it is indispensable to the profitability of it that the right kind of variation shall be provided for by farm producers.

TRYING A SWEETER SONG.

To the Editor: In your last issue you protest against being beset by crows and intimate that a sweeter song might cheer you up. I avail myself of the chance to try, for I am a constant reader, though not a farmer. I find in the latest publication by the Chamber of Commerce of the United States the statement: "About sixty per cent of the whole country is enjoying business described as "good," and that on the far-away Pacific coast "good" predominates despite the drouth which somewhat affected California, the decline in ship-building, which is general in all the rest of the country, and the lack of cars to move lumber, wherever lumber is an industry of any moment. But the Pacific Coast States, California in particular, long ago learned the lesson of diversification of production. For they have all manner of staple products for

their reliance, and likewise they ship fruits and vegetables in countless carloads to the eastern states. Only in Arizona and California is there no question of a yield of cotton considerably larger than last year. In Wyoming and California the oil business is good, production still keeps up, and there is a world-wide demand which seems difficult to satisfy. There are many other facts cited which show that California wins by her diversity of interests and production. Is not that very significant?—J. W. A., San Francisco.

Yes; and not only is the fact cheering, but the recognition of it in the propaganda of a national promotive body is valuable in state development. Many other instances of new diversification of production could also be cited, but these will do for a starter and will attract attention in connection with the facts that California now has a population of 3,426,536, a gain of about 45 per cent since 1910, and stands now the eighth state of the Union instead of the twelfth, as a decade ago. The percentage of growth in California is three times the rate of increase of the whole country—not including outlying possessions. However, there is good reason to expect that California will advance even higher during the current decade and will probably contend with Texas for the first place; for California is only about 140,000 below Michigan, 425,000 below Massachusetts, and 1,200,000 below Texas, which our present rate of increase will enable California to surpass—if Texas will only keep quiet about it! California has secured enviable publicity during the last decade because her unique and varied surplus productions, which have gone to all parts of the world and advertised natural adaptations and capacities in a most effective way and has gained also because of wider reputation for the delights of living and opportunities for all kinds of investments. California's lesson of the desirability of diversity of production which you cite should be learned everywhere, but it has to be remembered that the lesson in this line is more applicable in California than elsewhere, because no other state has such wide natural adaptations to production, and that, aside from Texas, no other state has a comparable area upon which to develop all the industries which natural adaptations and capacities invite. You are right to strike the note you do in your paragraph; it is the keynote of the future!

QUERIES AND REPLIES

By the Editor.

Inquirers Must Give Full Name and Address
Answered Questions also on other pages.

Cover Crops and Soil Moisture.

To the Editor: We are starting an orchard on land that can't be irrigated. We plowed early and continued cultivation to the middle of July. Our trees planted last winter made good growth; some grew as much as five feet. They are still growing and look healthy. We wish to grow a cover crop and still plow early enough to save the moisture which we find is very hard to do. We are told that if we inoculated our seed we could plow the first of June and still have more moisture than we would have if we plowed early without a cover crop, also that for $3 spent for inoculated seed we would get as much fertilizer as we would get out of 20 tons of manure or $100 worth of commercial fertilizer. Does inoculating seed help to preserve moisture? Does it make the cover crop any better?—G. E. W., Escalon.

Cover crops do not add to the moisture in the soil while they are growing, although the organic matter which they add to the soil may make it more retentive of moisture in following years. It is often claimed that they increase moisture by shading the surface, but what they may save in that way is only a small fraction of the moisture they use up in making their growth. You cannot plow under a cover crop in June without drying out the soil and bringing distress to the trees—unless you are working with summer irrigation. It is not true that any single cover crop is likely to equal any such amount of organic manure and commercial fertilizers. If you should get it, the trees would perish from drouth during the following summer. Inoculation of a legume seed will increase the growth of it unless the soil is already supplied with bacteria—which is usually the case but not always. It is to meet such a possible deficiency that inoculation is reasonable.

Pruning Almonds.

To the Editor: My almond trees seven years old bore a heavy first crop this year, which bent over the top limbs very much, and they remain that way now. During the spring months I went over the orchard and cleaned out the water sprouts—those lower down, at any rate, but they have since suckered out badly, particularly on the bent-over top limbs. Should all those suckers or watersprouts be removed from the top limbs, or should some remain to shade the limbs this coming summer? Also, where a tree has spread out from the center, leaving an opening too large, should I leave a good watersprout to fill in?—W. P. H., Chico.

In the case of the almond where the question of height is less important than with a hand-picked fruit, we would probably shorten some of the branches which are badly curved-back to a point where a new shoot has started to carry on the growth in a good upward direction, which you originally desired to secure, and we would thin out some of the shoots if they threatened too much brushiness above. In the case of a hand-picked fruit, we would probably also shorten considerably the shoot which we left to carry on. In an older tree and a badly curved branch we would welcome the chance to cut it out low down if a well-directed new growth was ready to replace it. It is always desirable to use a sucker to fill space which is too open--when you are sure that there is such a space and not merely free space which new growth from adjacent branches may be reasonably expected to occupy next summer.

A Good Late Peach.

To the Editor: I sent, on September 27, samples of a seedling peach which came up in the yard of a friend, and it seems to me to be of value. I think it is of better quality than the Salway and better than any late peach I know. What is your opinion? The tree is about 8 years old; good bearer, and has little or no curl leaf.—A. E. B., Sacramento.

The peach is large (about three and one-half inches in diameter); symmetrical and globular; colorings and some external characteristics suggestive of Elberta. Its size may possibly be somewhat due to garden treatment and should be determined by ordinary orchard conditions. Interiorly it shows a hard pit, rather small and flat for so large a peach; perfectly free, but well enclosed in fine textured light yellow flesh, even at the stem end; red at pit and clouded somewhat with red beyond pit cavity; flesh free from all wild twang but rather scant in flavor and aroma, which may be partly due to growing conditions. It is certainly a striking peach and should be taken care of, and its commercial behavior determined. Quite a number of Elberta seedlings, both earlier and later than the parent variety, have been observed, but none so far have made a great hit.

Fundamentals of Large Fruit.

To the Editor: In my French prune orchard I have a number of trees which produce very small fruit. Would it pay to topwork these trees? Also have some trees with limbs with few and very small leaves on them. What causes this? Could it be that hardpan causes the above? I have read that some nurseryman has produced a large French prune. Who is it?—R. H., Live Oak.

When trees of the same variety produce large fruit and other trees small it is probably not the fault of the variety but of the tree and is caused by conditions which do not allow it to grow thrifty and bear well. Nursery trees are presumably grown from buds from trees true to the type and good bearers, but if a tree gets into a hard place it cannot live up to its ancestry. It may be hardpan or gravel, or anything else which makes it hard for the tree. The cure is usually irrigation and manure. There is nothing permanent to be gained by grafting over a sick or starving tree. All nurserymen are trying to get the best prune of the French type which will be larger. They can talk about them in our advertising columns whenever they life. Mr. Killingsworth said some things about it in our issue of September 4.

Fall Treatment of Strawberries.

To the Editor: Will strawberry plants which are allowed to send out runners at will during the fall bear as well next year, or should runners be kept off now? The runners were kept off during the bearing season. My plants have not yet dried up at all and since the rains runners are rooting in great shape.—C. H. F., Fortuna.

For the strength and subsequent bearing of the original plants the runners should be kept off all the time—unless you need new plants. All the results of leaf-action should be conserved in the root crowns of the old plants for later growth of fruit stems. Let the new leaves grow until the temperature ends then.

Pear Blight on Apples.

To the Editor: I have eleven acres of Stayman Winesap and King David apples. Last spring a blight appeared in the blossoms, most of which dried up with the twigs supporting them. The blight seemed to stop at the main branch. However, in many instances, particularly in the King Davia trees, the blight has gone down into the branches. In the Winesap trees it has not gone into the branch except in some instances immediately about the base of the twig, the rest of the branch being perfectly healthy. It would seem impractical to cut out all the affected blossom twigs on eleven acres when the blight appears in spring. I would much appreciate your advice on this matter, as would other farmers in their neighborhood, as there are several orchards affected in the same way.—J. C., Paradise.

We are sorry we know of nothing but cutting it out—hard though it be. The chance of immune apples seems more remote than of immune pears—though it is possible that attacks are more apt to stop with twig-killing in the apple than in the pear. Still the rational thing to do is to cut, gather and burn all killed twigs this winter to clean the trees as far as possible of exudations, which insects carry to the next bloom. Where the blight has gone down the branch, there must be cutting below that or the bark-paring described on page 221 of our issue of August 21. The debarking method seems to be working well in some of our largest pear orchards.

Killing Bark Beetles.

To the Editor: In your reply regarding the "bark beetle" (Eccoptogaster rugulosus) in your issue of September 18, you advised only dormant sprays. I understand that ranchers in my vicinity are using (kerosene emulsion) 20 gallons kerosene and 10 lbs. of soap and 1 pint of tobacco leaf 40 to 200 gallons of water for this pest during the growing season. Is this spray of any value?—H. J. R., Beaumont.

Yes; it is a good spray for any moving insect which it hits—aphis, thrips, unarmored scales, etc.—including bark beetles, which happen to be loafing around on the bark at the time, but it would be theoretically strange if it would hit many for they get into and under the bark as soon as they can. Still, the proof of the pudding, etc.

CALIFORNIA WEATHER RECORD

The following rainfall and temperature record is furnished the Pacific Rural Press by the United States Department of Agriculture Weather Bureau at San Francisco for the week ending October 11, 1920.

Station—	Rainfall Past Week	Rainfall Seasonal To Date	Rainfall Normal To Date	Temperature Highest	Temperature Lowest
Eureka	.50	5.81	2.24	70	50
Red Bluff	.04	.93	1.28	84	48
Sacramento	.46	.47	.66	72	50
San Francisco	1.41	1.54	.59	70	52
San Jose	.96	.98	.62	74	42
Fresno	.50	.64	.55	84	50
San Luis Obispo	.60	.60	.71	72	44
Los Angeles	Trace	.04	.20	74	54
San Diego	.00	.02	.20	70	55
Winnemucca	.12	.42	.90	80	28
Reno	.01	.45	.77	74	30
Tonopah	.08	09	1.45	72	34

PROMISE OF RAINY YEAR.

(Written for Pacific Rural Press by L. E. Blochman.)

That we are in for early rains appears more and more evident with each day of October. For the rains, unlike the more usual October rains, are not followed by clearing weather, but by continuous cloudy weather, which are mere indications of the continued storms to the north of us.

Eureka has already had 5 inches of rain—heavy rains throughout September and October to date (11th), and now the Bay region is the next lower down the coast to receive rains, though it has not worked further south, which will probably be only a matter of a short while.

Early rains of October (not the September ones) are not indicative of an off season. Several wet seasons have followed in its wake, as also some drier ones. But so far, a great deal of stormy weather activities is manifesting itself on the more northerly Pacific Coast. And though we do have this activity some seasons without the southern movement to give moisture for the central and southern end, there have been no high barometer areas developed this season so far to prevent the normal southerly movement. Hence the probability of good October rains in the state generally.

The Los Angeles Livestock Show Has "Arrived"

Written for Pacific Rural Press by R. E. Hodges.

The third Los Angeles Livestock Show goes into history as the most magnificent event of its kind ever held in the southwest. Its predecessors suffered financial shortage due to flu in 1918 and rain in 1919, but if the 1920 show did not pay all of its own bills from its own income, it at least will not need to call on the State Legislature to make up the deficit, for public-spirited local men put up a guarantee fund of $105,000, which will cover any probable shortage many times over. Having drawn livestock exhibits from many states, it has practically assured Los Angeles of a co-equal place in the circuit of great western livestock shows, which is a long dream sure to come true within the lifetime of men already old. It remains for San Francisco to summon the nerve required, and the gap will be filled. We heard frequently at the livestock show as we had heard at the recent National tractor show the regret expressed that the two were not combined. If this can be practically done, it will please many and make it more worth while for visitors to come long distances. However, that may be, we congratulate the management on the many-sided success achieved this year.

Los Angeles Livestock Show Notes.

The sow, My Lady Friend, who has just been made World's Grand Champion at the 1920 National Swine Show, is the same sow that the Diamond Bar Ranch sow, Queen of Pathfinders, defeated for World's Grand Champion last year. This looks like the Queen of Pathfinders is champion of the world for two years.

The Junior Champion Duroc boar, Royal I Am, owned by Graham & Henshaw of Lancaster, was just two weeks over a year old, had bred 15 sows at the ranch, was rather thin, but weighed 470 pounds when he left the ranch. His back made a fine arch 69 inches long.

The Poland China grand champion boar at Los Angeles was shown by the Eastman Rancho of San Fernando. This is only one of the half-dozen grand championships on hogs taken by Southern California breeders.

The Tarzana ranch of Van Nuys won both grand championships on Hampshire hogs.

Dr. L. J. Anderson, recently appointed field man for the California Duroc Breeders' Association, found plenty to do among the Durocs at Los Angeles. Mr. Anderson came into his present work because of his notable success with boys' pig clubs in the Placerville High School. The boys' contests now are wherever the boys may be.

The Craig Ranch of Owensmouth showed a Duroc [illegible] lively plump smooth uniform pigs that had squealed the first time only two weeks before. A movie camera shot them at the show. They were out of a litter of eleven.

J. L. Dunlap of Pomona, who moved to California last February, bringing five Poland China sows and a boar, won thirteen premiums on the ten head he had in the competition at Los Angeles. One sow which he thought would win nothing, took fourth prize in a class of more than a dozen.

J. A. Gailey of San Marcos, who started breeding Duroc hogs [illegible] year ago with three sows and a boar, took fifth prize on his boar, which weighed 775 pounds. The sire of this boar weighed 1100 pounds.

When B. H. Wilkinson of the Falfadale Farm, Perris, paid $2,000 for the under-year boar, Great Orion Sensation Jr., he was taking what was considered a long chance on a fine animal. His judgment was royally vindicated at the Los Angeles Show, where this boar won grand championship at two years old.

Dairy Cattle Winners.

The Holstein-Friesian Association of southern California held their banquet at Los Angeles, October 6. About fifty attended. Geo. M. Brown acted as toastmaster, brief talks were made by several, among which was John L. Smith of Spokane, Washington, and Prof. Gordon, assistant farm adviser of Los Angeles county. Frank Reed Saunders of Phoenix, Arizona, stated that he thought the Holstein classes at the Los Angeles Show were better than at any of the big Eastern fairs he had attended this fall, even including the New York State Fair. All Holstein breeders are urged to join the southern California organization and all information may be had by writing Secretary R. A. Condee, at Chino, California.

Anita M. Baldwin captured two firsts, four seconds, a junior and reserve grand championship, and three seconds in the herd classes of Holsteins.

"The best Holstein show ever held in the West" is the way the Los Angeles show was characterized by John L. Smith of Hazlewood Farm in Washington State. Mr. Smith is a pioneer breeder for the combination of type and production in Holsteins.

Both Guernsey grand championships went to Walter H. Dupee of Santee.

E. R. Stalder of Wineville, who started purebred Holstein breeding three years ago with eight cows and a bull, won a first and reserve championship, and two seconds on the six animals he exhibited at Los Angeles.

The George Jr. Republic of Chino probably surprised some folks with the type and quality of their Holstein bull, which won grand championship in that splendid exhibit.

J. L. Jones of Burbank put up a splendid show as indicated by his grand champion Holstein cow, four first prizes, four second prizes, etc.

Jersey cattle and exhibitors were not so numerous as their numbers in the State would warrant. One of the older breeders, J. E. Thorp of Lockeford, took grand and reserve grand championships on bulls, and another experienced breeder, Grant A. Brown of El Monte, took the corresponding prizes on cows.

Ayrshire honors were divided between the Steybrae Farm of Redwood City and A. MacMinn of Litchfield, Arizona. The former too grand championships on females; the latter showed the grand champion bull.

F. F. Pellissier of Whittier won a first prize on the only Holstein animal he entered, a senior yearling bull.

Beef Breeds and Breeders.

White is rapidly becoming the fashionable livestock color in California. Poultry have set the pace, Holsteins have been coming to it in recent years, Ayrshires are working that way, and many of the Shorthorn winners at the Los Angeles Livestock Show were all white. These included the first and second premium calf herds.

Anyone who looked at the grand champion Hereford bull, Beau Blanchard 76th, owned by J. H. Cazier & Sons Company of Wells, Nevada, was arrested by the immense rounded hindquarters on the animal. He was grand champion at the California State Fair. His sister was twice grand champion at the Chicago International and was senior champion at the last International. Beau Blanchard is less than 3 years old and was first shown at our 1920 State Fair.

The point was made after a number of State Fair beef awards had been unexpectedly shuffled around at Los Angeles, that if it is at all possible to secure a different judge for each breed, it would insure men most familiar with the ideals of that breed. There are a number of differences in ideals as well as in color.

Romie C. Jacks of Chualar, Monterey county, hired a cart to haul away his prizes on Herefords. They included junior and grand champion heifer, senior champion and reserve grand champion cow, reserve senior champion bull, first senior yearling bull, five second prizes and some others.

T. S. Glide's Little Sweetheart again won Shorthorn grand championship and was considered by Mr. Glide to be in the best form she was ever shown. Little Sweetheart was grand champion at the Chicago International in 1919.

J. P. Doherty, representing the Aberdeen-Angus breed in the eleven Western states, with headquarters at Portland, Oregon, was at Los Angeles

[illegible] breeding quality for his breed.

Several hundredweight more than 140 tons of bulls were sold in two blocky Hereford animals by Babbitt & Cowden of Cashion, Arizona. Both bulls were bred by Yost of Kansas City. One of them, as told by L. T. Leatherman, who has charge of them, is Bonnie Donald, who won first as a junior calf at the Chicago International in 1916, first at the Kansas City Royal, first at the Southeastern Fair at Atlanta, Georgia, junior champion at the Kansas State Fairs at Hutchinson and Topeka, and first at the Iowa, Nebraska, and Missouri State Fairs. Though he has recently been breeding heavily in the hot Salt River Valley, he weighed 2100 pounds at Los Angeles and was second in class.

There were three exhibits of fat steers in lots of 15 each. One was of well fattened Herefords. The other two were predominantly Aberdeen-Angus, but mixed a little with Hereford. They had been taken direitly to the fair from their mountain grass range in San Diego county. While they were in good uesh, they were not really ready for the block. A few weeks of grain feeding would have added flesh and fat that would have made the best kind of beef and good profits.

Cattlemen of southern California

(Continued on page 514.)

AN IMPORTANT EVENT IN HOLSTEIN CIRCLES.

We hear much from every angle of the livestock business about improved methods and greater production. In the meat-producing animals more pounds of better flesh are sought for the same amount of feed. Dairy cattle that will yield more milk and butterfat are what good dairymen are continually looking for and the progressive ones are seeking these better cows with Babcock test and scales. When we find a dairyman who has sought and found cattle that are excellent producers, his herd becomes a supply from which the owner of cattle not so good can obtain animals. Opportunity will be offered in the near future for dairymen and breeders who favor the Holstein-Friesian cattle to select from 150 head of absolutely healthy cattle what they may need or want. Toyon Farm Association is an organization that has been breeding and accumulating Holsteins of the very highest type and producing ability. The time has arrived for them to offer to the cattle-buying public some of the choicest females, a large majority of which are in milk—a chance to buy clean, high-producing cows, heifers and bulls.

A NEW FIELD REPRESENTATIVE.

The Pacific Rural Press, ever on the alert to serve its subscribers and advertisers in every way possible, announce that the service of E. E. Niccolls, formerly with the U. S. Bureau of Markets, and later with the Moran Packing Company of San Francisco, has been obtained as field representative in the livestock department. Mr. Niccolls comes exceptionally well qualified to fill the position in all lines, but especially so in beef cattle, swine and sheep from the market viewpoint.

The publisher feels that with Mr. McConnell at the head of the livestock department, well versed in all lines from the purebred standpoint; Ralph Newman, in charge of the dairy division, with the addition of Mr. Niccolls, the Pacific Rural Press is in a position to serve the public better than ever. These gentlemen will have full charge of this department, not only editorially, but the livestock advertising as well.

POLLED HEREFORD SALE SUCCESSFUL.

The sale of Polled Hereford cattle at the Los Angeles Livestock Show, October 6, was a success in its primary purpose, which was to introduce this hornless strain to new breeders in various parts of California. Buyers included the pioneer Diablo Stock Farm of Danville, Diamond Bar Ranch of Spadra, Los Angeles county, G. H. Horne of Queensland, Australia, the Casmalia Ranch & Cattle Co. of Casmalia, Santa Barbara county, C. H. Messenger of Jamul, San Diego county, R. L. Lenfest of San Jose, John Cuddeback of San Gabzriel, Ed Borchard of Newbury Park, Ventura county, John Troup of Goleta, C. H. Kellogg of Saugus, and Owen S. Hollister of Lompoc. The stock was practically all from outside of California, the sale being conducted under auspices of the American Polled Hereford Breeders' Association, Des Moines, Ia. The nineteen young females averaged $259, the eighteen bulls averaged $314, the total average being $283.

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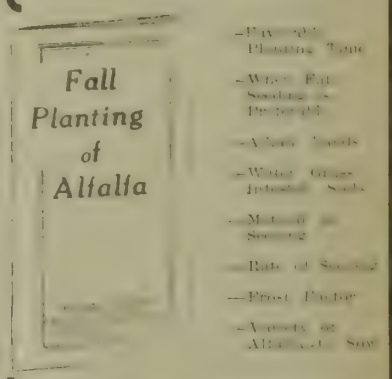

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Why should you experiment when you may secure proven successful methods. Our booklet is ready for mailing—and you may secure a copy free—write for it NOW.

GREEN BRAND GOLD

Also ask for a copy of our GREEN-GOLD PLANTER for October. It contains information for the man who plants.

Address communications to either our Modesto or Fresno stores

BOMBERGER SEED COMPANY

2 Stores

MODESTO - FRESNO

Why California's Fruit Industry Is Pre-Eminent.

The prominent position California's horticulture has attained in the nation's agricultural industries is the culmination of unexampled perseverance, nerve, skill and unstinted capital working to that end.

Written for Pacific Rural Press by W. S. Killingsworth.

For months it has been the writer's privilege to discuss the manner of production and the methods of marketing California's greatest benefactor --fruits. During this time little has been said of what was required to place this great industry in the front rank of the nation's commercial progress. So rapid has been its development that it seems incredible. However, there are many who witnessed its christening that are now enjoying the benefits that required years of hard labor to bring into being. It has taken less than fifty years to gain the distinction of being the largest citrus producing section on the globe, and less than that to outstrip any and all competitors in the production of the deciduous products. During this time it has required perseverance, nerve, skill and capital to accomplish this great undertaking. A little history of such by one who has grown up with the industry might interest those of latter-day connection with it.

A Cool Reception.

Thirty years ago, on arriving in Los Angeles, the writer walked into the office of the Earl Fruit Co. and presented Mr. Earl with his business card. He gazed at it for a moment, then with a cynical look turned and said, "Well, young man, what are you here for?" Rather a cool reception for one who had been led to believe that on reaching the grand and glorious climate of Southern California the glad hand would be thrust at him—but not so. However, we were prepared for anything, and so in a commonplace manner we divulged our mission, which was to the effect that we represented a string of fruit auction houses located in many of the eastern cities, and it was our purpose to solicit shipments of California fruits to be sold in "those auction houses on commission."

Thought We Had "Nerve"—and We Did.

As we outlined our policy of handling fruits from other sections of the United States, explaining the superior advantages the Earl Fruit Co. would have in placing their fruit in our hands to be sold at open auction, we discovered his expression of seeming contempt resolved itself into that of pity. He said, "Will you have a seat?" He said, in part: "I think that you people have a nerve to expect California growers and shippers to patronize markets as small as Baltimore, Pittsburg, Buffalo, Montreal and Toronto. It would be suicidal to ship a full carload of either citrus or deciduous fruits to any one of those markets." Baltimore at that time had a population of more than 400,000. Including the manufacturing towns within a radius of twenty miles, Pittsburg had a population of more than 1,000,000. The three remaining cities had a population of more than 300,000 each. With all that, Mr. Earl had the nerve to tell us that they were too small to justify the shipment of a carload of citrus or deciduous fruits to any one of them. However, we were not dismayed by his reproach, but "girded up our loins" and went in pursuit of more congenial environments. We merely call this little incident to the attention of the readers of the Pacific Rural Press that they may understand to what extent California fruits were distributed at that time as compared with now.

The Monopoly of the "Big Four."

The "big four," as they were commonly alluded to—New York, Chicago, Philadelphia and Boston—were the receivers of the major portion of all citrus and deciduous fruits shipped from California up to that time. Until we came to California, the cities we represented had never received a straight car of tree or vine fruits, as coming direct from California. However, they had received many carloads each year, but they were purchased from the auction rooms of one or more of the "big four" cities. This grew to be monotonous as well as costly, for in many instances the fruit would not hold up after being taken out of an iced car and reshipped by ventilator service; hence these inconveniences and financial losses forced us to modify such by our invading the territory producing and shipping such fruits. For some time after we appeared on the scene no encouragement that we could offer, no explanation of what the future held in store for California's rapidly increasing production of fruits, seemed to touch a responsive chord. The packers and shippers were slow to grasp the splendid opportunity offered them. Not daunted by a disapproval of our long-standing offer of relief, like little "Jerry," we remained on the job. Eventually things came our way.

The First Convert.

The first shipper to become converted and take our program was that grand old man, J. Z. Anderson, of San Jose. His years of labor, attended with phenomenal success as a packer and shipper of deciduous fruits, inspired him with the belief that he could make a like success with the citrus end of the game. On establishing himself at Riverside, he purchased the fruit on several large groves in that territory, and it was from his packing house that we broke the ice by billing out our first car of citrus fruit to be sold at open auction at Pittsburg. Another car soon followed, and another and so on. The first car arrived and sold at topnotch prices, which gave us a splendid opening to carry our fight into the camps of the other shippers.

As the season continued, the remainder of the markets we represented were given a trial by several other packing and shipping concerns located at Riverside, and as predicted by the firm we represented, those markets disposed of this fruit at prices beyond the expectation of consignor and consignee—a splendid tribute to cities labeled by that modern Hercules of the fruit industry as too small to handle a carload of California fruits. However, we were encouraged to that extent that we entered the deciduous territory with letters of commendation that made it smooth sailing and these same "small" cities came through with flying colors on deciduous shipments. One of the old established firms, now in the discard, gave us battle at every turn of the road. Their headquarters were at Chicago, and prior to our intervention they were supplying a large portion of the fruit handled in these "small" cities at a large profit, therefore every car we handled direct not only interfered with their commission on the car, but was enlarging a field for California fruits that was crippling their prestige.

The Dawning of a New Era.

This was the beginning of a new era in the distribution and disposition of California fruits, and today we feel safe in saying that there are approximately 1,000 markets in the United States, Canada and Mexico, that are receivers of California citrus and deciduous fruits in carload lots, to say nothing of the hundreds of cars shipped to the countries of Europe, South America, Australia, China and Japan. We are claiming no credit for this abrupt change in the manner of disposing of California fruits. However, it was the psychological moment to intervene. From that day until the present California fruits have been handled in a co-operative way, beginning with the citrus productions, and as their success became known one after another contracted the habit until there is not a production of tree or vine that is not enjoying all the rights and privileges known in the matter of co-operative marketing, which is proving to be the soundest and most satisfactory basis yet practiced in any line of horticulture or in any locality. So well under control are these different interests that the management of each fears no overthrow by any opposition now, or at any future time. As a matter of fact, the opposition that did exist for awhile, and to some extent continues to function in a limited way, has become reconciled to the extent that they appreciate the fact that co-operation is here to stay.

Nation-wide Education.

There are business men in every line of the fruit industry in California, and when these organizations were being formulated, the best material in each line was selected to stand at the wheel and pilot the ship through to safety, therefore there was no man or set of men, no combination or an aggregation of combinations that could prevent a safe landing. There was rough sailing at times, but there has never been a call for the "life line" yet. The determination on the part of those who were supporting the cause with their time, energy and money has been recognized and applauded from the rim to the center of this great nation. The nation has been educated to eat fruit, and this education came through systematic advertising. One has but to consult the publicity agent of any one of these co-operative organizations, and he will admit that P. T. Barnum—the father of advertising—was a pigmy in comparison thereto. The annual amount expended by some of these organizations in advertising extends into the hundreds of thousands of dollars, but when we take into consideration the enormous business benefited by this advertising the cost per package is so small that the figures are almost invisible, yet some of the struggling opposition delight to spread the propaganda that in the practice of such extravagant methods as nation-wide advertising and high-salaried officers, the poor grower is made to suffer.

Lifted Out of the Slough of Despond.

If he is suffering when pears are $100 per ton to the canneries, raisins at 24 cents per pound, peaches 18 cents per pound, prunes 9 to 25 cents per pound, and so on down the line, including wine grapes at $242 per ton net, for the love of all that is holy, tell us what did the poor grower suffer five years ago, when he was not getting enough net out of any one of the above-named productions, brought into use by the sweat of his brow, to purchase a meal that would take up the "slack," to say nothing of necessary overhead expenses? We are proud of the fact that we have lived long enough to witness the ascendency of the "bottom rail," which for a long time was in the depths. It is on top and no movement will ever replace it, as the horticultural industry of California is now at the bat with bases full, no strikes and no one out.

Though Whittier has seen several enlargements of its orange and lemon packing capacity in recent years, still another increase is in progress. The Whittier Select Citrus Association is building an 80x160-foot addition, increasing their floor space to 70,800 square feet. This association packs about 700 carloads per year, their maximum capacity being 67 carloads per day, according to Manager C. W. Hightower.

Help!!!!!!.

Whether your trees were overburdened with fruit,
Or overrun with insects,
They need the help of **ZENO.**
By cleansing the tree, softening the bark,
The tree is rested in Winter and
Stimulated in the Spring---
It will bear more and better fruit in the Fall.

ZENO

Is an internationally used
Miscible oil tree spray, and these are reasons
Why it has proved the best by years of test.

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(ZENO MAY BE HAD OF YOUR LOCAL DISTRIBUTOR, FRUIT COMPANY EXCHANGE, OR BY WRITING TO US DIRECT)

The FARMER says=

"for stumping genuine GIANT has no equal"

From recent letters of ten farmers who have used Giant Powders for Stumping we make these extracts:

"1. Your Giant Farm Powders shoot the roots. 2. They have wide breaking power and less bad gases than others. 3. I get the same excellent results from them every time. 4. They are always uniform. 5. I used eleven tons and wouldn't have any other make. 6. I want to sell a lot of other powder that I have because Giant does the work much better. 7. Genuine Giant can't be equalled. 8. I don't have to use so much powder when I blast with Giant. 9. You know what we need for stumping. 10. I save money by using Giant Powders."

Write today for our free book, "Better Farming With Giant Farm Powders." It tells how to save money and get better results in stumping, ditching, tree-planting, etc.

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Place Your Order

FOR FRUIT TREES, ORNAMENTALS, ROSES NOW

WRITE FOR OUR NEW PRICE LIST

There will be a decided shortage of Fruit Trees again this year. We therefore advise our customers to place their orders as soon as possible in order that the stock may be reserved for them before the supply is exhausted.

We wish to call particular attention to our Improved French Prune and the New Double X Prune.

California Nursery Company

NILES, CALIFORNIA

Order your TREES now

Make Sure Next Season's Planting

Many Varieties Will Be Scarce

Any delay in ordering may mean a year's delay in planting

WE ARE ALWAYS PLEASED TO ANSWER QUESTIONS REGARDING BEST VARIETIES TO GROW, SOIL, IRRIGATION, PRUNING, ETC.

ROEDING TRUE TREES FRESNO, CAL.

FANCHER CREEK NURSERIES

FRESNO, CALIFORNIA

Timely Work in the Orchard

(Written for Pacific Rural Press by W. S. Killingsworth.)

The Time to Rout Orchard Pests.

Tree fruit harvest is now in the discard, so let's turn our attention to cleaning the orchard of pests that pass the winter under rubbish and in places where a rank growth of vegetation is left standing. Many orchards are fenced where weeds and growths of different plants are allowed to mature during the summer, all of which should be carefully moved and destroyed, else rodents and pests of every nature will find a comfortable hiding place during the winter, and there being practically no vegetation upon which they may exist, they naturally attack the trees. In the thorough destruction of such homelike places it materially increases the mortality of the pests, hence the orchardist has a smaller number of such pests to fight in the spring. Cleaning up of such rubbish and wild vegetation may be accomplished by grubbing it out or burning it. The latter, of course, is dangerous on account of the possibility of destroying the fences. In addition to this hiding place many ranches, especially those located on hillsides, there are draws and small ravines in which rubbish and prunings are deposited during the summer, making it an ideal spot for a winter home for rodents of every type. These places should by all means be cleared up. Should there be danger of these drainage avenues increasing in width and depth from heavy rainfall during the winter, care should be used not to leave the land too much exposed. Should there be a reasonable amount of undergrowth, it would be well to simply cut it off at the ground, allowing the roots to remain, which will naturally keep the earth from washing. The brush may be piled and burned, but by all means clean it out. You will not only reduce the pests on the spot, but reduce the cost of fighting them another season.

Spraying Time Approaching.

The 1920 deciduous fruit shipping season will soon join the ranks of its predecessors with no regrets, but with the hope that its successor may prove of equal value as a producer, which of course was largely due to the care of tree and vine while in the dormant state, to say nothing of subsequent care while in the course of production. Of the former we wish at this time to call the attention of the orchardist whose production is confined to tree fruits. It may seem a little early to talk about spraying, but time flies, and from personal experience there is but little time to be lost between the time the shipping season ends and pruning and spraying time begins, or should, at least. In a former issue we spoke of pruning; that it would be advisable to begin as early as possible for reasons mentioned, one of which we will repeat: that all surplus brush should be out of the way before there is any attempt made at spraying, to prevent loss in spraying material that would go onto brush to be subsequently pruned. Tree and vine, foliage, body and root are annually falling victims to something new in the way of pests; therefore it is imperative that the orchardist and vineyardist be on the watch at all times. We shall not attempt at this time to go into detail as to spray formulas, and the time that the different sprays should be applied, for we feel that it is unnecessary, as every county in the State has a most efficient horticultural commissioner who is prepared to not only dispense advice, but ready to assist in preparing and applying the different spray materials at the proper time. These commissioners and their deputies solicit the co-operation of the growers in order that they may be properly instructed in the use of spray materials, which would lessen their burdens during the harvesting and shipping season when a rigid inspection might be abolished, and the grower relieved of a fine and embarrassment of appearing in court for violation of the fruit standardization act. However, we stand in waiting to freely impart full information on the matter of spraying. Be advised, however, that it is now time to prepare for such important work.

The Home Storage of Apples.

In many of the home orchards of the state are to be found the "old apple tree." When properly cared for it, or they ,as the case might be, come to the front with a splendid crop of apples, sufficient to meet the requirements of the family during the winter months if the fruit should be properly stored. Should the home be equipped with a cellar, it is often the least sanitary part of the dwelling, and it is there that the apples would in all probability be stored, but before such is done the cellar should be thoroughly cleansed and sprayed with a well prepared disinfectant, which may be made with hydrated lime, and where it is is applied with a spray machine instead of a brush it must be thoroughly diluted—one pound of lime in a gallon of water, adding two ounces of copper sulphate. This should be dissolved in a quart of water and added to each gallon of whitewash, which gives it a fresh blue tinge and adds to the sanitary value of the wash. This should be allowed to dry thoroughly before the fruit is stored. When the fruit is stored every opportunity to cool the cellar should be made use of. Open all ventilators in the evening when nights are cool, allowing the cellar to fill with cold air. In the mornings close all openings in order to retain this cool air. Never open for any length of time during a warm spell, as a sudden change in temperature will have a demoralizing effect. In order to avoid guesswork in such an important matter a good thermometer should be hung in the cellar at all times. When a constant temperature of 40 to 45 degrees Fahrenheit has been attained the ventilation should be regulated to maintain it at this point as nearly as possible. If these instructions are followed, thousands—yes, hundreds of thousands of boxes of apples may be saved that have heretofore rotted, not only in the orchard but in boxes poorly housed.

Proper Storing of Apples.

The Pacific Rural Press is constantly called upon for an expression of opinion as to the advisability of planting a cover crop in the orchard. From years of practical experience in orchard care we strongly advise the planting of a cover crop. The Melilotus Indica (Bitter clover) is a splendid annual quick-growing cover crop. It is not good for forage or hay starts early to grow and is of good size when ready to plow under. Ten to fifteen pounds is usually the amount used in planting an acre. Vetches, such as the woolly podded, spring or tares, are very valuable for cover crops. These are largely planted in the orange groves of the South for green manure and plowed under in the spring. In years past, when the livery stable predominated, it was our custom to make use of a great deal of this manure as it contained a great amount of bur clover and shattered wheat, oats and barley, all of which would put on a rank growth during the winter. A cover crop acts in many ways that prove beneficial: (1) when properly plowed under it serves as fertilizer; (2) it loosens the soil and prevents it from running together, becoming a solid mass impenetrable to fibrous roots where irrigation is not practiced; (3) it assists in retaining moisture, and for these three reasons, if for no other, a cover crop is a benefit to any orchard, and especially is it the case where commercial fertilizers of no description are used; also where the land is kept so thoroughly cultivated during the summer and fall that no vegetation is allowed to grow.

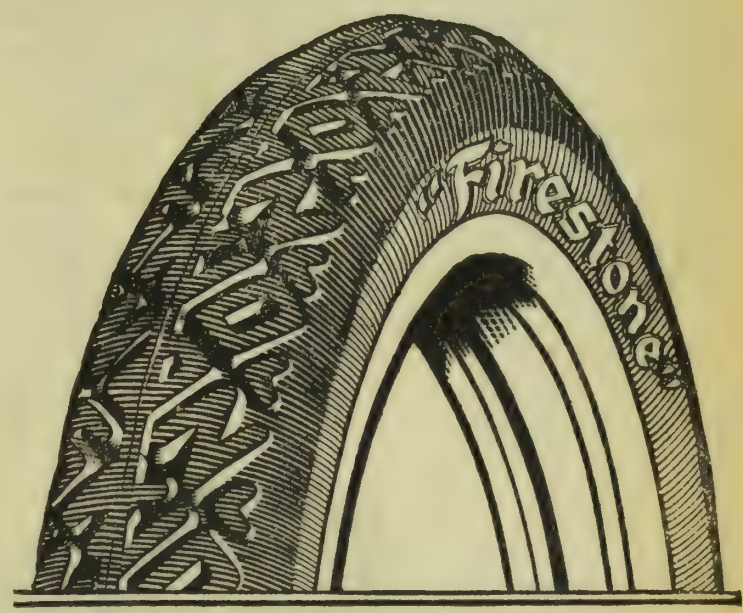
Firestone

Buy a set of Firestone 3½-inch tires and discover the big feature behind their uniform service—perfect ***balance.***

Firestone has devoted eighteen years to developing the ***balanced*** tire, giving light car owners more mileage at low cost—most miles per dollar.

The answer to getting more service and more ***uniform*** service out of all four tires is the Firestone 3½. It is more than thickness of tread or amount of rubber and fabric, greater cushioning or greater air capacity. It is proper ***balance***—the way each of these component parts of a Firestone 3½ tire is made to co-ordinate.

Sales of this tire increased 96% for the first six months of this year. The result justifies the effort because the stamp of approval has been set by the public on the Firestone 3½—***the balanced tire.***



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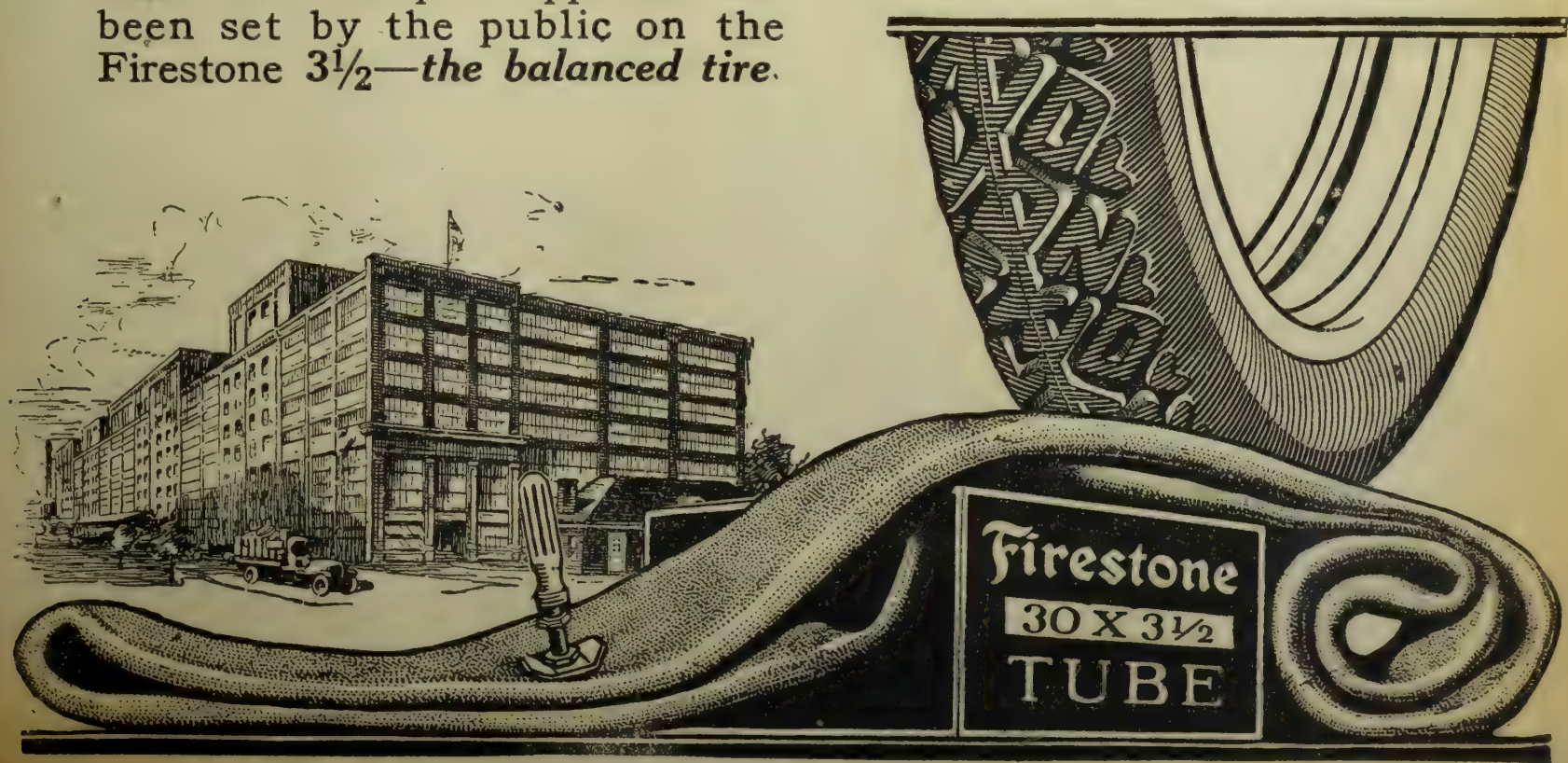


Here and There in the Fruit Business

Walnut Prices Cut 30 Per Cent.

The California Walnut Growers' Association have announced the result of a conference held in Los Angeles last week, which is to the effect that there has been a reduction in price over that of last year amounting to 30 per cent. Carlyle Thorpe, general manager of the association, said the new opening wholesale prices per pound will be as follows: Diamond brand No. 1, 22½ cents; No. 2, 16½ cents; band budded, 25½ cents; Standard budded, 22½ cents.

Grapes Unhurt by Rain.

Reports reach us from many grape sections to the effect that the recent storm did but little, if any, damage to the grape crop. Fair weather following the storm dried out the foliage as well as the large bunches. Lower San Joaquin Valley's harvest of grapes is well along, while the upper end has more than half of the grape crop to go forward. Now that the car situation has been greatly relieved shipments will increase.

Largest Walnut House in the World.

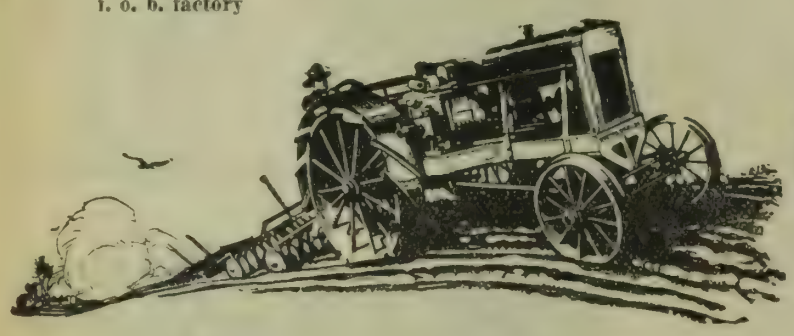
Puente, Los Angeles county, can now boast of the largest walnut packing-house in the world. The plant has just been opened up to care for the 1920 crop. Those who have heretofore seen the largest walnut packing plant in California may draw on their imagination as to one three times as large, and they will have a picture of the Puente plant. There are 7,000 acres of bearing and 5,000 acres of non-bearing walnut trees in the district. The association expects to handle 7,000,000 pounds of walnuts through the new plant during the 1920 season. The plant is capable of turning out 300,000 pounds of walnuts per day and has storage room for 1,340,000 pounds. One hundred and sixty persons are employed in the performance of the various duties about the plant. The officers and directors of the association are: president, S. L. Watts; secretary, R. H. Neely; vice-president and manager, B. F. Mason; other directors—E. G. Hotchkiss, B. Rowland, S. H. Robinson, C. J. Hurst, and J. Evan Wig. All of the officers are prominent walnut growers of the Puente district.

Santa Clara Prunes Harvested.

A trip through Santa Clara Valley last week end revealed the fact that the prune growers had allowed no grass to go to seed under their feet, either under the prune tres or on the dry yards. From Santa Clara to Gilroy we saw but two orchards where there were any prunes remaining under the trees, the total tonnage of which was so small that the orchardists will not appear in a court of bankruptcy over their loss, should such be the case. Noting this clean sweep in the orchards we were curious to learn what shape the dry yards were in. Upon examination we found but two where the trays filled with prunes had not been stacked and well protected against rain. The two yards with trays still "out" were in no immediate danger of loss, the prunes, though dampened by the previous night's rain would dry out in a short while after the sun and wind appeared. If a judge in a contest of prune harvesting we would score Santa Clara county 100 per cent efficient. While thousands of trays are stacked, we knew that the safety of the fruit was well in hand, and all that remained was, when thoroughly dried, to transfer the fruit from tray to lug box, thence to one of the many "Sunsweet" packing plants. We would naturally suppose that to be the storage place for awhile, as the entrance to practically every prune orchard is adorned with a "Sunsweet Orchard" banner.

J. J. Hoey, editor of the Fig and Olive Journal, after an inspection of the olive orchards in the Lindsay section, says they have the heaviest production in the state.

Price $1495
f. o. b. factory



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At the big Ohio State University drawbar test of 1919, Hart-Parr 30 developed 26½ drawbar horsepower and 3220 pounds pull drawbar, out-performing all other tractors in the test.

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HART-PARR 30
BUILT BY THE FOUNDERS OF TRACTOR INDUSTRY

WATSONVILLE SHORT OF FRUIT CARS.

The grape growers are not alone in the stress of car shortage. The apple packers of Watsonville are experiencing like trouble. Several packing houses have become so congested with apples packed and ready for shipment that they have been forced to shut down operations, both in the matter of picking and packing. It is estimated that 100 carloads of Bellflowers are ready for shipment, but are held up for lack of cars.

However, it is not the first time the Watsonville packers have been up against a car shortage. While such conditions are always attended by a certain amount of shrinkage and a possible decline in the market, no very serious losses may be expected from this temporary shortage of cars, as the Watsonville apple has a reputation as a splendid keeper under anything but extreme adverse circumtsances, which are most likely not to occur until relief puts in its appearance.

Every effort is being made by the civic bodies of Watsonville in conjunction with the packers and local railroad authorities to get immediate action, so that the packing plants may resume operation.

ADVICE ON BRIDGE GRAFTING.

To the Editor: Noting the article by J. R. of Sebastopol on "bridge grafting" in September 4 number of Pacific Rural Press, I wish to say I have six prune trees which have been girdled by gophers. One tree is dead and others are dying. When is bridge grafting to be done—in spring, when sap is rising; or can it be done now and be effective? I am told it is too late to do anything this year, but I fear the trees will not live through winter as the girdling is very wide and complete.—G .H. S., Los Gatos.

(Answered by J. Robinson, Sebastopol.)

It is too late to do anything this year. The work should be done just before or just as the sap is starting in the spring. If the girdling is not all around the tree they will possibly live until time to do the work next spring. I presume the girdling is done under the surface otherwise it might me well to heap some earth up around the tree to protect the wound from the sun. When ready to do the work cut your scions about ¾ of an inch longer than the space you wish to bridge over; sharpen each end wedgelike; raise the bark below and above at the edge of the wound and insert your scions under the bark; put your scions close together; wax well with a melted wax; wrap it tightly with thin cloth and give it another good coat of wax over the cloth, and prune your trees back well.

WHICH ETTERSBURG HAVE YOU?

To the Editor: Would you advise planting out an acre of Ettersburg strawberries? I have grown many new plants from a few rows, but have been told they are not a good shipping berry. Are they an early berry?—W. D. B., Walnut Creek.

(Answered by Albert F. Etter, of Ettersburg.)

I could give a very definite answer if I knew which variety your correspondent refers to. When asking questions about Ettersburg strawberries, it should be remembered that the family is wider in point of variation than all the other varieties in general cultivation. The term "red as a strawberry" must some day be far from accurate, because today we have strawberries in all shades of red and pink, white and yellow as well. The system I am following in breeding will ever widen and create new forms of strawberries to meet wants for special purposes to better advantage than the ordinary sorts.

If your correspondent has Ettersburg No. 80, I can say that, as grown in this region, it is a very good shipping berry, and it is so rated in Oregon. I have never heard from any part of California that it was not a good market berry, and I have received letters from various parts of the State saying that it was a high-class market sort, and a more profitable sort to grow because it was so much more robust in growth.

Demand Germain's the original proven HAIRY PERUVIAN ALFALFA SEED

TRUE PURE Pedigreed TO TYPE

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Raise more and better alfalfa—plant Germain's proven, re-cleaned, easily-germinated Hairy Peruvian Alfalfa Seed.

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Write for descriptive price list. Get your plants from the grower.

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CALIFORNIA'S VITICULTURAL RECORD.

Written for the Pacific Rural Press.

Where is he or she who on the morning after constitutional prohibition made its debut, "the morning after the night before," reached forth for the pitcher of ice water and after the "coppers" were cooled in a "quoth the raven nevermore" tone of voice, said, last night the sun went down upon a crimson, dizzy world, a world of youth and old romance. Today the sun looks forth upon a stark and austere world, its pleasures muted and its midnight laughter stilled, its loins cased in sack-cloth, and gray ashes in its hair. We went to bed as children of the moon, we now arise as pilgrims in a strange bleak land. Where the crimson poppy reared its flaming mouth are strewn the desolate sands of Nevermore. Where once the purple vine gushed forth there stands naught save the gnarled gray stems and shriveled leaves. The sale of the product from those "gnarled gray stems" are not in keeping with the prophecies of a bioused mind. One has but to keep in touch with the daily auction sales to realize that the wine grape is very much in evidence. Not just satisfied in our mind as to the correctness of some of the fabulous prices reported, we took the matter up with W. D. Bennett, sales manager of the California Fruit Exchange of Sacramento, to receive the following:

"Referring to your favor of October 8th, beg to state that the sale you refed to of Alacante Bouchet in New York on October 6th, of $6,212.00 has since been topped by us by a sale in New York on October 7th, of Alacantes, car grossing $6,465.00. These were shipped by Rusconi from Washtoki under the Native Son Brand, packed in Los Angeles lugs. The average per lug was $5.32. Another record was made in the same sale for a car of Alacantes by the same grower in a ventilator box car in which the Alacantes averaged $5.12 per lug. We really consider the latter sale as a bigger accomplishment than even the car that sold at $5.32 in an iced car. This same shipper sold the past week six cars of Alacantes, part iced and part ventilated, for a gross of $35,087.00 which is an average of $5,848.00 per car."

To use the vernacular of the street "can you beat it?". It is within the memory of those born since the battle of Manilla Bay that Alacante Bouchet grapes were left on the vines for the hogs to clean up, not worth picking. If the grower took a chance he received from $8.00 to $10.00 per ton delivered at the winery and take it in three payments. It is problematical as to what the future holds in store for the wine grape, however, we would advise the grower to take good care of his vineyard, a few years like this will satisfy him with this worlds goods, and some one else can try their hand.

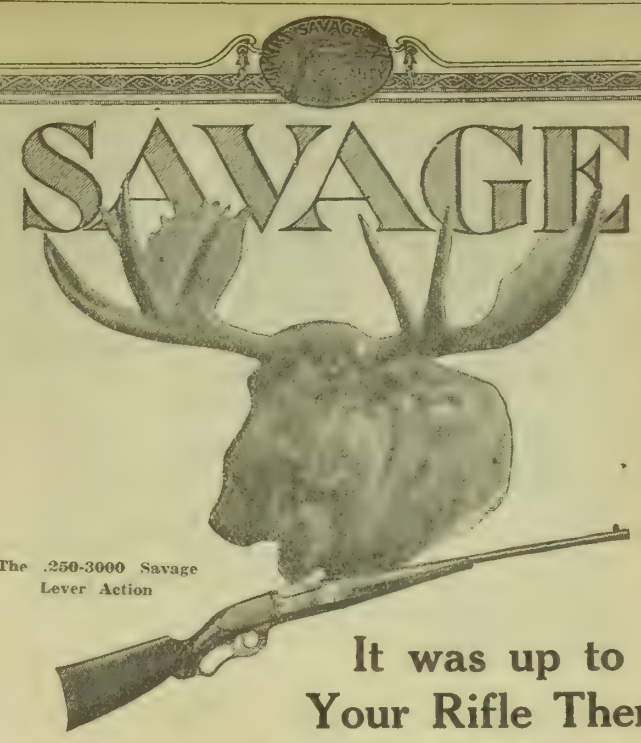
VINE MILDEWS—SPANISH MEASLES.

To the Editor: Is there any remedy for speckled blue Mildew on Thompson grapes? It seems entirely different from oidium or powdery mildew.—T. H. B., Woodlake.

(Answered by Prof. Bioletti.)

I have written notes so often for the Pacific Rural Press regarding blue, black, or green mildew or Spanish measles, or whatever the particular local name may be, that I am not sure whether there is anything to be gained by writing anything more about it. The more I see of this trouble the more convinced I am that its name is legion, and that it is not an infectious disease at all nor even a number of infectious diseases, but the result of several unfavorable conditions of which the principal is a deficiency or a lack of regularity in the water supply. It may be due to drouth, improper irrigation, or a condition of the soil which makes it difficult to get the water to the roots and to keep it there.

SAVAGE



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WHEN it's all over and you're back for another long stretch of work what have you to look back on? Did your trip come up to your expectations?

Do you look back on that one big chance—the only one your whole time out, when, after fighting through rocky gullies and scraggly bush, you sighted him—a big, black Bull Moose monarch of the forest and lakes—AND HE SIGHTED YOU?

It was up to your rifle then—one shot to do it—and you got him!

R. F. McClellan got his Moose with a .250-3000 Savage Rifle. Killed him with one shot at 1,100 steps—something over 1000 yards while the big bull was ramming through the underbrush to safety. The vicious little 87-grain bullet struck just in front of the hip joint on the left side—ripped through the whole length of the great body and was later found just back of the right shoulder between the hide and the flesh.

That's Mr. McClellan's testimony of Savage reliability. And mountain sheep, goats, and Alaska bear have fallen before his deadly accurate Savage Rifle.

The .250-3000 Savage Rifle is made in both lever action and bolt action models. See them at your dealer's or write us for complete descriptive catalogue.

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Fancy fig packing is now under headway at Clovis, at the packing plant owned by Mrs. Fred Hansen, located in Nees colony. The first shipment of the season was a special order for China and shipped direct..

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Farmers, Miners, Builders—people in every kind of business are saving money buying used or renewed pipe from us. We sell every kind of pipe. Send in a list of your requirements today and get our prices. We have saved hundreds of people 33 1-3 to 50 per cent on their pipe bills. Here's a partial list of some of the miles of pipe we have in stock for immediate delivery.

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700 ft.	8 in.	"	16 "
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1,000 ft.	18 in.	"	12 "
800 ft.	22 in.	"	14 "
300 ft.	24 in.	"	14 "
500 ft.	36 in.	"	12 "

10,000 feet light wrought iron 8-inch pipe with cast-iron collars.

All above pipe thoroughly overhauled and inspected and ready for immediate use.

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Break Up the Plow Sole

Continual cultivation of irrigated land will form in one season a thick impervious plow sole that deep plowing in the spring will not entirely destroy.

You can break up that plow sole—destroy it entirely—by blasting one or both sides of your trees this fall (just outside the foliage line) with

HERCULES FARM DYNAMITE

This breaks the plow sole—allows the water from the trench to get *underneath* it and melt it from the under side.

There's a heap of good "dope" for the Rancher and Orchardist in the Hercules Powder Co.'s 68 page book "Progressive Cultivation".

This book tells you how to plant trees, cultivate your orchards, subsoil, clear land and do many other things with the help of dynamite.

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MARIOUT and BELDI SEED BARLEYS

Large yields; quick growth; early maturity; more drouth resistant than other varieties known to us.

There is in California a very limited quantity of choice wheat and barley seed of these varieties. All our seed grown on new soils, one irrigation only. All water from deep wells; no Bermuda, Johnson or Morning Glory. Orders booked as received, shipments following consecutively.

We also have limited quantities Early Baart, Sonora, Diener's Hybrid-Baart and Diener's Hybrid Sonora Seed Wheats. This is our first year with last two varieties and data not yet sufficient to permit our making definite conclusions or recommendations. Both tiller well, permitting light planting, and neither shatters so badly as Sonora.

In our judgment Bunyip, Bayah and Dart Imperial wheats and Mariout and Beldi barleys yield more on less soil moisture and shatter less in wind than any grains we have grown.

We are also now booking cotton seed orders for late fall and winter delivery. Pure strains, Durango and Mebane, grown by us in selected, hand-rogued fields. We do our own ginning, carefully avoiding seed mixing.

We invite trial of our seeds for results with less moisture.

Write for prices, stating quantity desired.

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Buy from your local dealer or from

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Look for the Tag LOS ANGELES, CAL.

Agricultural and Mechanical Service

What Is "Carbon Fuel."

To the Editor: What are the merits of "carbon fuel?" Is it desirable for domestic purposes?—T. G. Y., Sacramento county.

"Carbon fuel" might cover any kind of fuel composed chiefly of carbon, such as coal dust pressed into bricquettes with or without oil. But probably the fuel being advertised is the soot from chimneys of plants which make gas from crude oil. This soot is pure carbon. Its use as fuel resulted from the necessity of gas plants in Los Angeles to find a way to dispose of their soot which was even more troublesome than rice hulls in the Sacramento Valley and Bay region. The Los Angeles gas plants were pioneers in California in using crude oil on account of its local production and the cost of coal. They periodically cleaned out their chimneys and dumped the soot into the Los Angeles River. Folks down the river finally voiced a strong enough protest to prevent this and a great pile of soot accumulated at the plants. Gas-factory chemists worked over the problem and finally hit on the idea of wetting it down, pressing it into bricquettes, and selling it for household fuel. It may be lighted in a cookstove by using a little more kindling than is used for soft coal. Then, if a plentiful supply of the fuel is kept on the fire, it will burn hot and smokeless after the nature of coke, which is another form of pure carbon. Practically no ashes are left. The chief drawback of "carbon fuel," aside from its tendency to quit burning if scantily replenished, is that if the bricquettes are broken and get on the fingers or carpet, they leave a regular soot mark. It costs half to three-quarters as much as coal and actually contains more heat units.

Fall-Planted Rice Matures Early.

Fall planting of rice has proved highly successful in getting a good stand and an early start the following spring in the experience of Christensen & Burmester of Glenn county. But they do not claim that their experience proves it could be done under other conditions of winter climate. Last year a heavy north wind in fall just before harvest shattered about a sack per acre of their Aikoku variety onto the ground. This was disked in immediately after harvest to protect it from birds. By the middle of last April the entire hundred acres was up an inch tall without irrigation and "every kernel sprouted." In the fall of 1918, a field of Wataribune shattered similarly but was not disked. In the following spring, nothing was done to it except run the water on. This produced 55 sacks per acre in 1919. Being near town, there were not enough ducks and other birds to pick it up or the stand would not have proved so good. Possibly in a wet winter, with water standing long on the ground, Wataribune might not come through. Birds are blamed for its failuure last spring, but Aikoku did volunteer in some water holes, so its success with well-covered fall planting looks reasonably assured.

Peruvian Alfalfa-Seed Mistake.

I saw an item in a recent issue about a farmer who raised seed of Peruvian and Chilian alfalfas. The Peruvian outyielded the other three to one in seed. I would like to sow ten acres of it. Please send me names of growers.—J. W. K., Lake county.

The farmer mentioned in the item delivered three times as much Peruvian alfalfa seed from the same area as that which produced a certain amount of Chilian seed. That fact indicates that he substituted and misnamed some of his seed, for the Peruvian certainly did not outyield common alfalfa in seed production to that extent. If it did, it would be of as little value for hay as a great deal of the imported seed which may be identified by the great tendency of the plants from it to produce more seed than hay. Hairy Peruvian, as tried throughout California, generally outyields the common variety for hay, but it is coarser and does not make the highest grades unless planted thickly and given plenty of water in order to maintain a very thick stand. Names have been sent to the subscriber.

Plowing Loose Straw with Disk.

What is the best method of plowing under standing stubble and also loose straw with a light four-disk tractor plow? The standing stubble prevents the furrow from turning completely over and loose straw balls up ahead of each disk. I do not wish to burn. A heavy iron drag placed ahead of the disks might flatten the stubble but would choke up with loose straw. —L. M., Mendocino County.

We have inquired from people over a stretch of several hundred miles; and the best we can say is to sharpen the disks frequently and load the frame as heavily as it will stand. If the disks are adjustable, set them practically vertical and at a 30-degree angle off from the line of draft. Use a disk scraper on each disk, setting it to give maximum aid in turning the furrow upside down. Note separate paragraph in next issue regarding the way the American Beet Sugar Co., at Chino, is turning under the densest kind of a tough growth of sweet clover and sunflowers six to eight feet tall with heavy tractor disk plows.

Raising Eucalyptus Windbreaks.

To produce about 200,000 eucalyptus seedings for windbreak in Monterey county, the California Orchard Co. planted the seed in a cold frame early in spring. The new seedlings were in July transplanted into flat boxes about two inches apart. Since they need moderate shade, they were then set into a lath house to harden and develop for planting across the orchard this winter.

ALFALFA AND BARLEY VARIETIES EXHIBITED.

(Written for Pacific Rural Press.)

"Farmers appreciate seeing crops grown from seed before they buy similar seed," said J. M. Bomberger of Modesto in showing us his significant exhibit of barleys and alfalfas.

Sample bundles were shown of Hairy Peruvian alfalfa grown: (1) on sandy land, which each year suffers late in the season for moisture; (2) on heavy land, which annually suffers late for moisture; and (3) on subirrigated land. Since drouth actually weakens the strongest and kills the weakest plants, areas which suffer every year for moisture cannot maintain good stands of any variety. Therefore, the samples shown were much coarser and shorter and perhaps less leafy than that grown on subirrigated areas.

"Smooth Peruvian," from the same field as number two above, showed the same height as the hairy variety, but finer stems.

Chilian alfalfa of the "dry land," "wet land," and "heavy land" strains were shown alongside of some alfalfa grown from imported seed planted last spring at the same time as the dry land Chilian. The Chilian was not blooming at all when cut, while the imported stock was full of bloom though only two-thirds as tall as the other.

The barley sheaves included one lot of Beldi, Mariout, and common. The Beldi yield was heavier than the common, but Mariout was heavier than either, though its straw grew only three-fifths as tall. These samples were grown in Wood colony on good soil with good moisture. Another exhibit included Mariout and Tennessee Winter barley grown on heavy land near Patterson. The Mariout yielded more, though it grew only three-fourths as tall.

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APIARY DEPARTMENT
CHICO, CALIFORNIA, U. S. A.

NEW DROUTH-RESISTANT PERENNIAL GRASS.

To the Editor: Answering your questions regarding my new Spencer grass: Prof. C. V. Piper, Chief Agrostologist of the United States Department of Agriculture, Washington, D. C., visited my experimental plot in August, 1917. He was well pleased with my experimenting with different grasses, and said he would send me about 20 different kinds of grasses to try out here in Los Angeles—some from South America, some from India and other parts of the globe. I received the grass seeds April 1, 1918, which I planted in rows. I watched their growth and development very carefully, as I was anxious to learn the good qualities of each, and those grasses that proved to be annuals I discarded, because I am only interested in perennials.

The best grass that I found among the different varieties belonged to the Guinea Grass family. However, it is not a Guinea grass, but is about halfway between the Guinea grass and Smilo grass in its habits. It is a much larger producer and grows faster than Smilo grass. The one row of real Guinea grass that I planted died when the first cold weather came in the early part of the winter. The second row, which looked somewhat like Guinea grass, only much finer, barely lived through the winter, except one bunch, which came from one seed and seemed to be a darker green and hardier and thriftier than the balance, caught my attention and I recognized it as being something better than the rest.

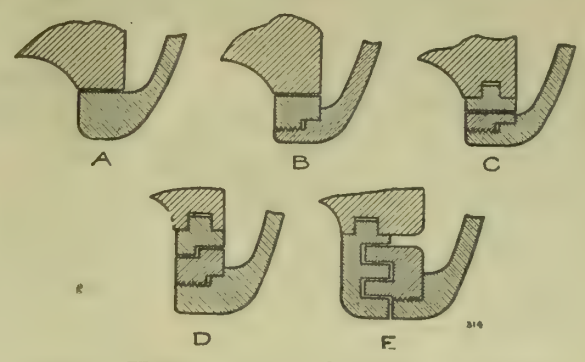
In the spring of 1919 I dug up this one plant, which I now call Spencer grass, and subdivided the crown and planted it in a row 30 feet long in the field, where it could get more sun and room. It went to seed in August, 1919, bearing considerable seed, but the birds gathered it and shattered it out as fast as it ripened, so that I was able to save very little seed from it. This 30-foot row staid green and grew a little during warm periods the past winter, which was quite cold here at times. The frost nipped it a little during the cold spells, but did not injure it any. I cut it off about two inches above the ground in March, 1920, and it is now seven feet high and bearing much seed. Like all perennial grasses, it grows much stronger and larger the second year.

The seed that fell on the ground in August and September, 1919, kept sound on the ground all winter, and thousands of tiny plants came up from the seed about the middle of March, 1920, although we had very little rain and the top surface of the ground was dry and hard. I was very busy at the time and could not take time to irrigate, so it lingered along about eight weeks until the little leaves began to turn brown and I thought it was about dead. I examined them and found the heart of these little plants alive, and then realized that any plant that would stand so much drouth and hardship while it was so young, was just what we needed in California. I then took time to make a ditch and irrigate it, and as soon as it received water it revived and grew wonderfully, and has grown about three feet high since the first irrigation, about three months ago. I think it will be an excellent grass for California on account of it being a hardy grass, a large producer and a good seeder, and best of all, it is a perennial; because of these good qualities, I call it Spencer grass. I have no seed or plants of Spencer grass for sale at present, as I want to experiment with it another winter and raise more before putting it on the market.—Eugene Spencer, Los Angeles.

It Makes Us Blush.

Editor Pacific Rural Press: I wish to compliment you on the general efficiency of your paper. It seems to me each issue gets better and better. Keep up the good work.—Albert Coupe, Napa Co.

DeLAVAL IRRIGATION PUMPS



High Efficiency Saves Power

Here are shown the five steps in the evolution of the DeLaval labyrinth rings. The advantages attained in reducing the leakage and increasing the clearances have led the DeLaval engineers to perfect the ring "E." This consists of two removable rings, one attached to pump casing, the other to revolving impeller. The intermeshing grooves greatly reduce leakage without the many disadvantages of the straight rings. These rings are made of bronze and thoroughly tested.

This is one of a series of advertisements explaining the different parts of the DeLaval Irrigation Pump.
Write us and learn what can be saved with High Efficiency Pumps.

HERZOG ELECTRIC & ENGINEERING CO.
179 Stewart St., San Francisco
(4)

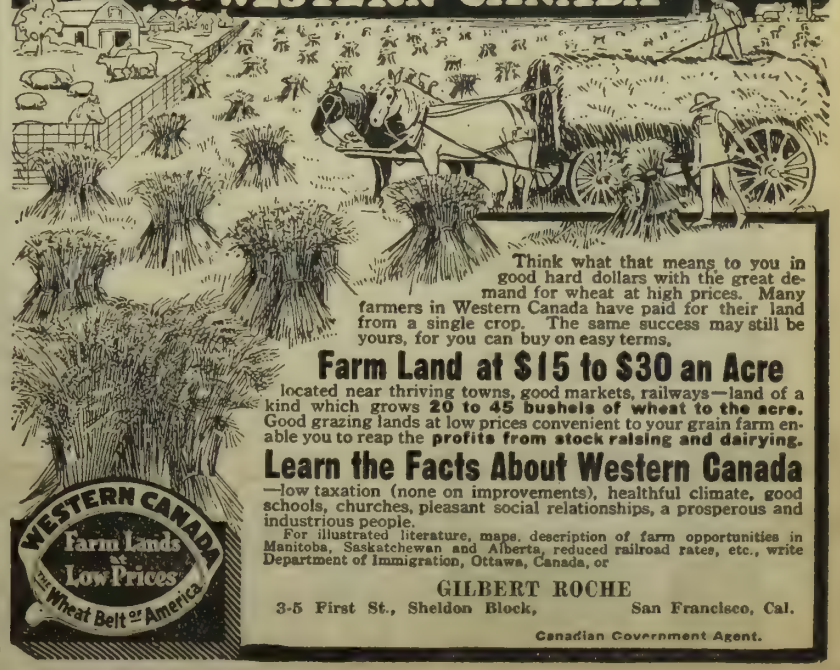
RED CROWN GASOLINE

The "Red Crown" sign stands for an all-refinery gasoline.

STANDARD OIL CO.
(California)

The Gasoline of Quality

Harvest 20 to 45 Bushel to Acre Wheat in WESTERN CANADA



Think what that means to you in good hard dollars with the great demand for wheat at high prices. Many farmers in Western Canada have paid for their land from a single crop. The same success may still be yours, for you can buy on easy terms,

Farm Land at $15 to $30 an Acre

located near thriving towns, good markets, railways—land of a kind which grows **20 to 45 bushels of wheat to the acre.** Good grazing lands at low prices convenient to your grain farm enable you to reap the **profits from stock raising and dairying.**

Learn the Facts About Western Canada

—low taxation (none on improvements), healthful climate, good schools, churches, pleasant social relationships, a prosperous and industrious people.

For illustrated literature, maps, description of farm opportunities in Manitoba, Saskatchewan and Alberta, reduced railroad rates, etc., write Department of Immigration, Ottawa, Canada, or

GILBERT ROCHE
3-5 First St., Sheldon Block, San Francisco, Cal.
Canadian Government Agent.

The Silent Alamo

-furnishes electric light and power for the country home. Runs without vibration. Write for catalog.

"Duro" Water Systems

The all-round water system for the household. Furnishes water under pressure at small cost. Send for catalog.

"Universal" Milking Machines

—enable dairy farmers everywhere to add hours to the day for other duties. Write for catalog.

Pumps

Horizontal pumps, Vertical pumps, Deep-well pumps, Direct-connected Outfits, etc. Write for catalog.

"Louden" Barn Equipment

Get 25 per cent more milk, save feed, and save labor, by making your cows comfortable with Louden Equipment. Write for catalog.

Gas & Oil Engines

We can furnish you with any kind of an engine in any size you require. Write for catalog.

*Name*_____

*Address*_____

Cut out this ad, sign your name, check the catalogs you want, and mail to us.

LOUDEN

Litter And Feed Carriers

Lift Barn Work Out Of The Drudgery Class

You can save half the time cleaning the barn and feeding your stock every day. You can cut out the back-breaking labor. You can quit scattering feed over the barn floor. You can put an end to the 50% loss in the fertilizing value of manure. You can do all this and more with Louden Litter and Feed Carriers. They move easier, lift more, and have no trouble-making, dangerous hit-or-miss ratchets, brakes or clutches. Built in any style.

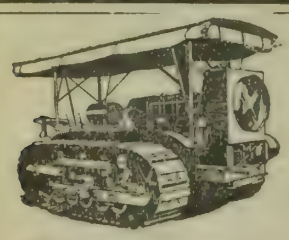
New 224-Page Illustrated Catalog Free

Tells you how to make your barn pay better. Describes entire Louden line of Stalls and Stanchions, Feed and Litter Carriers, Animal Pens, Hay Unloading Tools, Power Hoists, Detachable Water Bowls, Barn and Door Hangers, etc. We will also send you the Louden Barn Plan Book. *No Charge.*

California Hydraulic Engineering & Supply Co.

68 Fremont Street
San Francisco

420 E. Third St., Dept. A
Los Angeles



Working Capacity

The "Caterpillar" Tractor is more often purchased on the basis of its actual working capacity than on mere horsepower ratings. It is for that reason that it is so generally chosen in preference to other tractors of higher nominal rating. Big working capacity is the result of a liberal surplus of power over its rating, minimum transmission losses, non-slipping track, trouble-free performance.

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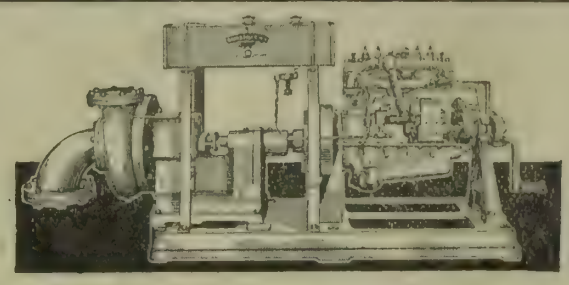
CATERPILLAR

Reg. U.S. Pat. Off.



All the Water You Want

(Clip Out and Mail)

BEAN SPRAY PUMP CO.
111 W. Julian Street
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*Distance to water below surface of ground*_____
*Probable distance to water when pumping*_____
*If water is to be raised above surface of ground, how high? (Length and size of pipe line)*_____
*Volume of water desired (Gals. per min.)*_____
*(Inches)*_____
*If you have pit, give width*_____ *length*_____
*depth*_____
*H.P. of motor or engine if you have that equipment*_____
*Give total depth of well*_____
*Inside Diameter of well*_____
*Is well straight and true?*_____
*Is electric power available?*_____
*Name*_____
*Address*_____
*Rural Route No.*_____
(50-P2) *Box*_____

You don't have to conserve on power if you own this Bean Direct-connected Engine and Pump. You can pump all day and all night if you want to.

Runs as smooth as an electric driven unit. The water pours from the discharge in a steady flood. Runs 10 hours on 6 or 7 gallons of fuel.

The outfit consists of a sturdy 4-cylinder engine direct-connected to a Bean Universal 4-inch Pump, the pump with the water-sealed stuffing box, automatic water balance, and other valuable features.

Send the coupon for Bean catalog of Horizontal, Vertical, and Deep-well Pumps, and Direct-connected outfits.

BEAN SPRAY PUMP CO.
111 W. JULIAN ST., SAN JOSE, CALIF.
Branches: Fresno Los Angeles

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Centrifugal Pumps

JOHNSTON

TURBINE CENTRIFUGAL PUMPS

Installations can be made in wells 10 in. or larger. Produce 300 to 4000 gallons per minute. Ask for Folder No. 7.

AMERICAN WELL & PROSPECTING CO.,
407 E. 3rd St.,
Los Angeles

Mariout Barley

COMPENTENTLY TESTED FOR PURITY. GOOD, CLEAN SEED OF HIGHEST QUALITY FROM HEAVY-YIELDING STOCK.

H. G. STEVENSON, JR. **Winters, Cal.**

FEDERATION OF AMERICAN FARMERS.

The efforts of the Federation of American Farmers to secure for the farmers of the West Side Irrigation district, power for the operation of their pumps for the flooding of their lands in preparation for the next year's crop of grain, have been crowned with success and the operation of the pumps began on October 1st.

Full and continuous service has been promised by the Pacific Gas & Electric Company for a period of thirty days when, it is hoped, rains in the mountains will have fallen to fill the reservoirs and thus permit of sufficient power to keep the pumps going for the full time necessary for the complete flooding of the acreage.

The West Side of San Joaquin county is said to be the only section in California where grain lands must be flooded in the fall to ensure a crop for the next year. The preparation of the lands for the water and the seeding is a matter of large expenditure, and the amount spent for this work would be thrown away unless water could be assured in the months of October and November. Therefore, the news that this Federation had been successful in securing the assurance of water for the district, in the present power and water shortage, was welcome news to the interested farmers and to the people of the county and State.

The lands so benefited cover approximately 10,000 acres and the smallest estimate of yield is 200,000 bushels of grain, the cutting off of which would have been a calamity at this time, when grain lands in California are being turned to other crops and increasing shortages in grain production are reported from all over the world.

Railroad Commission.

Another matter in which the Federation of American Farmers has been successful is in gaining recognition for the farmers' needs from the State Railroad Commission. This concerned several farmers near Campbell, Santa Clara county, who had been denied electric service by the power company, though two power lines passed their doors.

Being denied this service, they appealed to the railroad commission for relief and after considerable correspondence, they were informed, on April 6, 1920, that an engineer would be sent at once to make a personal examination of conditions and take action in the matter.

The farmers waited patiently for the expected visitor and wrote at intervals to the commission concerning the projected visit, but received no satisfaction. Therefore, about September 1st, a complaint was made to this organization with the request that something be done to get some settlement of the matter from the railroad commissioner or the power company.

A committee was appointed to wait on Governor Stephens in regard to the dilatoriness of the railroad commission in fulfilling its promises of investigation and its apparent apathy in the farmers' case. The committee, headed by State Chairman McDonald, called at the Governor's office and, finding His Excellency absent, presented their case to Private Secretary Martin C. Madsen in full, together with copies of the papers and correspondence.

Later Mr. Madsen advised this Federation that he had made complaint to the railroad commission and that "the commissioners were very much surprised and asked me to obtain from your committee full particulars. It is the purpose of the commission to give such a representative organization full opoprtunity for presentation of any matter they may desire to offer."

The outcome of the affair is best told in the letter of thanks forwarded to Governor Stephens by the Federation: "We are very glad to be able to report that two days after our letter asking for assistance was forwarded to you, an engineer from the railroad commission visited the Henderson

farm, near Campbell, Santa Clara county, and after a thorough investigation, issued orders for the immediate installation of the service and this order was obeyed to the complete satisfaction of the interested farmers."

The Federation of American Farmers has appointed a committee composed of two members from each county unit, to consider and report on the initiative propositions which will appear on the November ballot, in their effect upon the farming industry of the State. The individual reports of the committeemen will be submitted to the State Board of Directors for consideration and upon these reports will be formulated the action of the federation membership.

The initiation of the recent suits against the California Raisin Growers by the great private, profiteering organizations, acting through the Attorney General of the United States, has aroused great apprehension in the minds of all farmers engaged in cooperative marketing. They see in this persecution the beginning of a general attack upon the farmers and growers who have united in selling their products direct to the consuming public, without the intervention of middlemen, who took enormous profits without rendering any necessary service.

Backing Raisin Growers.

The Federation of American Farmers has gone to bat for the raisin growers and will use all its power and influence to have these suits dismissed. A committee of the organization has taken the matter up with high officials at Washington, including President Wilson, asking that General Palmer and his subordinates be called off from their present activities in the cause of "big business" as against the essential producer and the ultimate consumer.

That nothing more has been heard about the suits instituted in this state against the milk producers is a proof of the power and influence of the organized farmers. The efforts and activities of this federation, which were so effective in that case, will be duplicated, only on a far larger scale, if these persecutions against the farmers are allowed to continue. The question as to whether the farmer must yield to the domination of the middlemen or whether he shall be allowed to raise his crops in peace and market them direct to the consumer, depends upon the issue in the present prosecution. In the settlement of that question the Federation of American Farmers proposes to take an active part on the side of the farmer and consumer.

The Tomato Growers.

The condition of the tomato growers is most deplorable, especially in Santa Clara county, where thousands of tons of ripe tomatoes will never be harvested. This is because the banks will not loan the money necessary to harvest the crops and get it into the cans. Their attitude in the matter is said to be due to the large stocks of canned tomatoes held by the government and the fact that these goods are put on the market at a price below the cost of production.

The Federation has done everything possible to help the growers in their dilemma. A committee was sent to the Federal Reserve banks in San Francisco to ask for relief, only to be informed that no relief could be given. This visit further proved that "Federal Reserve," as applied to banks, is a misnomer; that they do not handle one dollar of government reserve funds, but only private capital, which they can loan to banks affiliated with them.

Canneries have broken contracts right and left and there will undoubtedly be an aftermath of expensive litigation. Inspectors have been appointed by the State authorities and paid by the cannery owners for the purpose, apparently, of rejecting tomatoes offered for canning, on contracts which the canners do not wish to carry out. Over-ripe, watery, or imperfect fruit are rejected, and there is little doubt that there are a score of ready-made reasons why the growers' product should be rejected, if the canneries do not want them delivered. That the government overstock should be responsible for such a condition as is outlined here seems incredible, but so it is.

SUMMARY OF THE PRESENT COTTON CONDITIONS.

Liquidation in the current month delivery in reflecting the lack of immediate demand on spot cotton in the New York market, owing to the recent curtailment by northern mills, registered a loss of one cent a pound for this option and had influence to a lower range of prices in the more deferred futures from one to two dollars a bale. Eastern mills report a falling off in sales for the week, and many reports from the dry goods quarter complain of lack of business.

The buying power appears to be very limited. As a consequence of the conditions maintained. However the feeling is that there is no particular sign of any distinct weakness. The Department of Agriculture Bureau of Crop Estimate has this to say: "A further decline of two points in the condition of cotton was reported as of September 25. The poor stand, the late planting, the adverse weather conditions up to the last of June, and experiences of growers in the newly planted districts are largely responsible for present conditions. Last year's crop was 103,700 bales picked from 185,000 acres, average of 268 pounds of lint per per acre."

Lee Union-Alls

The most popular work and play garment in America

The millions of Americans who are wearing LEE UNION-ALLS insist on the trade-mark not merely because of the great comfort and convenience of these nationally famous garments but because they reduce substantially the high cost of living.

They're not Union-Alls Unless they're Lee

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The H. D. Lee Mercantile Co.

Kansas City, Mo. Kansas City, Kas. Minneapolis, Minn. St. Louis, Mo. South Bend, Ind. Trenton, N. J. Chicago, Ill. San Francisco, Cal. Los Angeles, Cal.

40 Cords a Day

Easily Sawed by One Man with new OTTAWA. Get your own fuel at less than 2c a cord, then supply big demand for fire wood at $20 a cord up. **Beat the Coal Shortage!**

OTTAWA LOG SAW

Over 4 H-P. 310 strokes a minute. Wheel-mounted. Easy to move, cheap and easy to run. Engine runs other machinery when not sawing. New clutch lever starts and stops saw while engine runs. Cash or Easy Payments. 30 Days' Trial. 10-Year Guarantee. Send for Big FREE BOOK and Special Low Factory Price NOW. Write to

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60,000 feet
Government Standard
WROUGHT IRON PIPE
2 to 12 inches. Like new
25 to 50 per cent off list price.
Everything for Building
SYMON BROS.
1527 Market Street
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CRESOLITE

makes
STUMPS HUMP
also willows and all brush. Money back if it don't.
LOUIS BAHRS, Loomis, Cal. Agents wanted.

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BLAZING-AWAY-IN-COST-DEFENCE!

A clean burning and reliable oil-gas burner for all domestic purposes.

Burner and Valve Prepaid $8.50

Write for circular. Live agents wanted.

SCIENTIFIC SPECIALTIES CO.
Manufacturers
2411 S. Main St., Los Angeles

Big Money Boring Wells

One Man One Team

Have water on your own farm. In spare time make wells for your neighbors. It means $1000 extra in ordinary years, double that in dry years. No risk—no experience needed.

Outfits for Getting Water Anywhere

Earth augers, rock drills and combined machines. Engine or horse power. *Write for easy terms and free catalog.*

LISLE MFG. COMPANY
Box 712 Clarinda, Iowa

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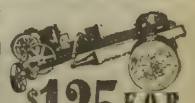
LEVER CONTROLLED
Log Saw $125 F.O.B. K. C.



Engine, Saw, Etc., all complete. From Pittsburgh add $6.50. Ask for Terms. Folder FREE.

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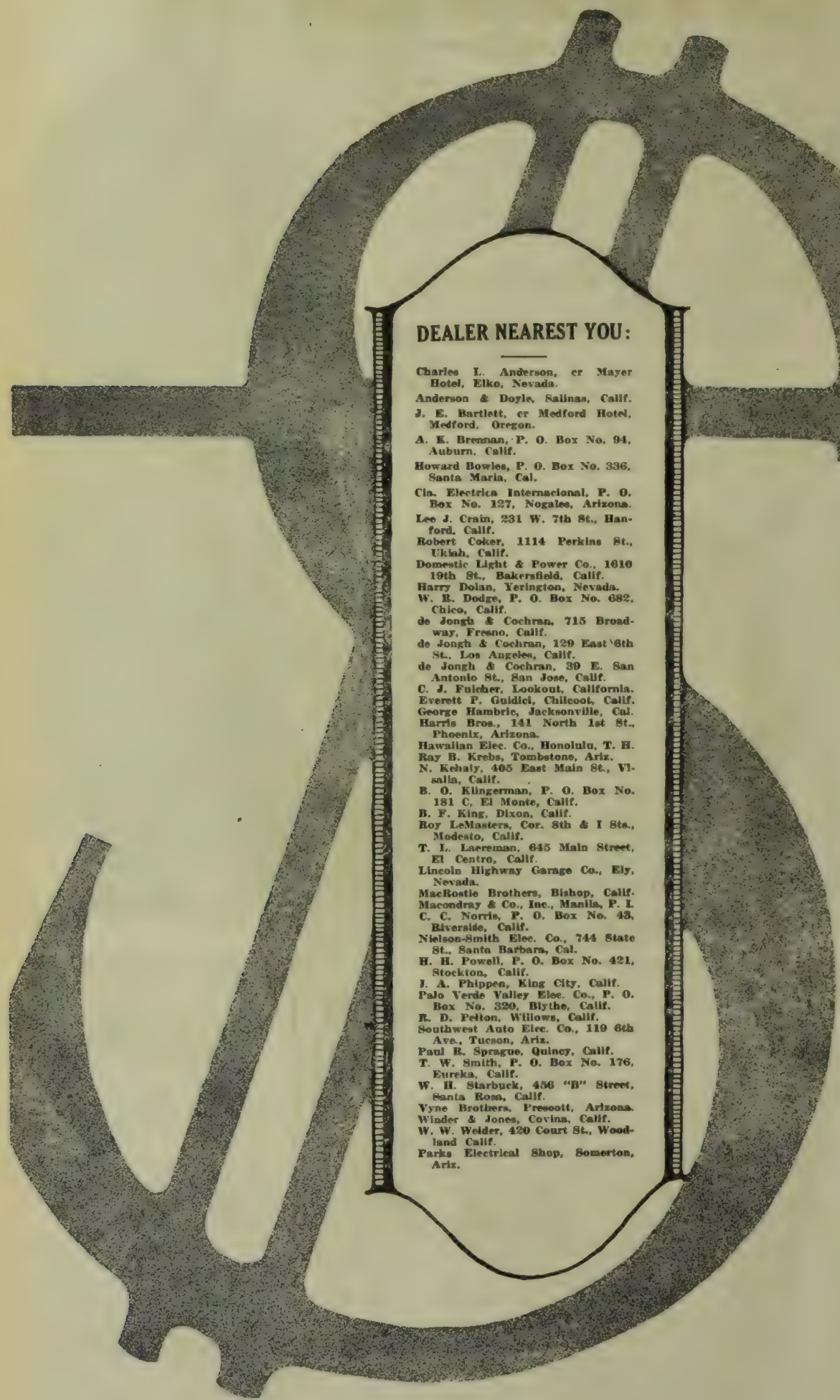

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Anderson & Doyle, Salinas, Calif.
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Howard Bowles, P. O. Box No. 336, Santa Maria, Cal.
Cia. Electrica Internacional, P. O. Box No. 127, Nogales, Arizona.
Lee J. Crain, 231 W. 7th St., Hanford, Calif.
Robert Coker, 1114 Perkins St., Ukiah, Calif.
Domestic Light & Power Co., 1610 19th St., Bakersfield, Calif.
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de Jongh & Cochran, 715 Broadway, Fresno, Calif.
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C. J. Fulcher, Lookout, California.
Everett P. Guidici, Chilcoot, Calif.
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Harris Bros., 141 North 1st St., Phoenix, Arizona.
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Lincoln Highway Garage Co., Ely, Nevada.
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C. C. Norris, P. O. Box No. 43, Riverside, Calif.
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880 Mission Street, San Francisco — 39 E. San Antonio St., San Jose
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I have a house of.....rooms, ...barns and .....outbuildings.
Prove to me how **DELCO-LIGHT** on my farm will pay for itself.

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sell for $600—the 1 kilow
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of increased capacity will
r $675—the 1¼ kilowatt
d labor load of your farm,
carry it.

armers of America follows
LIGHT for the past five
ft the farm for the front,
saving relief.

Higher wages for farm help are established. But present DELCO-LIGHT wages, paid in the form of fuel costs and upkeep, only amount to from 5 to 10 cents per day on the average farm. For this sum, the house and outbuildings equipped with labor-saving devices and also brilliantly lighted have complete service from an individually-owned electric light and power plant.

DELCO-LIGHT is standardized mechanically and stabilized in price. To-day, you know just what the cost will be to own and operate this profit-making, fool-proof plant. You are safeguarded at every step in its purchase. You cannot make a mistake.

You are invited to make a 30-day test on a money-back guarantee before purchasing. Demonstrate for yourself that DELCO-LIGHT operates at a cost of a few cents a day. Any user of DELCO-LIGHT—there are more than 3000 on the Pacific Coast alone—will tell you why he believes the plant will last a lifetime, and it will. It is ready for service on delivery.

ORDER a plant today from the **DELCO-LIGHT** dealer nearest you. He will install it immediately and your personally-conducted test begins. Have **DELCO-LIGHT** in operation before the days shorten. Watch it call a halt to the knocking-off of work because of darkness. Know what it means to live in a home like more than 100,000 **DELCO-LIGHTED** homes in the country. They no longer have drudgery. You need not. Put some of your crop money in **DELCO-LIGHT** today. It will pay you highest interest. And you'll get back the principal, too, because **DELCO-LIGHT** pays for itself quickly. Sold on your own choice of terms on a money-back guarantee.

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LOS ANGELES
129 E. Sixth Street

FRESNO
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SAN JOSE
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n night without light
n hour without power

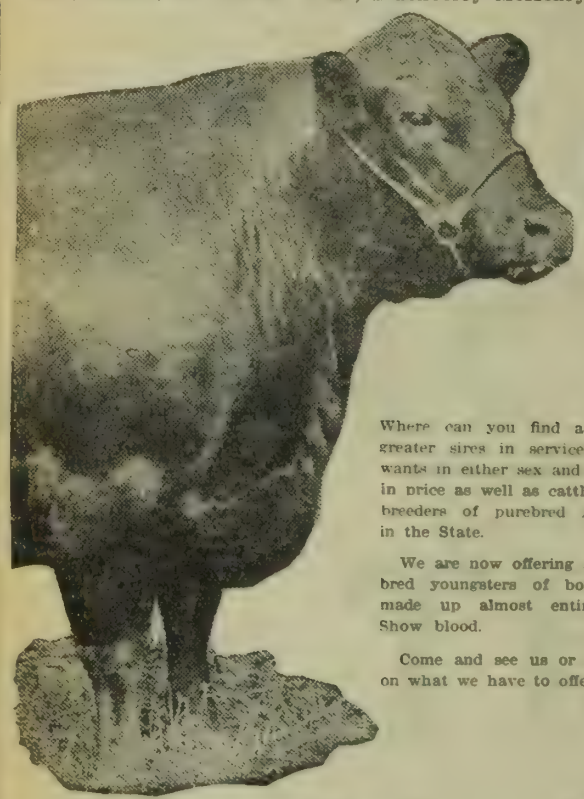
BROOK HOLLOW FARM

ABERDEEN-ANGUS CATTLE

HERD HEADED BY

QUINCY LAD 2ND, NO. 173126

Sire, Equity Boy, No. 144180. Dam, Della Queen, No. 112131.
Junior Sire—BLACK CAPON, No. 185820
Sire, Erston, No. 135728. Dam, Blackberry McHenry 81st, No. 125467



Purebreds Increase Profits

Where can you find a combination of two greater sires in service? We can fill your wants in either sex and guarantee satisfaction in price as well as cattle. We are the largest breeders of purebred Aberdeen-Angus cattle in the State.

We are now offering some very fashionably bred youngsters of both sexes. Our herd made up almost entirely of International Show blood.

Come and see us or write for information on what we have to offer.

Brook Hollow Farm

HOLLISTER, CALIFORNIA

Registered

62 HEREFORD FEMALES 62

At Public Auction

THURSDAY, NOVEMBER 18, 1920

Some months ago the owners purchased the entire herd of registered Herefords, numbering 180 head, from Kiesel Land & Cattle Co., in Oregon, a larger herd than they care to carry, and this sale will be the medium for disposing of a part of the herd.

These cattle will be presented for sale in just thrifty condition. They are range-raised and used to rustling for themselves, and should be a most useful lot of breeding females as the foundation for new herds.

LOOK AT THESE AGES!

Four of these females were born in 1913, eight in 1914, one in 1915, five in 1916, twenty-two in 1917, thirteen in 1916, eight in 1919, and there is one old cow in the lot.

Sixteen of them have calves at foot, and all the balance are either in calf or at breeding age. Many of them are in calf to **BEAU BLANCHARD 37TH**, son of the famous Beau Blanchard, and there are also ten daughters of this bull in the offering.

Owners:

FINNELL STOCK FARMS CO., GALT, CALIF.

For catalog write to management

Auctioneers:
COL. BEN A. RHOADES, Los Angeles.
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Management
CALIF. BREEDERS' SALES & PEDIGREE CO.
C. L. HUGHES, Sales Manager, Sacramento, Calif.

GLOBE "AI" FEEDS

-Judge them on Business Principles!

FEED FOR SWINE STOCK AND POULTRY

ASK YOUR DEALER

THE L. A. LIVE STOCK SHOW.

(Continued from page 502.)

Worthy E. Marks, P. O. Box 332, Placerville.

and many visitors from other parts of the state held an electric sort of meeting October 7 at the Los Angeles Livestock Show. Many vital discussions occurred as recorded in a separate article.

BEEF CATTLE.

Herefords.

Exhibitors: Babbitt & Cowden, Cashion, Ariz.; Wm. Briggs & Son, Dixon; John H. Cazier & Sons Co., Wells, Nev.; G. W. Emmons, Danville; Glendale Stock Farm, Aspen, Colo; Thomas & Hill, Los Angeles; Romie C. Jacks, San Francisco; D. H. Ogden, Alpine.

Bull 3 years old or over—1st, Jacks, Paragon Dare; 2d, Babbitt & Cowden, Bonnie Donald; 3d, Babbitt & Cowden, Beau Bonnie; 4th, Glendale Stock Farm, Polled Gay Lad; 5th, Emmons, Grove's Perfection.

Bull 2 years old and under 3—1st, Cazier, Beau Blanchard 76th; 2d, Jacks, Woodford 34th; 3d, Emmons, Junior Grove.

Senior Yearlings Bull — 1st, Jacks; Beau Blanc Visage 9th.

Junior Yearling Bull—1st, Cazier, Nevada Lad 72nd; 2d, Jacks, Wyoming's Type; 3d, Glendale Stock Farm, Woodford Grove; 4th, Glendale Stock Farm, Briton Bride.

Senior Bull Calf—1st, Glendale Stock Farm, Bonnie Repeater 2nd; 2d, Jacks, Crimean 1st; 3d, Hill, Beau Primrose.

Junior Bull Calf — 1st, Cazier, Blanchard 1st; 2d, Briggs, Pilot; 4th, Emmons, Diablo's Fearless.

Cow 3 years old or over — 1st, Glendale Stock Farm, Pearl; 2d, Briggs, Miss Dale; 3d, Jacks, Miss Debonair 4th.

Cow or Heifer 2 years old and under 3—1st, Jacks, Bocaldo Beauty; 2d, Jacks, Ga. Princess 10th; 3d, Glendale Stock Farm, Woodford Lady P.; 4th, Briggs, Beauty; 5th, Emmons, Polled Laura.

Senior Yearling Heifer — 1st, Briggs, Miss Era 14th; 2d, Cazier, Carnation Girl 2d; 3d, Briggs, Golden Lass 22nd.

Junior Yearling Heifer—1st, Jacks, Ruth Domino; 2d, Jacks, Belle Grove; 3d, Briggs, Lady Fairfax 9th; 4th, Glendale Stock Farm, Miss Woodford; 5th, Cazier, Circe 5th.

Senior Heifer Calf—1st, Cazier, Carnation 4th; 2d, Glendale Stock Farm, Lady Beatrice; 3d, Jacks, Miss Domino 9th; 4th, Briggs, Dale's Victory; 5th, Cazier, Nevada 5th.

Junior Heifer Calf—1st, Briggs, Beth; 2d, Jacks, Dainty Dare; 3d, Emmons, Amy Diablo; 4th, Glendale Stock Farm, Belle Grove 5th; Glendale Stock Farm Maud Grove.

Senior Champion Bull—Cazier, Beau Blanchard 76th. Reserve Senior Champion Bull—Jacks, Paragon Dare.

Junior Champion Bull—Cazier, Blanchard 1st. Reserve Junior Champion Bull—Glendale Stock Farm, Bonnie Repeater 2nd.

Senior Champion Cow — Jacks, Bocaldo Beauty. Reserve Senior Champion Cow—Glendale Stock Farm, Pearl.

Junior Champion Heifer—Jacks, Ruth Domino. Reserve Junior Champion Heifer—Cazier, Carnation 4th.

Grand Champion Bull—Cazier, Beau Blanchard 76th. Reserve Grand Champion Bull—Cazier, Blanchard 1st.

Grand Champion Cow or Heifer—Jacks, Ruth Domino. Reserve Grand Champion Cow or Heifer—Jacks, Bocaldo Beauty.

Aged Herd—1st, Jacks; 2d, Glendale Stock Farm.

Young Herd—1st, Cazier; 2d, Glendale Stock Farm.

Calf Herd—1st, Cazier; 2d, Glendale Stock Farm.

Four Animals of either sex—1st, Cazier's; 2d, Glendale Stock Farm.

Shorthorns.

Exhibitors: Wm. Bond, Newark; Thos. B. Dibblee Estate, Lompoc; Diersen & Vaughn, Sacramento; Easton & Ward, Diablo; T. S. Glide, Davis; Pacheco Cattle Co., Hollister; Howard Vaughn, Sacramento.

Bull 2 years old and under 3—1st, Easton & Ward, Blackhawk Villager; 2d, Pacheco Cattle Co., Dalmeny Count; 3d, Glide, Scottish Lord; 4th, Bond, Cumberland Gloster; 5th, Vaughn, Right Sort Jr.

Senior Yearling Bull—1st, Dibblee, Baron Lancaster; 2d, Glide, Cheerful Count.

Junior Yearling Bull—1st, Glide, Spicy Count; 2d, Pacheco Cattle Co., Amanda's Dale.

Senior Bull Calf—1st, Pacheco Cattle Co., Pacheco Lad 215th; 2d, Dibblee, Silver Cup; 3d, Glide, King's Count; 4th, Dibblee, Baronson; 5th, Easton & Ward, Blackhawk White Beau.

Junior Bull Calf — 1st, Bond, Cumberland Goods; 2d, Dibblee, Royal Clansman; 3d, Dibblee, Sterling Lancaster; 4th, Pacheco Cattle Co., Pearl's Pacheco.

Cow 3 years old or over—1st, Glide, Little Sweetheart; 2d, Pacheco Cattle Co., Pacheco Lass 80th; 3d, Dibblee, Bright Bess of Collynie; 4th, Bond, Mayfield Victoria.

Cow or Heifer 2 years old and under 3—1st, Pacheco Cattle Co., Golden Beauty; 2d, Bond, Ormondale Maid 2d; 3d, Glide, King's Countess; 4th, Easton & Ward, Blackhawk Roan Lady; 5th, Easton & Ward, Blackhawk Queen.

Senior Yearling Heifer—1st, Pacheco Cattle Co., White Pacheco; 2d, Glide, Village Rose; 3d, Glide, King's Countess 2nd; 4th, Pacheco Cattle Co., Pacheco Bloom; 5th, Dibblee, Orange Blossom A.

Junior Yearling Heifer—1st, Pacheco Cattle Co., Pacheco Doris; 2d, Bond, Cumberland Maid; 3d, Glide, Village Girl; 4th, Easton & Ward, Blackhawk Roan Lady 2d; 5th, Dibblee, Secret Clipper.

Senior Heifer Calf—1st, Pacheco Cattle Co., Sultan's Dale; 2d, Dibblee, Village Ruby; 3d, Glide, Hillcrest Flower 3d; 4th, Easton & Ward, Blackhawk Victoria 2d; 5th, Dibblee, Village Fair Girl.

Junior Heifer Calf—1st, Pacheco Cattle Co., Pacheco Doris 2nd; 2d, Pacheco Cattle Co., Pacheco Lass 213th; 3d, Dibblee, Lavender Queen 5th; 4th, Dibblee, Princess Royal; 5th, Easton & Ward, Blackhawk Victoria 3rd.

Senior Champion Bull — Easton & Ward, Blackhawk Villager.

Junior Champion Bull—Pacheco Cattle Co., Pacheco Lad 215th.

Reserve Junior Champion Bull—Glide, Spicy Count.

Senior Champion Cow—Glide, Little Sweetheart.

Reserve Senior Champion Cow—Pacheco Cattle Co., Golden Beauty.

Grand Champion Bull—Easton & Ward, Blackhawk Villager.

Aged Herd—1st, Pacheco Cattle Co.; 2d, Glide; 3d, Bond.

Young Herd—1st, Pacheco Cattle Co.; 2d, Glide; 3d, Dibblee.

Calf Herd—1st, Pacheco Cattle Co.; 2d, Dibblee; 3d, Glide; 4th, Dibblee.

Cattle Co.; 2d, Easton & Ward; 3d, Bond;

Four Animals, either sex—1st, Pacheco 4th, Glide.

Tdo Animals, either sex—1st, Pacheco Cattle Co.; 2d, Bond; 3d, Glide; 4th, Glide.

DAIRY CATTLE.

Ayrshires.

Exhibitors: A. MacMinn, Litchfield, Ariz.; E. B. McFarland, San Mateo.

Bull 3 years old or over—1st, MacMinn, Dairy King of Arizona; 2d, McFarland, Steybrae Improver.

Junior Yearling Bull—1st, McFarland, Ayrmont 366.

Senior Bull Calf—1st, MacMinn, Tam O'Shanter; 2d, McFarland, Ayrmont 079B; 3d, McFarland, Ayrmont 080B.

Junior Bull Calf—1st, McFarland, Steybrae Douglas; 2d, MacMinn, Litchfield Butter Boy; 3d, McFarland, Steybrae Queechy; 4th, MacMinn, Litchfield Majestic.

Cow 4 years old or over—1st, McFarland, Willowmoor Vesta 4th; 2d, McFarland, Willowmoor Nan; 3d, McFarland, Ada Rome of Willow Oak.

Cow 3 years old and under 4—1st, MacMinn, May Deene of Mesa; 2d, McFarland, Steybrae Elka; 3d, MacMinn, University Ivy Rose; 4th, McFarland, Steybrae Grace Darling; 5th, McFarland, Steybrae Nancy.

Heifer 2 years old and under 3—1st, McFarland, Steybrae Nona, 2d, MacMinn, Arizona Snowdrop; 3d, McFarland, Burnside Miss Century.

Senior Yearling Heifer—1st, MacMinn, Annie Rooney; 2d, McFarland, Ayrmont 357; 3d, MacMinn, Sweet Marie; 4th, McFarland, Ayrmonth 356.

Junior Yearling Heifer—1st, McFarland, Steybrae Gem; 2d, MacMinn, Ayrshire Lass; 3d, MacMinn, Bonnie Jean; 4th, McFarland, Steybrae Elta.

Senior Heifer Calf—1st and 2d, MacMinn; 3d, 4th and 5th, McFarland.

Junior Heifer Calf—1st, 2d, 3d and 4th, MacMinn; 5th, McFarland.

Senior Champion Bull—MacMinn, Dairy King of Arizona.

Junior Champion Bull — McFarland, Ayrmont 366. Reserve—MacMinn, Steybrae Douglas.

Senior Champion Cow—McFarland, Willowmoor Vesta 4th. Reserve—MacMinn, May Deene of Mesa.

Junior Champion Heifer—MacMinn, Annie Rooney. Reserve—McFarland, Steybrae Gem.

Grad Champion Bull—MacMinn, Dairy King of Arizona. Reserve—McFarland, Ayrmont 366.

Grand Champion Cow or Heifer—McFarland, Willowmoor Vesta 4th. Reserve—MacMinn, Annie Rooney.

Aged Herd—McFarland; 2d, MacMinn.

Young Herd—1st, McFarland.

Calf Herd—1st, MacMinn; 2d, McFarland.

Four Animals, either sex—1st, McFarland; 2d, MacMinn; 3d, MacMinn; 4th, McFarland.

Two Animals, either sex—1st, McFarland; 2d, MacMinn; 3d, McFarland; 4th, MacMinn.

Five Cows—1st, McFarland.

Guernseys

Exhibitors: W. H. Dupee, Santee; Brant Rancho, Owensmouth; Hollow Hill Farm, Colton; A. B. Humphrey, Escalon.

Bull 3 years old or over—1st, Brant Rancho, May King of Fern Ridge; 2d, Humphrey, Escalon Challenger.

Bull 2 years old and under 3—1st, Humphrey, Nobleman of Maple Hill; 2d, Hollow Hill Farm, Topper Langdon of H. H. F.

Senior Yearling Bull—1st, Dupee, Veda's May King of Edgemoor; 2d, Dupee, Masterpiece of Edgemoor.

Junior Yearling Bull—1st, Hollow Hill Farm, Reuben King of H. H. F.; 2d, Dupee, Imperator of Edgemoor.

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7 Firsts and 5 Second Prizes

Shropshire and Merino Sheep

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Single or in Carload Lots

T. S. GLIDE, Prop. DAVIS, CALIFORNIA

Senior Bull Calf—1st, Hollow Hill Farm, Carl E. King of H. H. F.; 2d, Humphrey, Escalon Advancer; 3d, Brant Rancho, Apollo of the Rancho; 4th, Dupee, Checkmate of Edgemoor.

Junior Bull Calf—1st, Humphrey, Escalon Rex; 2d, Hollow Hill Farm, Reuben Langdon of H. H. F.; 3d, Dupee, Man O'War of Edgemoor; 4th, Brant Rancho, Show Boy of the Rancho.

Cow 4 years old or over—1st, Dupee, Cheminante 11th; 2d, Dupee Florham Dame; 3d, Hollow Hill Farm, Imp. Dene Jewel; 4th, Hollow Hill Farm, Cherry 3rd of the Effards; 5th, Hollow Hill Farm, Imp. Buttleware Mistletoe.

Cow 3 years old and under 4—Brant Rancho, Golden Glen Pansy; 2d, Brant Racho, Jeanne of Green Lodge; 3d, Brant Rancho, Dorothea of Green Lodge; 4th, Hollow Hill Farm, Rosa King of H. H. F.

Heifer 2 years old and under 3—1st, Brant Rancho, Little Queen of the Rancho; 2d, Hollow Hill Farm; 3d, Brant Rancho, Redwing of the Rancho; 4th, Humphrey, Escalon Evangeline; 5th Hollow Hill Farm, Princess Selma.

Senior Yearling Heifer—1st, Dupee, Patroness of Edgemoor; 2d, Hollow Hill Farm, Della Langdon of H. H. F.; 3d, Dupee, Dolly of Edgemoor; 4th, Brant Rancho, Rosemary of the Rancho; 5th, Humphrey, Escalon Lassie.

Junior Yearling Heifer—1st, Dupee, Bar Maid of Edgemoor; 2d, Hollow Hill Farm, Nesha E. King of H. H. F.; 3d, Hollow Hill Farm, Rosie E. King of H. H. F.; 4th, Brant Rancho, Nelissa of the Rancho; 5th, Humphrey, Escalon Rose.

Senior Heifer Calf—1st, Hollow Hill Farm, Caroline E. Langdon of H. H. F.; 2d, Dupee, Beautiful Rose of Edgemoor; 3d, Dupee, Margy's May Rose of Edgemoor; 4th, Brant Rancho, Althea of the Rancho; 5th, Brant Rancho, Elenor of the Rancho.

Junior Heifer Calf—1st, Dupee, Minuet of Edgemoor; 2d, Dupee Vampire of Edgemoor; 3d, Hollow Hill Farm, Brittania E. King of H. H. F.; 4th, Humphrey, Escalon Mariorie; 5th, Brant Rancho, Bertha of the Rancho.

Senior Champion Bull—Humphrey, Nobleman of Maple Hill. Reserve Senior Champion Bull—Brant Rancho, May King of Fern Ridge.

Junior Champion Bull—Dupee, Veda's May King of Edgemoor. Reserve Junior Champion Bull—Hollow Hill Farm, Carl E. King of H. H. F.

Senior Champion Cow—Dupee, Cheminante 11th. Reserve Senior Champion Cow—Brant Rancho, Little Queen of the Rancho.

Junior Champion Heifer—Dupee, Patroness of Edgemoor. Reserve Junior Champion Heifer, Dupee, Minuet of Edgemoor.

Grand Champion Bull—Dupee, Veda's May King of Edgemoor. Reserve Grand Champion Bull—Humphrey, Nobleman of Maple Hill.

Aged Herd—1st, Brant Rancho; 2d, Hollow Hill Farm; 3d, Humphrey.

Young Herd—1st, Dupee; 2d, Hollow Hill Farm.

Calf Herd—1st, Dupee; 2d, Hollow Hill Farm; 3d, Brant Rancho.

Four Animals, Either Sex—1st, Dupee; 2d, Hollow Hill Farm; 3d, Dupee; 4th; Hollow Hill Farm; 5th, Humphrey.

Two Animals, Either Sex—1st, Dupee; 2d, Hollow Hill Farm; 3d, Humphrey; 4th, Brant Rancho; 5th, Hollow Hill Farm.

Five Cows—1st, Brant Rancho; 2d, Hollow Hill Farm.

Holstein-Friesians.

Exhibitors: Anita M. Baldwin, Santa Anita; E. D. Barry Jr., Daggett; Burr Farm, Los Angeles; Calif. George Jr. Republic, Chino; James J. Jeffries, Burbank; Los Angeles County Farm, Hondo; F. F. Pellissier, Whittier; A. MacMinn, Litchfield, Ariz.; C. W. Michael, Gardena; Saunders & Hudspeth, Phoenix, Ariz.; Singleton & Haskell, Redlands; A. J. Stalder, Rosamaines Rancho, Riverside; E. R. Stalder, Nuevo Stock Farm, Wineville.

Bull 3 years old or over—1st, George Jr. Republic, Dichter Spofford Korndyke Lad 5th; 2d, Anita M. Baldwin, Merci Lad Korndyke Burke; 3d, A. J. Stalder, King Pontiac Netherland Segis 3rd; 4th, Burr Farm, King Korndyke Pontiac 20th.

Bull 2 years old and under 3—1st, A. J. Stalder, Rosamaines Pontiac Ormsby; 2d, E. D. Barry Jr., Sir Aaggie Hiske Walker; 3d, Burr Farm, Sir Manuel Korndyke.

Senior Yearling Bull—1st, F. F. Pellissier, King Hengeveld Alcatra Prilly; 2d, Los Angeles Co. Farm, Colantha Aaggie Prince Pontiac.

Junior Yearling Bull—1st, Anita M. Baldwin, King Korndyke Pontiac Acme; 2d, James J. Jeffries, K. S. P. J. Count; 3d, A. J. Stalder, Sir Ormsby Skylark Ranwerd; 4th, Los Angeles Co. Farm, Perfection Homestead of L. A. Co.

Senior Bull Calf—1st, Frank Reed Saunders, It Orndyke Korndyke; 2d, E. R. Stalder, Nuevo Pontiac Ormsby; 3d, Anita M. Baldwin, Prince Walker Cornucopia 15th; 4th, A. J. Stalder, Rosamaines Pontiac Artis Spofford; 5th, Anita M. Baldwin, Prince Walker Cornucopia 19th.

Junior Bull Calf—1st, E. R. Stalder, Nuevo Colantha Ormsby; 2d, James J. Jeffries, K. S. P. J. Show Boy; 3d, James J. Jeffries, calf, unnamed; 4th, A. J. Stalder, Rosamaines Pontiac Tolia Estata; 5th, George Jr. Republic, Korndyke Pontiac.

Cow 4 years old or over—1st, Burr Farm, Bess Creole Belle 3rd; 2d, James J. Jeffries, Belle Canary Fyke Mercedes; 3d, James J. Jeffries, Belle Fyke Nudine; 2d, Burr Farm, La Conner Pontiac Albine Girl; 3d, George Jr. Republic, Snowflake Juliana Fobes of Rock; 4th, Anita M. Baldwin, Anoakia De Kol Gelsche; 5th, Burr Farm, Gerbe Piebe Roderick.

Heifer 2 years old and under 3—1st, James J. Jeffries, K. S. P. J. Pet Segis; 2d, Anita M. Baldwin, Blanche Nudine Clothilde Walker; 3d, George Jr. Republic, Ida De Kol Pearl Lyons; 4th, A. J. Stalder, Rosamaines Segis Ormsby; 5th, Burr Farm, Duchess Orndyke Sadie Vale.

Senior Yearling Heifer—1st, George Jr. Republic, Lady Dichter Juliana; 2d, E. R. Stalder, Arlia Rowena Princess; 3d, James J. Jeffries, K. S. P. J. Baron Lillabel Lilith; 4th, Burr Farm, Buddies' Promise; 5th, A. J. Stalder, Stanislaus Skylark Inka De Kol.

Junior Yearling Heifer—1st, James J. Jeffries, K. S. P. J. Pietertje Girl; 2d, Anita M. Baldwin, Burbanks Aaggie Lincoln; 3d, Anita M. Baldwin, Anoakia Moorland Creamelle; 4th, Anita M. Baldwin, Burbank's Roderick Aralia De Kol; 5th, Burr Farm, Burr Farm Juliana.

Senior Heifer Calf—1st, Anita M. Baldwin, unnamed calf; 2d, James J. Jeffries, K. S. P. J. Floria Canary; 3d, A. J. Stalder, Rosamaines Rowena Segis; 4th, James J. Jeffries, K. S. P. J. Snowflake Mercedes; 5th, Burr Farm, Burr Farm Veeman Baroness.

Junior Heifer Calf—1st, James J. Jeffries, K. S. P. J. Artis Lady; 2d, Anita M. Baldwin, unnamed calf; 3d, A. J. Stalder, Rosamaines Norena Ormsby; 4th, George Jr. Republic, Lady Doric Juliana; 5th, James J. Jeffries, K. S. P. J. Pietertje Canary.

Senior Champion Bull.—George Jr. Republic, Dichter Spofforl Korndyke Lad 5th.

Reserve Senior Champion Bull—A. J. Stalder, Rosamaines Pontiac Ormsby.

Jeffries, Gerben Canary Belle De Kol; 4th, Los Angeles County Farm, Holland Magda Colantha 3rd; 5th, Burr Farm, Amelia Bona De Kol.

Cow 3 years old and under 4—1st, James J. Jeffries, Belle Fyke Nudine; 2d, Burr Farm, La Conner Pontiac Albine Girl; 3d, George Jr. Republic, Snowflake Juliana Fobes of Rock; 4th, Anita M. Baldwin, Anoakia De Kol Gelsche; 5th, Burr Farm, Gerbe Piebe Roderick.

Heifer 2 years old and under 3—1st, James J. Jeffries, K. S. P. J. Pet Segis; 2d, Anita M. Baldwin, Blanche Nudine Clothilde Walker; 3d, George Jr. Republic, Ida De Kol Pearl Lyons; 4th, A. J. Stalder, Rosamaines Segis Ormsby; 5th, Burr Farm, Duchess Orndyke Sadie Vale.

Senior Yearling Heifer—1st, George Jr. Republic, Lady Dichter Juliana; 2d, E. R. Stalder, Arlia Rowena Princess; 3d, James J. Jeffries, K. S. P. J. Baron Lillabel Lilith; 4th, Burr Farm, Buddies' Promise; 5th, A. J. Stalder, Stanislaus Skylark Inka De Kol.

Junior Yearling Heifer—1st, James J. Jeffries, K. S. P. J. Pietertje Girl; 2d, Anita M. Baldwin, Burbanks Aaggie Lincoln; 3d, Anita M. Baldwin, Anoakia Moorland Creamelle; 4th, Anita M. Baldwin, Burbank's Roderick Aralia De Kol; 5th, Burr Farm, Burr Farm Juliana.

Senior Heifer Calf—1st, Anita M. Baldwin, unnamed calf; 2d, James J. Jeffries, K. S. P. J. Floria Canary; 3d, A. J. Stalder, Rosamaines Rowena Segis; 4th, James J. Jeffries, K. S. P. J. Snowflake Mercedes; 5th, Burr Farm, Burr Farm Veeman Baroness.

Junior Heifer Calf—1st, James J. Jeffries, K. S. P. J. Artis Lady; 2d, Anita M. Baldwin, unnamed calf; 3d, A. J. Stalder, Rosamaines Norena Ormsby; 4th, George Jr. Republic, Lady Doric Juliana; 5th, James J. Jeffries, K. S. P. J. Pietertje Canary.

Senior Champion Bull.—George Jr. Republic, Dichter Spofforl Korndyke Lad 5th.

Reserve Senior Champion Bull—A. J. Stalder, Rosamaines Pontiac Ormsby.

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60 REGISTERED SHORTHORNS 60

50 Females—10 Bulls

The offering includes 30 cows, 15 of which have calves at foot, and 20 heifers, practically all of which will be bred to the three great Caledonia sires.

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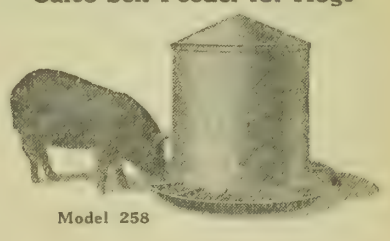


Model 258

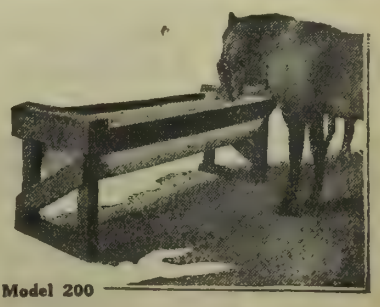
Calco Self-Watering Tank for Hogs

Model 251

Calco Hog Fountain

Model 269

Calco Stock Watering Trough



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JAMES McDONNELL, - Supt.

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COWS don't *give* milk any more. They swap it for good care and nourishing feed. And when they get that, they more than balance accounts.

Whether it's a prize winning cow or the ordinary barnyard variety, rations containing the same tissue-building, milk-producing elements are her just due.

OLYMPIC Dairy Feed produces the highest milk flow over the longest possible period.

Scientifically formulated by practical feeders and especially trained chemists, OLYMPIC Dairy Feed increases butter fat and decreases production costs.

In this perfectly balanced dairy feed are the following ingredients: Ground Barley, Linseed Oil Meal, Cotton Seed Meal, Soybean Meal, Corn Feed Meal, Wheat Bran and Corn Gluten Feed. It's a combination that makes healthier cows and wealthier dairymen.

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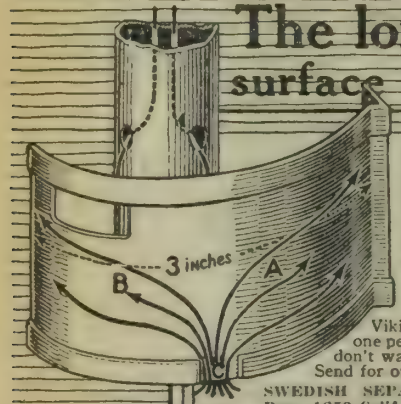

Note how the whole-milk goes first to the bottom, and then enters the middle (c) of every disc at the same time. The skim milk (a) is thrown forward, while the cream (b) goes back to the cream outlet, instead of getting in the way of and being pushed out with the milk, as it would be if the full-milk entered at *end* of the disc. Look at the length of that disc, too!

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Two miles out North First Street.

HOLMES STOCK FARM

MODESTO.

Registered Holstein Friesians

Prize winners at all the Shows. Inspection invited and satisfaction guaranteed. Write for prices.

R. L. HOLMES, Prop.

CLARK, HUNTER & CLARK LIVESTOCK AUCTIONEERS

915 I St., Modesto, Calif.
Registered Hog Sales a Specialty

Junior Champion Bull—Anita M. Baldwin, King Korndyke Pontiac Acme.

Reserve Junior Champion Bull.—E. R. Stalder, Nuevo Colantha Ormsby.

Senior Champion Cow—Jeffries, K. S P. J. Pet Segis.

Reserve Senior Champion Cow—Burr Farm, Bess Creole Belle 3rd.

Junior Champion Heifer—George Jr. Republic, Lady Dichter Juliana.

Reserve Junior Champion Heifer—Jeffries K. S. P. T. Pietertje Girl.

Grand Champion Bull—George Jr Republic, Dichter Spofford Korndyke Lad 5th.

Reserve Grand Champion Bull—Anita M. Baldwin, King Korndkye Pontiac Acme.

Grand Champion Cow or Heifer—Jeffries, K. S. P. J. Pet Segis.

Reserve Grand Champion Cow or Heifer—George Jr. Republic, Lady Dichter Julianna.

Aged Herd—1st, George Jr Republic; 2d, Anita M. Baldwin; 3d, Burr Farm; 4th, A. J. Stalder.

Young Herd—1st Jeffries; 2d, Anita M. Baldwin; 3d, George Jr. Republic; 4th, A. J. Stalder.

Calf Herd—1st, Jeffries; 2d Anita M. Baldwin; 3d, A J. Stalder; 4th, Burr Farm.

Four Animals, Either Sex—1st, Jeffries; 2d, George Jr. Republic; 3d, A. J. Stalder; 4th, Anita M. Baldwin.

Two Animals, Either Sex—1st, 2d, 4th, Jeffries; 3d, Burr Farm.

Five Cows—1st, Jeffries; 2d, Anita M. Baldwin; 3d, Burr Farm.

Jerseys.

Exhibitors: Grant A. Brown, El Monte; J. E. Hathaway, Norwalk; J. E. Thorp, Lockeford; F M. West Fullerton.

Bull 3 years old or over—1st, Thorp, Jolly Senator Raleigh; 2d Brown, Lady Shylock's Financier; 3d Hathaway Raleigh's Delight.

Senior Yearling Bull—1st, Thorp, Biddy's King of Mossdale; 2d, Winsor Ranch, Beauty's White Sox.

Junior Yearling Bull—1st, Brown, Financial Marjoram Count.

Senior Bull Calf—1st, Thorp, Fairy Boy of Mossdale; 2d, Brown, Financier's Cortie's Lad; 3d West, Maid's Noble Investment; 4th, West, Jewel's Virgil.

Cow 4 years old or over—1st, Brown, Shy Lady Viola; 2d, Thorp Salome of Mossdale; 3d, Thorp, Nomie of Mossdale; 4th, Thorp, Sonny St. Helier's Daughter.

Cow 3 years old and under 4—1st, Brown, Financier's Viola Lass; 2d, Thorp, Desert's Honeysuckle.

Heifer 2 years old and under 3—1st Thorp, Goldie's Nehalem Cowslip; 2d, West, Miss Silverside's Gipsy; 3d, Brown, Financier's Daisy Witch; 4th, Thorp Bonnie of Mossdale 2d; 5th, Brown, Lena Oakhurst.

Senior Yearling Heifer—1st, Brown, Financier's Ida; 2d, West, Miss Silverdale's Nina; 3d, Thorp, Violet of Mossdale; 4th, West, Miss Raleigh's Barbara; 5th, Thorp, Gladys of Mossdale.

Junior Yearling Heifer—1st, Thorp, Queen Bess of Mossdale; 2d, Brown, Shylock's Shy Jean; 3d, Brown, Shylock's Elodine.

Senior Heifer Calf—1st, Brown, Shylock's Countess; 2d, Thorp, Sonny's Blossom of Mossdale; 3d, Thorp, Jolly Emerila of M.; 4th, Brown, Shylock's Nancy; 5th, Thorp, Girlie of Mossdale

Junior Heifer Calf—1st, Brown, Shylock's Lottie; 2d, West, Sunkist Lass Martha; 3d, Thorp, Ramona of Mossdale

Senior Champion Bull—Thorp, Jolly Senator Raleigh

Jnunior Champion Bull—Thorp, Biddy's King of Mossdale Reserve, Brown, Financial Marjarom Count.

Senior Champion Cow—Brown, Shy Lady Viola Reserve, Thorp, Goldie's Nehalem Cowslip

Junior Champion Heifer—Brown, Financier's Ida Reserve, Thorp, Queen Bess of Mossdale.

Grand Champion Bull—Thorp, Jolly Senator Raleigh, Reserve — Thorp, Biddy's King of Mossdale.

Grand Champion Cow or Heifer—Brown, Shy Lady Viola. Reserve—G A. Brown, Financier's Ida.

Aged Herd—1st, Thorp; 2d, Brown.

Young Herd—1st, Thorp; 2d, Brown.

Calf Herd—1st, Thorp; 2d, Brown.

Four Animals, Either Sex, Get of One Sire—1st, Thorp; 2d, Brown.

Two Animals, either sex, produce of one cow—1st, West; 2d, Thorp; 3d, Brown; 4th, Brown.

Five Cows—1st, Brown; 2d, Thorp.

HORSES.

Belgians.

Exhibitors: Merritt & Bowers, Tulare, Cal. All awards to above exhibitor.

English Shires.

Exhibitors: Merritt-Bowers Co., Tulare; Fred H Bixby, Long Beach; Easton & Ward, Diablo.

Stallion 4 years old or over—1st, Merritt-Bowers, General Sherman; 2d, Fred H. Bixby, Montezuma Chief; 3d, Merritt-Bowers, Severn Donald.

Stallion 2 years old and under 3—1st Easton & Ward, Blackhawk Clansman.

Stallion 1 year old and under 2—1st, Fred H. Bixby, Lightsome's King.

Stallion Colt—1st, Fred H. Bixby, Seco.

Mare 4 years old or over—1st, Easton & Ward, Blackhawk Chessie; 2d, Easton & Ward, Horton Bounce; 3d, Easton & Ward, Wellington Princess; 4th, Fred H. Bixby, May Gypsy.

Mare 3 years old and under 4—1st, Fred H. Bixby, Letty; 2d, Fred H Bixby, Meridian.

Mare 2 years old and under 3—1st, Easton & Ward, Blackhawk Choice.

Champion Stallion — Merritt-Bowers, General Sherman. Reserve Champion Stallion—Fred H. Bixby, Seco.

Champion Mare — Easton & Ward, Blackhawk Chessie. Reserve Champion Mare—Easton & Ward, Blackhawk Choice.

One Stallion and 4 Mares—1st, Easton & Ward.

Percherons

Exhibitors: Anita M. Baldwin, Santa Anita; Fred H. Bixby, Long Beach; L. L. Chattel, Sacramento; Merritt-Bowers Co., Tulare.

Stallion 4 years old or over—1st, Merritt-

Bowers Co.; 2d, Bixby, Drusus; 3d, Merritt-Bowers Co ; 4th, Merritt-Bowers Co., Inquiet.

Stallion 3 years old and under 4—1st, Anita M. Baldwin, Arsar; 2d, Anita M. Baldwin, Belzar; 3d, Anita M. Baldwin, Mejus; 4th, Chattel Colon.

Stallion 1 year old and under 2—1st, Anita M. Baldwin, Tryzar; 2d, Anita M. Baldwin, Nervezar.

All prizes on females and groups awarded to Anita M. Baldwin.

JACKS AND JENNETS.

Exhibitors: Anita M. Baldwin, Santa Anita; Fred H. Bixby, Long Beach; Merritt-Bowers Co., Tulare; R. C. Foote & W. M. Delano, Artesia.

Jack 4 years old or over—1st, Bixby, Disturber; 2d, Merritt-Bowers, Tulare; 3d, Foote & Delano, Black Jumbo

Jack 3 years old and under 4—1st, Baldwin, Washeba; 2d, Merritt-Bowers, King's Monarch; 3d, Baldwin, Woodeba.

Jack 2 years old and under 3—1st, Baldwin, Mareba; Merritt-Bowers, Blue Jay; 3d, Foote & Delano, General Foch.

Jennett 4 years old or over and Foal—1st, Baldwin, Rita Payne and foal; 2d, Foote & Delano, Princess and foal.

Jennett 4 years old or over—1st, Baldwin, Lucy Pitzer; 2d, Baldwin, Bell King.

Jack or Filly Foal under 1 year old—1st, Baldwin, Payneba; 2d, Foote & Delano, Filly.

Four breeding Animals under 4 years old—1st, Baldwin.

SWINE.

Berkshires.

Exhibitors: Gardiner Blackman, Perris; F. L. Hall, Perris; A. B. Humphrey, Escalon; Inglewood Union High School, Inglewood; Italian Vineyard Co., Guasti; J. Francis O'Conor, Santa Rosa.

Boar 2 years old or over—1st, Bastanchury, Royal Longfellow 5th; 2d, Maier, Escalon May Star; 3d, Hall, Ames Rival 118th; 4th, Italian Vineyard Co., Champion Masterpiece 8th.

Senior Yearling Boar—1st, O'Connor, Enhancer; 2d, Humphrey, Escalon Type; 3d, Italian Vineyard Co., Model Leader 3rd.

Junior Yearling Boar—1st, Humphrey, Escalon Big Joe; 2d, Humphrey, Grape Wild Challenger; 3d, Italian Vineyard Co., Real Type Symboleer 2nd; 4th, Hall, Rose Great Rival 11th; 5th, Bastanchury, Baron Premier 157th.

Boar, Senior Pig—1st, Humphrey, Escalon Model Leader; 2d, Hall, Rose Crest Rival 10th; 3d, Blackman, Improver Belle's Rival; 4th, Humphrey, Bourbon Emblem; 5th, Italian Vineyard Co., Royal Type 3d.

Boar, Junior Pig—1st, Humphrey, Grape Wild Champion 2d; 2d, Humphrey, Grape Wild Champion; 3d, Italian Vineyard Co., Del Rio 2nd; 4th, Blackman, Star Oaks Masterpiece; 5th, Italian Vineyard Co., Matchless Type 2d.

Sow 2 years old or over—1st, Italian Vineyard Co., Wilsonia Laurel Princess; 2d, Humphrey, Grape Wild Rose 2nd; 3d, Italian Vineyard Co., Duke's Natomas Princess; 4th, Hall, Mistress Fancy 2nd.

Sow , Senior Yearling—1st, Humphrey, Grape Wild Rose 6th; 2d, Humphrey, Escalon Lady 5th; 3d, Inglewood H. S. Rival's Matchless Lady 6th; 4th, Italian Vineyard Co., Emblem's Queen 12th; 5th, Italian Vineyard Co., Emblem's Queen 13th.

Sow, Junior Yearling—1st, Italian Vineyard Co., Meadowview Duchess 6th; 2d, Humphrey, Grape Wild Rose 8th; 3d, Italian Vineyard Co., Real Type's Lucindy 5th; 4th, Italian Vineyard Co., Violet Fenn; 5th, Humphrey, Grape Wild Rose 13th.

Sow, Senior Pig—1st, Italian Vineyard Co., Real Type Belle 4th; 2d, Humphrey, Escalon May 13th; 3d, Italian Vineyard Co., Castle View Duchess; 4th, Italian Vineyard Co., Real Type Belle 5th; 5th, Humphrey, Escalon Belle 5th.

Sow, Junior Pig—1st, Humphrey, Grape Wild Rose 19th; 2d, Italian Vineyard Co., Matchless Lady Type; 3d, Humphrey, Grape Wild Rose 21st; 4th, Blackman, Model Lady; 5th, Italian Vineyard Co., Burton's Oregon Lady 2nd.

Senior Champion Boar—Humphrey, Escalon Big Joe. Reserve—O'Connor, Enhancer.

Junior Champion Boar—Humphrey, Escalon Model Leader. Reserve — Humphrey, Grape wild Champion 2d.

Senior Champion Sow—Humphrey, Grape Wild Rose 6th. Reserve—Italian Vineyard Co., Meadowview Duchess 6th.

Junior Champion Sow—Italian Vineyard Co., Real Type Belle 4th. Reserve—Humphrey, Grape Wild Rose 19th.

Grand Champion Boar—Humphrey, Escalon Big Joe. Reserve—Humphrey, Escalon Model Leader.

Grand Champion Sow—Humphrey, Grape Wild Rose 6th. Reserve—Italian Vineyard Co., Real Type Belle 4th.

Boar and 3 sows over 1 year old—1st, Humphrey; 2d, Italian Vineyard Co.; 3d, Humphrey; 4th, Bastanchury.

Boar and 3 sows under 1 year old—1st, Humphrey; 2d, Italian Vineyard Co.; 3d, Hall.

Boar and 3 sows, all bred by exhibitor—1st, Humphrey; 2d, Humphrey; 3d, Hall.

Get of 1 boar—1st, Humphrey; 2d, Italian Vineyard Co.; 3d, Humphrey.

Produce of sow—1st, Humphrey; 2d, Humphrey; 3d, Italian Vineyard Co.

Barrow—1st, Humphrey; 2d, Humphrey; 3d, Italian Vineyard Co.

Pen of 3 barrows—1st Humphrey; 2d, Italian Vineyard Co.

Duroc-Jersey.

Exhibitors: Charnock Ranch, Hemet; Conejo Ranch, Newbury Park; J. C. Craig, Owensmouth; Diamond Bar Ranch, Spadra; Falfadale Farm, Perris; J. A Garley, San Marcos; G. E. Gordon, Van Nuys; Graham-Henshaw, Lancaster; Hewitt Bros., Van Nuys; Hillside Water Co., Bishop; Chester Irish, Norwalk; E. R. Jones, Van Nuys; Leest & Mounier, Van Nuys; A. J. Ludwig, Downey; E. F. Meyers, Lankershim; Wm. V. Mong, Whittier; E. Avery Newton, Los Angeles; H. J. Penfield & P. Maxwell, Lankershim; J. Frank N. Rouff, Palmdale; J. L. Stevenson, Van Nuys; C. T. Thompson, Bishop; Winsor Ranch, Bonita; J. E. Thorp, Lockeford; A. V. Austin, Van

(Continued on page 520.)

DISPERSAL SALE
REGISTERED
67 Holsteins 67

KOUNIAS REGISTERED STOCK FARMS

On Waterford Road, 3 miles east of

MODESTO, CAL.

THURSDAY, OCTOBER 28, at 10 a. m.

This is a complete dispersal of one of the largest and best producing herds in the San Joaquin Valley, mostly young animals that have long years of usefulness before them.

SOME OF THE FEMALES:

21 DAUGHTERS OF KING KORNDYKE HENGERVELD ORMSBY 7TH, who is by a son of Pietertje Maid Ormsby, and is half brother to Ormsby Korndyke Lad, the greatest living sire of 1000-lb. yearly record daughters. He was Grand Champion at Modesto Live Stock Show, 1917.

9 DAUGHTERS OF KING KORNDYKE AAGGIE FAYNE, whose dam is a 33-lb. daughter of King Hengerveld Aaggie Fayne.

SIX DAUGHTERS of a 26-lb. cow that made 723.31 lbs. butter from 17,764.3 lbs. milk in one year. Five of them have A. R. O. records.

FOUR DAUGHTERS of a 20-lb. cow that made 615.02 lbs. butter from 16,764.4 lbs. milk in 327 days.

A 29.67-POUND 4-YEAR-OLD daughter of a 26-lb. cow that made 723.31 lbs. butter from 17,764.3 lbs. milk in one year.

A 20-POUND 4-YEAR-OLD, by a 33-lb. grandson of King Hengerveld, and out of a 31-lb. daughter of Sir Skylark Ormsby Hengerveld that made 1127.27 lbs. butter in one year.

A 22-POUND GRANDDAUGHTER OF ARALIA DE KOL, her two daughters and one son.

MANY COWS AND HEIFERS with official records up to over 20 lbs. butter in 7 days, and a large number of them out of good record dams.

REMEMBER—That about 30 of the cows and heifers are bred to **KING KORNDYKE HENGERVELD ORMSBY 7TH,** or to **KING KORNDYKE AAGGIE FAYNE.**

A Considerable Number of Fresh Cows and Heavy Springers!

HIGH CLASS BULLS IN THE OFFERING

A few of the bulls in this sale should find places at the head of registered herds, and every one of the balance can conservatively be rated as the good sort to head grade herds. Practically every bull is out of a good record dam, the young ones are growthy, of good type, and in good thrifty condition. Here is part of the list:

KING KORNDYKE AAGGIE FAYNE, the herd sire. Three years old, a good individual, almost white in color, out of a 33-lb. daughter of King Hengerveld Aaggie Fayne that milked 597 lbs. in 7 days. See his calves in the sale.

A SON OF JUDGE SEGIS, the famous son of King Segis, heading the well known herd at Hollywood Farm, in Washington. His dam, a 20-lb. 3-year-old daughter of a 31-lb. daughter of Sir Skylark Ormsby Hengerveld, that made 1127.27 lbs. butter in one year.

A SON OF KING KORNDYKE HENGERVELD ORMSBY 7TH, out of a 29.67-lb. 4-year-old, whose 26-lb. dam made 723.31 lbs. butter in one year from 17,764.3 lbs. milk. He is a fine individual.

A SON OF KING KORNDYKE HENGERVELD ORMSBY 7TH, out of a dam that made 26.06 lbs. butter from 563.4 lbs. milk in 7 days.

A SON OF KING KORNDYKE HENGERVELD ORMSBY 7TH, out of a 22.51 lb. dam.

A SON OF KING KORNDYKE HENGERVELD ORMSBY 7TH, out of a 21.32-lb. 4-year-old daughter of a 22.51-lb. cow.

A SON OF KING KORNDYKE HENGERVELD ORMSBY 7TH, out of a 21.31-lb. 3-year-old daughter of a 20-lb. cow.

SONS OF KING KORNDYKE AAGGIE FAYNE, out of dams with records up to over 18 lbs. as 2-year-olds.

DAIRYMEN—Practically all of these young bulls carry a combination of Ormsby breeding and the blood that produced De Kol of Valley Mead, foundation cow of one of the best Morris families. Both of these lines of breeding are famous, not only for large production, but good type as well.

EVERY ANIMAL POSITIVELY GUARANTEED TO BE A BREEDER; EVERY ANIMAL OVER SIX MONTHS OLD TUBERCULIN TESTED AND SOLD SUBJECT TO RETEST BY THE BUYER, EXCEPT AS ANNOUNCED AT SALE.

Catalog free on request to management

MANAGEMENT

CALIFORNIA BREEDERS' SALES AND PEDIGREE CO.

C. L. HUGHES, Sales Manager, Sacramento, Calif.

Auctioneers:

COL. BEN A. RHOADES, Los Angeles—COL. J. H. CORLEY, Modesto

GRAND CHAMPION HOLSTEIN FRIESIAN BULL

Of California 1920

At the Los Angeles Live Stock Show we won 14 Ribbons on 12 animals entered, including GRAND CHAMPION BULL, SENIOR CHAMPION BULL, JUNIOR CHAMPION HEIFER and Reserve GRAND CHAMPION HEIFER, 1st on Aged Herd. Reserve Grand Champion Heifer is a Daughter of our Grand Champion Bull

California Geo. Junior Republic

R. A. CONDEE, Supt. — RENI BRULLEAU, Herdsman

CHINO, CALIFORNIA

JAVA

COCOANUT CAKE MEAL.
Made where the cocoanuts grow.
Carried in modern ventilated steamers.
Sun-dried—not smoky or rancid.

Has your past experience in feeding cocoanut cake meal been satisfactory?

We particularly request a trial of our meal by those who in the past have been disappointed.

Your feed dealer may not have our brand in stock but can obtain a large or small lot promptly.

DEPT. 10

Java Cocoanut Oil Co., Ltd.

16 California St., San Francisco

Largest manufacturers cocoanut products in the world.

Big Dispersal Auction

18 miles southeast of Sacramento, 6 miles east of Elk Grove, 1 mile east of Sheldon

"WATCH FOR SIGNS AND FLAGS"

TUESDAY, OCTOBER 19, 1920

175 HEAD OF LIVESTOCK 175

CATTLE—110 head of high grade choice Holstein dairy cows—a number are fresh or heavy springers.
35 head of Holstein heifers from 1 to 2 years old.
Two registered Holstein bulls.
Four grade Holstein bulls.

HORSES—16 head of draft, saddle and driving horses. Several well-matched teams.

HOGS—Eight head of good brood sows.

RANCH EQUIPMENT—3 hay wagons, 2 mowers, 2 rakes, 1 riding plow, walking plow, top buggy, open buggy, surry, light wagon, 2 harrows, 1 renovator, alfalfa seeder, 4 Jackson forks, 2 hay slings, 1 Simplex separator, 1 upright boiler, 3 sets work harness, single harness and all the small tools on a well-equipped 800-acre ranch.

REASON OF SALE—Lease has expired.

DAIRYMEN — Your inspection is invited before date of sale.

FREE LUNCH — SALE 10 A. M. SHARP — TERMS CASH

NELLIE E. DASE (HIRD), Owner

CLARK, HUNTER & CLARK, Auctioneers

150 Registered Herefords at Public Auction

STATE FAIR GROUNDS

Sacramento, Calif.

THURSDAY, NOVEMBER 4,

45--Registered Herefords--45

This is the [illegible] offering of picked lots, known more popularly as the Association Sale. Hereford breeders all over the coast have been showing constantly toward the improvement of their herds and it is only natural to expect advancement in quality in each succeeding sale of picked cattle.

Foremost herds of the West will be represented in this sale and the buyer who wants to add one or more extra choice animals to his herd or the beginner who wants to start with that sort of foundation will find ample range of selection in this offering.

Sale under auspices of

PACIFIC COAST HEREFORD CATTLE BREEDERS' ASSOCIATION

J. I. Cazier, Pres., Wells, Nevada. J. A. Bunting, Sec., Mission San Jose, Calif.

FRIDAY, NOVEMBER 5

NEVADA HEREFORD RANCH

WILL SELL

55--Registered Herefords--55

Beau Blanchard 76th

This herd is widely known as one of the largest and most richly bred collections of the breed in the west. Especial attention has always been given to the maintenance of a healthy herd, and this herd is now in line for Federal accreditation.

At 1920 California State Fair BEAU BLANCHARD 76TH was Grand Champion in the greatest Hereford Show ever staged at Sacramento, and his young son PILOT, out of a Harris Standard 2nd dam, owned and exhibited by Wm. Briggs, Dixon, was first junior bull calf and Junior Champion.

Four of the first calves sired by BEAU BLANCHARD 76TH, and out of Harris Standard 2nd dams, bid well for high honors in the individual classes, and in the Get of Sire group stood second only to the get of Harris Standard 2nd. Remember that in this sale a large number of HARRIS STANDARD 2ND heifers sell bred to BEAU BLANCHARD 76TH.

HARRIS STANDARD 2ND is as well bred as any bull in the United States and is a wonderful sire. Our show herd for the past three years has shown some evidence of his breeding ability, but to be fully appreciated you must see the uniform excellence of his entire get on our ranch. His get have never been defeated in the Get of Sire class.

IN THIS SALE we will sell over 30 heifers sired by him, and many of them are safe in calf to BEAU BLANCHARD 76TH. Others will be bred to ABE MISCHIEF, by Mousel's mighty Beau Mischief, and to BOCALDO 21ST, by Hazlett's Grand Champion, Bocaldo 6th.

This is the first individual public sale offering made by NEVADA HEREFORD RANCH, and we believe the quality of the offering to be a credit to this herd, and one in which the buyer may rightly expect to secure correct breeding animals.

Harris Standard 2nd

Owners:

J. H. CAZIER & SONS CO., WELLS, NEVADA

Otis Cordell, Herdsman

SATURDAY, NOVEMBER 6

50--Registered Herefords--50

43 OF THE FEMALES IN THIS OFFERING born in 1917 or later, including

22 DAUGHTERS OF BOURBON COLUMBUS, out of dams by Beau Donald, Beau Tempter, Rupert Donald, Repeater 9th and Perfect Donald.

4 DAUGHTERS OF BEAU TEMPTER, out of dams by Rupert Donald and Columbus Busybody.

8 DAUGHTERS OF DON PERFECT 10TH, out of dams by Beau Donald, Beau Tempter, Paloma's Erling, and Don Brummel.

5 DAUGHTERS OF BEAU FAIRFAX, out of dams by Beau Tempter, Erling March On, Woodford 2nd and Rupert Donald.

THESE FEMALES OF BREEDING AGE are in calf to MAPLES LAD 137TH 788370, who is by Bonnie Brae 8th, out of a daughter of Domino, second dam by Beau Modest, he by Beau Brummel, third dam by Luminary, a son of Lamplighter.

This is a most popularly bred lot of young females and we rate them as desirable and valuable foundation stock. Their ages make them particularly desirable as foundation for new herds.

Owners:

BARNGROVER & WRIGHT, SANTA CLARA, CALIF.

Every animal in the three offerings listed above is positively guaranteed to be a breeder; every animal over six months old tuberculin tested and individual certificates furnished.

For catalog of any or all sales, write the management

Auctioneer:
Col. Ben A. Rhoades, Los Angeles.
In the Ring:
John A. Bunting, Mission San Jose.

Calif. Breeders' Sales & Pedigree Co.

C. L. Hughes, Sales Manager, Sacramento, Cal.

Livestock and Dairy Notes

SALE DATES.

Oct. 19-21—Rosmondale Ranch Holsteins, Duroes, Pendletons, Riverside.

Oct. 20th — Kings County Poland-China Breeders' Consignment, Hanford.

Oct. 22—Grant A. Brown Jerseys, Canwater.

Oct. 27—Newson and Christensen Poland Chinas, Clearwater.

Oct. 28—[illegible] Holsteins, Modesto.

Nov. 4th — Pacific Coast Hereford Breeders Association, Herefords, Sacramento.

Nov. 5th—John H. Cazier & Co., Herefords, Sacramento.

Nov. 6th—H. M. Barngrover, Herefords, Sacramento.

Nov. 10-11—Town Farm Assn., Holsteins, Sacramento.

Nov. 12—California Farm Shorthorns, Sacramento.

Nov. 18—Finnell Ranch Company, Herefords, Sacramento.

Dec. 1—H. E. Vogel, Holsteins, Fresno.

Dec. 2—Consignment Sale, Holsteins, Tulare.

Dec. 16-17—Consignment Sale, Holsteins, Sacramento.

Dairy.

Fifty-one Guernseys were sold for a total of $146,125, making an average of $2865. This was at the Langwater Farm Sale, North Easton, Mass., on September 21st.

The summary of the tuberculosis eradication work carried on by the U. S. Department of Agriculture, in co-operation with various states, for the month of August, shows 64,765 head tested with 2,473 reactors.

The exhibit at the Dairy Cattle Congress at Waterloo, Iowa, this year was even greater than that of past seasons. The Ayrshire breed was the only one which did not appear on a larger scale than in previous years.

There is a new herdsman in charge of the Holstein herd at the Jane Garden Farm at Sacramento. Harry L. Redd, who was formerly with W. J. Higdon's herd at Tulare, is now with F. W. Kiesel's cattle, and no doubt we will hear from his work in the future.

A recent letter from L. D. Smith, a well known breeder of Guernseys, formerly located in Berkeley but now of Hydesville, Humboldt county, reports green grass as 4 inches high and cows producing correspondingly. Mr. Smith says the Guernsey is highly appreciated in Humboldt county, and that he finds a ready market for young bulls.

The Hawaiian Islands are taking more and more purebred cattle all the time. Charles Lucas & Son of Honolulu are the latest buyers. They shipped on the steamer Lurline, sailing October 2nd, a very fine lot of Holsteins purchased from the Baywood Herd owned by the Lewis Company of San Jose. Mr. Charles Lucas, the senior member of the purchasing firm, has been in California for some time inspecting various herds, and finally selected a bunch from the Baywood herd. The reported price is said to be around $600 per head for the lot.

Beef.

The McCrary-Stover Company of Red Bluff have completed beef shipments of 1300 steers and cows for the season. The price realized was somewhat less than a year ago.

Perfection Fairfax, the Hereford bull with an international reputation, is dead. He was at the head of the McCray herd in Indiana and was 17 years old.

The American Polled Hereford Breeders' Association have issued a new promotion booklet that gives the history of this strain of the breed, with data regarding their growing popularity. It also has many illustrations of the stars of this strain, and, withal, is a very attractive publication and can be obtained by writing to the Des Moines, Iowa, office.

A recent announcement by the Railroad Commission conveys the information that South San Francisco shall be and is included in the railway switching district of the city of San Francisco. Also the order of the Commission directs the removal of the discriminatory charge in favor of the east bay section and against "South City." This arrangement should work to the benefit of the livestock shippers and butchers.

Sheep.

Great Britain's sheep have declined from 25,500,000 of pre-war days to 23,700,000 at present.

G. Scarafoni pleaded guilty recently before Judge Maynard of Suisun to the charge of selling scabby sheep and was fined $25. The conviction was secured by the State Dept. of Agriculture.

The farm bureau in Sonoma county has received notice that the two carloads of wool shipped to the National Wool Warehouse and Storage Company of Chicago has been sent on to Boston. This is quicker action than was anticipated.

Wool growers of South Dakota have shipped approximately 1,000,000 pounds of wool to Chicago this season to be sold in the wool pool of that state. They are encouraged to wait as buyers in Iowa have recently been offering 45 cents, which is from 10 to 15 cents better than the mid-summer market.

Government figures show the use of 38,000,000 lbs. of wool grease equivalent during August. This is an increase of one million pounds over the month of July, but is 18,000,00 lbs. less than the amount used in August, 1919. The increased use was in the lower grades rather than in the fine wools.

Swine.

Fifty California pigs, including two boars that took blue ribbons at the last state fair, are to be sent to the Philippines to improve the breed of hogs there.

Hog cholera has made its appearance on the Parducci ranch, near Colfax. County Agent Amundsen inoculated all of the swine on the ranch and advised steps to prevent spread. This is the first appearance of hog cholera in the foot hills for several years.

A cablegram recently received by Secretary Carmichael of the National Swine Growers' Association gave the following averages for the swine from this country sold in Buenos Aires, South America: Polands, $1,035; Durocs, $793; Berkshires, $388; Spotted Polands, $272; Chester Whites, $100.

Horses.

Belgian draft horse breeders are the only ones having an international exhibition all their own. This is now an annual event in connection with the Dairy Cattle Congress at Waterloo, Iowa. Their show this year was even a greater success than ever. Twenty-seven breeders had animals in competition, and more would have been there if they could have obtained transportation. The committee method of judging obtained, with Professor D. J. Kays of Ohio State University; Chas. Brown, Marcus, Ia., and Geo. Rupp Lampman, Sask., Canada, officiating.

Miscellaneous.

Mules are high in Missouri, as some of the prize teams bring anywhere from $1000 to $1500.

Reports from many of the range sections announce the outlook for early feed as excellent, due to the continued early rains.

In Oklahoma mule raising has so occupied the attention of the owners of mares, during recent years, that a shortage of young mares for future breeding and farm operations is noted.

Java Cocoanut Oil Co. are the largest cocoanut oil manufacturers in the world, having 12 factories. Their product is of the very highest grade, and the by-product, cocoanut meal, coming so prominently into the spotlight as a stock feed, is also of the very best grade without any trace of rancidity, making it very palatable and digestible.

LIVESTOCK DIRECTORY.

Rate, 4c. per word. Cash must accompany all orders.

SWINE.

Duroc-Jerseys.

DUROC-JERSEY SOW for sale—Golden Aena, Registration No. 390586, King's Col. stock. Farrowed April 18, 1918. Average litters fine. Fine condition. Will farrow November. Bred to Pathfinder stock (El Dorado Boy). No. 1 brood sow. Will sell at a bargain. Worthy E. Marks, P. O Box 332. Placerville, Cal.

DUROCS—BIG-TYPE—HIGHEST QUALITY—popular blood lines. Herd headed by Johnson's Defender, Jr., and Western Pathfinder Bred sows and gilts and young boars for sale at moderate prices. Greenwood Farm, Withcrow & Stafford, Live Oak, Cal.

DUROC-JERSEYS—2 senior yearling sows. Model Colonel and Defender blood. Also several gilts and boars sired by a grandson of Pathfinder. Prices right. Petaluma Duroc-Jersey Club, Petaluma High School, Petaluma, Cal.

DUROC-JERSEY BOAR for sale—El Dorado Boy. Registration. No. 167705. Pathfinder stock. No. 1 Breeding. Farrowed March 30, 1919. Average litters. 11½. Fine condition. Good points. Will sell at a bargain. Worthy E. Marks, P. O. Box 332. Placerville, Cal.

BRED SOWS AND GILTS and young stock. Pathfinder and Great Wonder I Am breeding. Monthly payments, if you wish. Derryfield Farm, Capital National Bank Bldg., Sacramento.

BOYANNA BIG-TYPE DUROCS—Breeding stock; priced right for sale. Inquiries invited. Satisfaction guaranteed. J. Boyd Harrold, Dixon, Cal.

LAMB'S DUROCS—Seven good sows with litters, weaned pigs and choice open gilts ready to breed Priced right to close out the herd. Elmer Lamb Ceres, Calif.

GOOD SPRING AND FALL GILTS—Strong in Pathfinder blood, sired by Pathfinder Wonder. Hamlin Farm, Box 697, Sacramento.

WINSOR RANCH DUROCS—Young boars and some top gilts bred to WINSOR'S GIANT ORION—Morris C Allen, Mgr., Bonita, Cal.

REGISTERED DUROCS — Choice gilts and weanlings, either sex. Breeding and satisfaction guaranteed. H. E. Boudier, Napa.

BIG-TYPE DUROCS — Gilts and boars of Winsor's Giant Orion breeding. Falfadale Farms, Perris, Calif.

BIG-TYPE DUROCS — Gilts and boars of Great Orion Sensation breeding. Falfadale Farm, Perris, Cal.

FOR THE BEST in Durocs, write June Acres Stock Farm, Davis, Cal.

JACK LONDON RANCH, Glen Ellen.—Exceptionally good weanlings. Bred sows and gilts. One good yearling boar and one fall boar. Prices reasonable.

Poland-Chinas.

POLAND CHINAS — Service boars, brood sows. Young boars and gilts. Best quality at reasonable prices. Let me know your wants. Edward A. Hall, Rt. 1, Box 39, Watsonville, Cal.

ELDERSLEY AND SHADY BROOK Farms big-type Poland-Chinas that make money for the Feeder, the Farmer and the Breeder. Prices reasonable. J. H. Ware, Brown's Valley, Calif.

TOHOQUA POLAND-CHINAS—A good tried boar and some choice young breeding stock for sale. Ferguson & McKaig, Orland, Cal.

WAUKEEN HERD POLAND-CHINAS — Home of King's Big Bone Leader. A few service boars for sale. Les McCracken, Ripon.

LAKESIDE STOCK FARM—Large, smooth and big-boned Poland-Chinas. Geo. V. Beckman & Sons, Lodi, California.

REGISTERED POLAND-CHINA SWINE — Prize-winners. Finest stock in the State. Bassett Bros., Hanford, California.

REG. BIG-TYPE POLAND-CHINAS—Service boars; weanling pigs. J. H. Cook, R. 4, Chico.

POLAND-CHINAS—Strictly large type. J. F. Lehman, Lodi, Cal.

Berkshires.

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HERD BOARS—STAR LEADER, Junior and Reserve Grand Champion of the World. The Grand Champion carload of barrows, over all breeds, at the San Francisco Live Stock Show, was sired by a son of Star Leader, NATOMAS BARON DUKE, grand champion of California. For sale, bred gilts, open gilts, young boars and weanling pigs. Write for booklet, prices and list of sows.

BRED GILTS.
Sired by Mayfield Rookwood 2d, a Grand Champion Boar, out of 600-700 lb. sows, and actually bred to "ACHIEVER," our English Blood Boar, the Sire that puts more bone and pork-making qualities into his pigs. Priced reasonably and absolutely guaranteed. Castleview Ranch, Santa Rosa, Calif.

The only herd of English Berkshires in the West. Bigger, better, stronger litters. More pounds of meat for less feed. Weanling pig, $35. Satisfaction guaranteed or money refunded at once. Sandercock Land Co., 703 Market St., S. F. In charge Natomas Land Sales.

GRAPE WILD FARMS—Berkshires—Guernseys. Big-type Berkshire Boars of serviceable age, sired by Big Leader—greatest son of Grand Leader 2nd. Panama-Pacific Grand Champion. A. B. Humphrey, Prop., Escalon.

QUALITY BERKSHIRES — Young stock, both sexes. Geo. P. Upham, Martinez.

BERKSHIRE BOARS—Real herd sires. We are offering these at sacrifice prices to move them quickly. Write for description and price. R. J. Merrill & Son, Morgan Hill, Cal.

REAL GOOD BERKSHIRES — Cholera immune. Frank B. Anderson, Sacramento, Cal.

Msicellaneous Swine.

YORKSHIRE SWINE — Registered Boars, Sows. Young stock. Mahajo Farm, P. O. Box 597, Sacramento, Calif.

DAIRY CATTLE

Holsteins.

REGISTERED HOLSTEIN-FRIESIANS — Both sexes choice stock; tuberculin tested. Sunnybrook Ranch, H. H. Sisson, Mgr., Willits.

HOLSTEINS
THE LEWIS COMPANY
Registered Holstein Cattle
Bulls, Heifers and Calves
of Ormsby breeding
Tuberculin tested
Lewis Building, San Jose

ASEVEDO BROS. CO.
Patterson, Cal.
Breeders of
REGISTERED HOLSTEINS
For Sale
Young bull, sired by King Abbekirk Johanna 24th, and out of a dam making 24 lbs. as a 4-year-old

CREAMCUP HERD — Registered Holsteins. Pontiac bull calves. M. Holdridge, Rt. A, Box 437, San Jose.

REG. HOLSTEINS, both sexes. World's record backing. Kounias Reg. Stock Farms, Modesto, Cal.

REG. HOLSTEINS—A. W. Morris & Sons Corp., Importers and Breeders, Woodland, Cal.

F. H. STENZEL, SAN LORENZO—Breeder of Registered Holsteins. High test producers.

REGISTERED HOLSTEINS — Best blood lines of the breed. R. L. Holmes, Modesto, Cal.

CHOICE HOLSTEIN bulls for sale. No females. Millbrae Dairy, Millbrae, California

GOTSHALL & MAGRUDER — Breeders of registered Holstein-Friesians. Ripon, Calif.

EL DORADO HERD OF REG. HOLSTEINS—Alex. Whaley, Tulare, California.

Milking Shorthorns

REGISTERED MILK AND BEEF SHORTHORNS, bulls and heifers for sale; catalogue free. Thomas Harrison, Santa Rosa Stock Farm, Santa Rosa, California.

INNISFAIL HERD MILKING SHORTHORNS—Young stock for sale; both sexes. Owned by Alexander & Kellogg Leased by J. D. Rowe & Son, Davis, Cal.

BREEDERS OF REGISTERED SHORTHORNS—Milk strain; choice young stock for sale. John Lynch Ranch, Box 321, Petaluma.

Jerseys.

SERVICE JERSEY BULL, bull calves Financial King blood, Chester White boars, prize winners. Best blood, type, production. N. H. Locke Co., Lockeford, Cal

FOR SALE—Purebred Jersey bull, 16 mos. old. Prize winner at two fairs this fall. $250.00, if taken now. W. H. Alfred, Loleta, Humboldt Co., Calif.

JACK LONDON RANCH, Glen Ellen—Two fine Jersey bulls, one ready for service.

SUNSHINE FARM JERSEYS—"Production counts." E. E. Greenough, Merced, Cal.

Ayrshires.

STEYBRAE AYRSHIRES — Registered; all ages. E. B. McFarland, 414 Claus Spreckels Building, San Francisco.

PENOBSCOT FARM REG. AYRSHIRES—Choice individuals, all ages, reasonable prices. Cool, El Dorado county, near Auburn.

NORABEL FARM AYRSHIRES—Le Baron Estate Co., Valley Ford, Cal.

Guernseys.

PUREBRED GUERNSEY HEIFERS—Heifer calves and bull calves for sale at reasonable prices and on terms, if necessary. The mothers are wonderfully bred and with high milk and butterfat yields. The sires have made Guernsey history. Also a few purebred Holstein cows, heifers and a herd sire for sale. Prices and terms on application. If you desire to start with purebreds, now is your opportunity. S. J. Strauss, P. O. Box 62, Modesto, Cal.

BEEF CATTLE.

SHORTHORNS—The foremost beef breed—Have a limited number of stock for sale, both sexes. If you wish to start a small herd I can probably supply your needs. T. T. Miller, Hollister, Cal.

ALAMO HERD REGISTERED HEREFORDS (founded by Governor Sparks). Herd and range bulls. Reasonable prices. W. D Duke, Gazelle, Siskiyou county, California.

RANCHO SAN JULIAN SHORTHORNS—Purebred range bulls, unregistered, for sale. Estate Thos. B. Dibblee, Santa Barbara, or Lompoc, Calif. John Troup, Supt.

THE NEVADA HEREFORD RANCH—Jno. H. Cazier & Son Co., Prop., Wells, Nevada. Reg. Hereford cattle. Breeding stock for sale.

CARRUTHERS FARMS, Live Oak, California. Shorthorn cattle and Berkshire swine o. quality and select breeding.

JACK LONDON RANCH, Glen Ellen—Shorthorn bull ready for service, and some good bull calves

WM. BRIGGS & SON, Dixon, Cal. Breeders of Hereford cattle and Rambouillet sheep.

ABERDEEN-ANGUS cattle of quality and breeding. L. Dee Ranch, Escondido, Cal

SIMON NEWMAN CO., breeders of Registered Herefords, Newman.

HEREFORDS — Mission Hereford Farm, J. A. Bunting, Prop., Mission, San Jose, Cal.

REGISTERED HEREFORDS—H. H. Gable Diamond G Ranch, Esparto, California.

GEORGE WATTERSON — Breeder Registered Herefords. Bishop, California.

A 2-DAY HOLSTEIN EVENT

Wed. and Thur. Oct. 20th and 21st

Dispersal of Peterposten Herd

On Wednesday, the 20th, E. Peterposten of Hughson will sell his herd of 40 Registered Holsteins. Your attention has been called to the quality of this herd in former issues. The persistent production of the different cows on test is proof of the claims made for them, that they are an extra good lot of Holsteins. The blood lines are good, the cattle are good. What more could you ask? There are 20 cows in the sale, 8 heifers, a year old this fall, a 30-lb. herd bull, and the balance is made up of heifer and bull calves. Nothing is reserved but every animal will be sold to the highest bidder. Every animal in the sale is guaranteed to be a breeder. Certificates of registry and transfer furnished free of cost to buyer. Sale will begin at 10 a. m., October 20th, at the Peterposten farm two miles south of Hughson, Cal., on the Hughson Turlock highway.

2nd Annual Holstein Bull Sale

On October 21st the Stanislaus County Holstein breeders' Association will hold their second bull sale. Twenty-two bulls will be offered in this sale, which range in age from ten months to two and a half years. An unusual opportunity for anyone needing a bull to select one from a large number at one time with the least expenditure of time. These bulls represent the best blood lines of the breed and are away above the average in type and quality. They are guaranteed to be breeders and certificates of registry and transfer will be furnished free.

Both sales under management of

Stanislaus Co. Holstein Breeders' Ass'n

MODESTO, CAL.

Which insures a square deal to the buyer.

Remember the dates—October 20 at Hughson—October 21 at Modesto.

Auctioneers.

COL. GEO. A. GUE, Yakima, Wash. COL. CY. N. CLARK, Modesto

OVER TWO MILLION CALVES

Protected against Blackleg for LIFE with ONE treatment vouch for Purity Blackleg Aggressin (Germ-Free Vaccine made by the Kansas Process). Absolutely safe to use. Cannot transmit disease. Brand, castrate, etc., when you vaccinate. OTHER PURITY PRODUCTS—Anti-Abortions Vaccine for Cattle; Hemorrhagic Septicemia Vaccine for Cattle and Sheep; Anti-Hog Cholera Serum, and High Count Mixed Infection Vaccine for Swine. For service that counts, write, phone, or wire.

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And How to Feed
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SHEEP WANTED

Wanted good young ewes.
Write full description and price to
JAMES G. MEE
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REGISTERED SHORTHORNS — Fair Oaks Ranch, Willits, Calif.

SHEEP AND GOATS.

F. A. MECHAM ESTATE, Petaluma, Cal.—Breeders and importers of Shropshire, Rambouillets and American Merinos, both sexes. Also Red Polled cattle. Take electric car at Petaluma or Santa Rosa for Live Oak Ranch

FOR SALE—Rambouillet rams and ewes—purebred; the very highest grade of large smooth body; heavy shearers; the wool and mutton type. Immediate delivery of individual or carload lots. You can find none better or of higher grade. Address Glenn, Cal. Location, 8 miles south Hamilton City, 1 mile west Ordbend. Windell Orchards Co

OAKDENE GOAT FARM, Walnut Creek, Contra Costa Co., Cal—Breeder of milk goats, Nubian, Saanen and Toggenburg registered grades. Bred and fed for milk production

DR. A. S. ALMEIDA, Dixon, Calif., Breeder and Importer of Registered Shropshire Sheep. Write me for prices on Reg. Ram Lambs.

J. R. BLOOM, Dixon, Calif.—Twenty-five years breeder of purebred Shropshire sheep Rams for sale. Single or carload lots.

FOR SALE—850 one, two and three-year-old Merino ewes. J. A. Swall, Box 742, Bishop, Cal.

DORSETS—ROMNEYS—Dorset ram lambs for sale. John, E. Marble, South Padasna.

SHEEP FOR SALE—1000 ewes. Will sell in lots to suit. Chas. G. Owens, Livermore.

HARVEY S. VANVLEAR, Lodi, Breeder and importer of registered Hampshire sheep.

CALLA GROVE FARM, MANTECA, CAL.—Breeders and importers of Hampshire sheep.

KAUPKE BROS., WOODLAND, CALIF.—Breeders and importers of Hampshire sheep

CARL LINDHEIMER, Woodland, Cal.—Rambouillet Ram lambs for light use.

CHAS. KIMBLE—Breeder and importer of Rambouillets, Hanford, Calif

BULLARD BROS., Woodland, Calif.—Breeders and importers of Rambouillet sheep.

MISCELLANEOUS.

BUTTE CITY RANCH
SHORTHORN CATTLE, SHROPSHIRE Sheep, Berkshire Hogs, Shetland Ponies, Bronze Turkeys, White Plymouth Rocks. Stock for sale at all times. W B. Dwyer and W. S. Guilford, Box P, Butte City, Glenn county, California

FOR SALE OR TRADE—Percheron stallion reg. (weight 2000). Will exchange for work horses or cattle. Address Ralph L. Clark, R. F. D. 2, Box 74, Lodi, Cal. Phone 24F4.

The Big Quality Sale

of the Season

—OF—

Poland Chinas

FROM THE

KINGS COUNTY POLAND CHINA BREEDERS' ASSOCIATION

10th Semi-Annual Sale

—OF—

TOPS FROM ELEVEN OF THE BEST HERDS IN KINGS COUNTY

HELD AT

Hanford, Calif.

Wednesday, October 20, 1920.

40 HEAD—4 BOARS, 36 SOWS AND OPEN GILTS

Sired by

LIBERATOR
YANKEE JR.
FRESNO BOY
BIG TIMM
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KING'S MASSIVE ORANGE
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BIG KNOX BOY
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For Catalogue and information write the Secretary.

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COL. GEO. W. BELL, Auctioneer.

Duroc-Jersey Hogs for Sale

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SOWS WITH LITTERS

DIABLO STOCK FARM,
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Oakland.

They are the large type and the best blood strains to be had anywhere.

HERD BOARS AND SOME OF THE SOWS

Lucy Orion's Model
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Prize of Tulare Belle
Pathfinder's Queen
Great Wonder I Am Gano
Lucy Orion's Mayflower
Twin Oaks Attraction
Lady Defendress 70th
and 50 others.

WEANLINGS—$15.00 EACH AT RANCH — A large number always on hand to choose from. Crates $2.50 each, refunded when returned prepaid in good condition.

MAIL ORDERS SOLICITED. SATISFACTION OR MONEY BACK.

TAMWORTH--The Bacon Hog

PIGS OF BOTH SEXES FOR SALE
FROM MASSIVE
PRIZE WINNING PARENTS

J. J. SUMMERFIELD, SANTA ROSA, CALIFORNIA

LOS ANGELES LIVE STOCK SHOW AWARDS.

(Continued from page 517.)

Nuys; Brant Rancho, Owensmouth.

Boar 2 years old or over—1st, Brant Rancho, May Rose King; 2d, Winsor Ranch, Winsor's Giant Orion; 3d, Graham-Henshaw, Orion's King Gano; 4th, Conejo Ranch, Giant Wonder.

Boar Senior Yearling—1st Falfadale Farm, Great Orion Sensation Jr.; 2d, Hewitt Bros., Top Sensation 1st; 3d, J. L. Stevenson, Orion's Model King.

Boar Junior Yearling—1st, Charnock Ranch, Charnock Cherry Friend; 2d, Mong, My Partner; 3d, Conejo Ranch, Giant's Type; 4th, Graham-Henshaw, Orion Col. Del Sur; 5th, Garley, California's Sensation.

Boar Senior Pig—1st, Graham-Henshaw, Royal I Am; 2d, Craig, Pathfinder's Likeness Jr.; 3d, Diamond Bar Ranch, Cherry's Model; 4th, Brant Rancho, May Rose Taxpayer; 5th, Craig, Pathfinder's Great Wonder.

Boar Junior Pig—1st, Diamond Bar Ranch, Cherry Pathfinder; 2d, Hewitt Bros., Model Defender's Sensation; 3d, Falfadale Farm, G. & W. Sensation; 4th, Craig, Pathfinder Orion; 5th, Chester Irish, Shamrock Lad

Sow 2 years old or over—1st, Diamond Bar Ranch, Queen of Pathfinders; 2d, Diamond Bar Ranch, Pathfinder's Molly; 2d, Charnock Ranch, Allie G. 2d; 4th, Diamond Bar Ranch, Lucy Pathfinder; 5th, Conejo Ranch, Wonder's Belle.

Sow Senior Yearling—1st, Diamond Bar Ranch, Pathfinder's Very Best; 2d, Diamond Bar Ranch, Orion Girl; 3d, Winsor Ranch, Sensation Queen; 4th, Conejo Ranch, Lady Model 2; 5th, Brant Rancho, May Rose Blossom.

Sow Junior Yearling—1st, Diamond Bar Ranch, Orion Sensation Lady; 2d, Diamond Bar Ranch, Smooth Duchess; 3d, Falfadale Farm, Lady Pathfinder; 4th, Charnock Ranch; 5th, Falfadale Farm, Great Orioness 4th.

Sow Senior Pig—1st, Brant Rancho, May Rose Tattletale; 2d, Diamond Bar Ranch, Cherry Rose; 3d, Craig, Pathfinder's Likeness Queen; 4th, Diamond Bar Ranch, Lena Sensation; 5th, Hewitt Bros., The Pride of Pathfinder.

Sow Junior Pig—1st, Diamond Bar Ranch, Cherry Duchess 2nd; Thorp, Sensational Girl of Mossdale; 3d, Thorp, Orion Queen of Mossdale; 4th, Falfadale Farm, Miss Sensation; 5th, Diamond Bar Ranch, Cherry Duchess 5th.

Senior Champion Boar — Falfadale Farm, Great Orion Sensation Jr. Reserve Senior Champion Boar—Brant Rancho, May Rose King.

Junior Champion Boar—Graham-Henshaw, Royal I Am. Reserve Junior Champion Boar—Diamond Bar Ranch, Cherry Pathfinder.

Senior Champion Sow—Diamond Bar Ranch, Queen of Pathfinders Reserve Senior Champion Sow—Diamond Bar Ranch, Pathfinder's Very Best

Junior Champion Sow—Brant Rancho, May Rose Tattletale. Reserve Junior Champion Sow—Diamond Bar Ranch, Cherry Duchess 2nd.

Grand Champion Boar—Falfadale Farms, Great Orion Sensation Jr. Reserve Grand Champion Boar—Graham-Henshaw, Royal I Am.

Spring Pigs—Boars — 1st, Diamond Bar Ranch; 2d, Hewitt Bros.; 3d, Falfadale Farm; 4th, Thorp; 5th, E. Avery Newton.

Spring Pigs — Sows—1st, Diamond Bar Ranch; 2d, Thorp; 3d, Thorp, Orion's Queen of Mossdale; 4th, Falfadale Farm, Miss Defender Sensation; 5th, Diamond Bar Ranch.

Spring Pigs Litter of Four—1st, ——; 2d, Falfadale Farm; 3d, Hewitt Bros.; 4th, Winsor Ranch; 5th, Thorp

Grand Champion Sow — Diamond Bar Ranch, Queen of Pathfinders. Reserve Grand Champion Sow—Diamond Bar Ranch, Pathfinder's Very Best.

Boar and 3 Sows over 1 year old—1st, Diamond Bar Ranch; 2d, Falfadale Farm. 3d, Diamond Bar Ranch; 4th, Craig; 5th, Brant Rancho.

Boar and 3 Sows, all bred by Exhibitor—1st, Diamond Bar Ranch; 2d, Falfadale Farm; 3d, Diamond Bar Ranch; 4th, Brant Rancho.

Four Animals, either sex, get of 1 boar—1st, Diamond Bar Ranch; 2d, Charnock Ranch; 3d, Winsor Ranch; 4th, Diamond Bar Ranch.

Four Animals, either sex, produce of 1 sow—1st, Diamond Bar Ranch; 2d, Falfadale Farm; 3d, Craig.

Fat Barrow, any age—1st, Conejo Ranch; 2d, Conejo Ranch; 3d, Conejo Ranch.

Pen of 3 Barrows, any age—1st, Conejo Ranch.

Fall Pigs—Boars—1st, Craig, Pathfinder's Likeness Jr.; 2d, Diamond Bar Ranch, Cherry Model; 3d, Brant Rancho, May Rose Taxpayer; 4th, Diamond Bar Ranch, Reformer's Model; 5th, Winsor Ranch.

Fall Pigs—Sows—Brant Rancho, May Rose Tattletale; 2d, Diamond Bar Ranch, Cherry Rose; 3d, Craig, Pathfinder's Likeness Queen; 4th, Diamond Bar Ranch, Lena Sensation; 5th, Diamond Bar Ranch, Wonder's Queen.

Fall Pigs—Litter of Four — 1st, Craig.

ROYAL I AM

JR. AND RESERVE GRAND CHAMPION
DUROC-JERSEY BOAR

Los Angeles Live Stock Show

Royal I Am is a son of Great I Am, Nebraska Grand Champion 1920. We offer a few fall pigs by ROYAL I AM

Graham & Henshaw

Lancaster, California

WE WON at Los Angeles Live Stock Show

GRAND CHAMPION AND SENIOR CHAMPION
1ST PRIZE SENIOR YEARLING ON

DUROC-JERSEY BOAR
GREAT ORION SENSATION JR.

WINNINGS OF THE GET OF GREAT ORION SENSATION, JR.

3rd Prize Jr Boar Pig—Same on Futurity
4th Prize Jr. Gilt—Same on Futurity
2nd Prize Young Herd
2nd Prize Herd—Bred by Exhibitor
2nd Prize Produce of Dam
4th Prize Get of Sire
2nd Prize Futurity Litter
2nd Prize Aged Herd—Headed by Great Orion Sensation Jr.
3rd and 5th Prize on Junior Yearling Sow

FALFADALE FARM

B. H. WILKINSON, Hog. Dept. PERRIS, CALIFORNIA

Pathfinder's Likeness Queen; 2d, Hewitt Bros.; 3d, Conejo Ranch; 4th, Newton

Hampshires.

Exhibitors: Conejo Ranch, Newbury Park; F. C. Fairbanks, Redlands; E. Avery Newton, Los Angeles; John G. Ritter, Palmdale; Tarzana Ranch, Van Nuys; Josh L. Wilson, Jr., Lamanda Park.

Boar 2 years old or over—1st, Fairbanks, Harvey's Choice; 2d, Tarzana Ranch, Black Beauty; 3d, Tarzana Ranch, Quality Allen 2d.

Boar Senior Yearling—1st, Newton, Golden Lad; 2d, F. C. Fairbanks, Chong.

Boar, Junior Yearling—1st, Fairbanks, Joe; 2d, Tarzana Ranch, Tarzana Allen.

Boar, Senior Pig—1st, Tarzana Ranch, Tarzana Prince; 2, Wilson, Liberty Messenger; 3d, Newton; 4th, Newton.

Boar, Junior Pig—1st, Conejo Ranch; 2d, Conejo Ranch; 3d, 4th and 5th, Tarzana Ranch.

Sow 2 years old or over—1st, 2d and 3d, Tarzana Ranch; 4th and 5th, Fairbanks.

Sow, Junior Yearling—1st, 2d and 3d, Fairbanks; 4th and 5th, Tarzana Ranch.

Sow, Senior Pig—1st, 2d and 5th, Tarzana Ranch; 3d, Wilson; 5th, Newton.

Sow, Junior Pig—1st, 2d, 3d and 4th, Conejo Ranch; 5th, Newton.

Senior, Champion Boar—Fairbanks, Joe

Junior Champion Boar—Tarzana Ranch, Tarzana Prince. Reserve—Conejo Ranch.

Senior Champion Sow—Tarzana Ranch, Floreine 2d. Reserve—F. C. Fairbanks, Blossom.

Junior Champion Sow—Tarzana Ranch, Tarzana Princess 1st. Reserve—Tarzana Ranch.

Grand Champion Boar—Tarzana Ranch, Tarzana Prince. Reserve—F. C. Firbanks, Joe.

Grand Champion Sow—Tarzana Ranch, Floreine 2d. Reserve—Tarzana Ranch, Tarzana Princess 1st.

Boar and 3 sows over 1 year old—1st, Tarzana Ranch; 2d, Fairbanks.

Boar and 3 sows under 1 year old—1st, Tarzana Ranch; 2d, Conejo Ranch; 3d, Newton; 4th, Newton.

Boar and 3 sows bred by exhibitor—1st, Conejo Ranch; 2d, Tarzana Ranch.

Get of boar—1st, Tarzana Ranch; 2d, Conejo Ranch.

Produce of sow—1st, Tarzana Ranch; 2d, Conejo Ranch; 3d, Newton.

Fat Barrow—1st, 2d and 3d, Tarzana Ranch.

Pen of 3 barrows—1st, Tarzana Ranch.

Poland Chinas.

Exhibitors: Anita M. Baldwin, Santa Anita; Frank Boheim, Downey; H. Christiansen, Arlington Station; Chas. Wm. Cooper, Rivera; J. L. Dunlap, Pomona; J. L. Hall, Lomita; E. Avery Newton Los Angeles; Viola L Renwick, Santa Barbara; Bruce White, Downey; Byrum Zinn, Downey; Eastman Rancho; O. D. Bragg.

Boar 3 years old or over—1st, Christiansen, President's Model; 2d, Renwick, El Profito.

Boar Senior Yearling—1st, Baldwin, Greenwood King.

Boar Junior Yearling—1st, Eastman Rancho, Buster Bob; 2d, Renwick, Mammoth Price; 3d, Dunlap, Longfellow Timm; 4th, Newton, Price's Longfellow.

Boar Senior Pig—1st, Eastman Rancho, Eastman's Korver; 2d, Dunlap; 3d, Dunlap.

Boar Junior Pig—1st, Baldwin; 2d, Eastman Rancho; 3d, Renwick, Endurance Bond; 4th, Baldwin; 5th, Eastman Rancho.

Sow 2 years old or over—1st, Baldwin, Miss Big Price; 2d Christiansen, Liberty Girl; 3d, Newton, Major's Choice.

Sow Senior Yearling—1st, Baldwin, Santa Anita Orange Bud; 2d, Renwick, Mammoth Queen; 3d, Baldwin, Miss Wonder's Price; 4th, Dunlap, Miss Lady 5th; 5th, Dunlap, Miss Lady 6th.

Sow Junior Yearling—1st, Renwick, Miss El Profito; 2d, Baldwin, I S. C. 1 of 19; 3d, Christiansen, Queen's Perfection; 4th, Dunlap, Gene's Lady; 5th, Christiansen, Model Dandy.

Sow Senior Pig—1st, Eastman Rancho, Smooth Maid; 2d, Dunlap; 3d, Dunlap; 4th, Bragg, Thompson's Choice; 5th, Dunlap.

Sow Junior Pig—1st, Baldwin; 2d, Baldwin; 3d, Renwick, Eagle Bond; 4th, Renwick, Banner Bond; 5th, Eastman Rancho.

Senior Champion Boar—Eastman Rancho, Buster Bob. Reserve Senior Champion Boar—Christiansen, President's Model.

Junior Champion Boar—Baldwin, unnamed. Reserve Junior Champion Boar—Eastman Rancho, Eastman Korver.

Senior Champion Sow—Baldwin, Miss Big Price. Reserve Senior Champion Sow—Baldwin, Santa Anita Orange Bud.

Junior Champion Sow—Eastman Rancho, Smooth Maid Reserve Junior Champion Sow—Baldwin, unnamed.

Grand Champion Boar—Eastman Rancho, Buster Bob. Reserve Grand Champion Boar—Baldwin, unnamed.

Grand Champion Sow—Baldwin, Miss Big Price. Reserve Grand Champion Sow—Eastman Rancho, Smooth Maid.

Boar and 3 Sows over 1 year old—1st, Baldwin; 2d, Christiansen; 3d, Dunlap.

Boar and 3 Sows under 1 year old—1st, Baldwin; 2d, Renwick; 3d, Dunlap; 4th, Newton.

Boar and 3 Sows all bred by Exhibitor—1st, Newton; 2d, Christiansen; 3d, Newton.

Get of 1 Boar—1st, Baldwin; 2d, Renwick; 3d, Dunlap.

Produce of 1 Sow—1st, Baldwin; 2d, Renwick; 3d, Dunlap; 4th, Newton.

Tamworths.

Exhibitors: Dutch Fork Stock Farm, Eastover, S. C.; T. T. Endsley & Son, Charleston, Ill.; Pleasant Hill Farm, Bethany, Ill.

The awards in this class were about equally divided between Endsley & Son and Pleasant Hill Farm. The former received two firsts in both the boar and sow classes, while Pleasant Hill Farm received three firsts in the same classes. The senior, junior and grand champion boars and junior champion sow were owned by Endsley & Son The senior and grand champion sow awards went to Pleasant Hill Farm with most of the firsts in group awards going to this latter firm.

Yorkshires

All awards in Yorkshire swine went to Pleasant Hill Farm, Bethany, Ill.

DIAMOND BAR WINS ON DUROC JERSEY HOGS

Los Angeles Live Stock Show

Senior Boar Pig—2nd Prize Fall Futurity—Reformer's Model.

4th Fall Futurity—Cherry Model.

Jr. Boar Pig—1st Cherry Pathfinder—by Ace of Pathfinder's.

Aged Sows—1st Queen of Pathfinders.

2nd Pathfinder's Molly.

4th Lucy Pathfinder.

Senior Yearling Sow—1st Pathfinder's Very Best.

2nd Orion Girl.

Jr. Yearling Sow—1st Orion Sensation Lady.

2nd Smooth Duchess.

Senior Sow Pig—2nd Open Class and Senior Futurity.

Cherry Rose—4th Open Class and Senior Futurity.

Lena Sensation — 5th Senior Futurity Wonder's Queen.

1st and 5th—Jr. Sow Pig—Pig sired by Ace of Pathfinders.

1st Aged Herd—Headed by Ace of Pathfinders.

3rd Aged Herd—Headed by Mammoth Sensation Jr.

1st Young Herd—Sired by Ace of Pathfinders.

3rd Young Herd.

1st Herd Bred by Exhibitor—Sired by Ace of Pathfinders.

3rd Herd Bred by Exhibitor.

1st Get of Sire—Get of Pathfinder.

4th Get of Sire.

1st Produce of Dam.

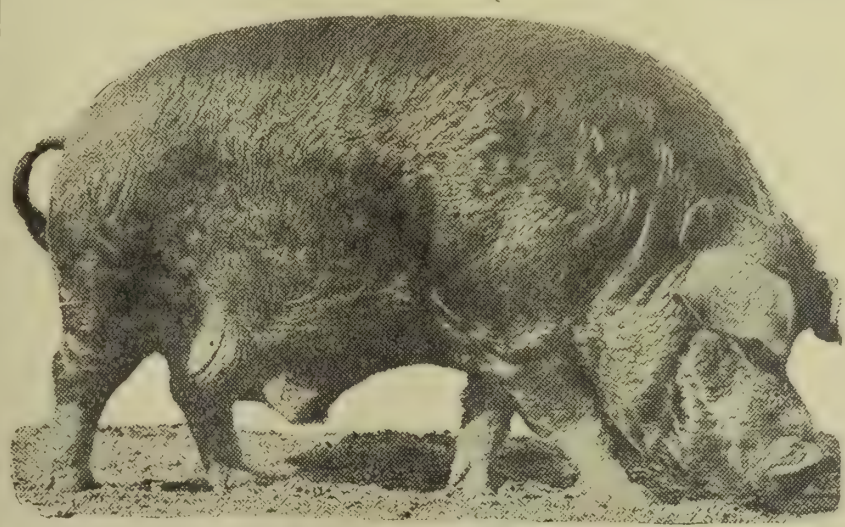
Reserve Jr. Champion Boar—Sired by Ace of Pathfinders.

Reserve Senior Champion Sow—Pathfinder's Very Best.

Reserve Grand Champion Sow—Pathfinder's Very Best.

Reserve Jr. Champion Sow—Sired by Ace of Pathfinders.

Senior and Grand Champion Sow—Queen of Pathfinders.



Ace of Pathfinders

DIAMOND BAR RANCH

F. E. LEWIS
Owner & Manager

R. K. WALKER
Hog Department

SPADRA

Los Angeles Co., California

Water Tanks
FOR SALE
Two new galvanized tanks, holding 4,600 and 2,600 gallons. Fine for farmer or stockman.
J. A. YOST
6th and Channel Sts., San Francisco, California

POLAND CHINA PIGS
Fine ones that will surely please you.
THERON J. SEITS
Geyserville, California

Dealers in PAPER — **Blake, Moffitt & Towne**
37-45 First St., San Francisco
Blake, Moffitt & Towne, Los Angeles
Blake, McFall Co., Portland, Ore.

EL PROFITO POLAND CHINAS
Some corking good "El Profito" Sow and Boar Pigs—age 4 and 5 months—immediate delivery. Satisfaction guaranteed.
SANTA BARBARA, VIOLA L. RENWICK CALIFORNIA

GUASTI BERKSHIRES
Weaned pigs, both sexes, from sows that farrow large litters and raise them. Priced reasonable — they are money-makers.
ITALIAN VINEYARD COMPANY
ALEX. M. WILSON, Supt. Guasti, Calif.

DIGESTER TANKAGE
Send for Sensible Folder on Feeding Hogs
WESTERN MEAT COMPANY
Animal Food Dept. 704 Townsend St., San Francisco

J. W. BENOIT HOLSTEINS

AT AUCTION

AT LONE OAK STOCK FARM, MODESTO

SATURDAY, NOVEMBER 6, 1920

64 HEAD, INCLUDING 49 FEMALES AND

Two Great Herd Sires!

This sale includes two of the highest record bulls ever offered in Stanislaus county. The dam of LONE OAK TERZOOL KORNDYKE, the senior sire, has a 7-day record of 32.71 lbs. butter and 600.30 lbs. milk, and 959 lbs. of butter and 21,550 lbs. of milk in 305 dams. The dam of the junior sire, LONE OAK VALDESSA FINDERNE, has a 7-day record of 30.51 lbs. butter and 790.92 lbs. butter and 18,377 lbs. milk in a year. Breeders in need of a herd sire should look up these bulls.

Also a yearling son of KING SEGIS ALCARTRA ABBEKIRK, out of FAIRMOUNT ECHO ALCARTRA, a double grandson of the $50,000 bull.

GREAT PRODUCING COWS

The females in the sale include two of the highest priced cows listed in a sale in Stanislaus county. They are FAIRMOUNT ECHO ALCARTRA, a daughter of the $50,000 bull, King Segis Pontiac Alcartra, and a daughter of the state record two-year-old KP. Tola Joe. Both of these cows are due to freshen a few days after the sale, being bred to the senior sire. Other good cows in the sale are WALHALLA PRINCESS 2ND, 23 lbs. butter, 603 lbs. milk in 7 days, and 706 lbs. butter, 17,328 lbs. milk in a year; ORA LOMA ELECTIC PONTIAC, 22.15 lbs. butter, 511.60 lbs. milk in 7 days and 592.4 lbs. butter, 15,719 lbs. milk in 286 days; FERN PONTIAC RUBY BURKE, whose record is 29.75 lbs. butter, 569 lbs. milk in 7 days and 574.97 lbs. butter and 13,875 lbs. milk as a three-year-old.

Another three-year-old has a record of 22.15 lbs. butter, 578 lbs. milk in 7 days, and 664.83 lbs. butter with 15,571 lbs. milk in 305 days. Still another three-year-old made 21.22 lbs. butter, 433.7 lbs. milk in 7 days, and 481.64 lbs butter, with 10,616 lbs. milk in 262 days.

22 DAUGHTERS OF EL PRADO WAYNE COLANTHA

A 30-lb. Grandson of Colantha Johanna Lad,

14 of which are bred to the senior sire. Eighteen daughters of LONE OAK TERZOOL KORNDYKE; those of breeding age are bred to LONE OAK VALDESSA FINDERNE. All but two of the females in the herd are Mr. Benoit's own breeding.

Every animal goes to the highest bid on sale day—nothing is reserved.
Every animal offered in this sale is guaranteed to be a breeder.
Certificate of registration, transfer furnished free of cost to buyer.

TERMS OF SALE—One-half cash and one year's time on the balance on approved notes. Sale begins at 10 a. m., November 6, 1920, at the Benoit's Lone Oak Stock Farm, four miles west of Modesto, Calif. A square deal to buyers insured by the management.

STANISLAUS COUNTY HOLSTEIN BREEDERS' ASSOCIATION

For catalogs and further information write,

E. M. MORROW, Sec'y, Modesto, Calif.

Auctioneers

COL. GEO. A. GUE, Yakima, Wash.—COL. CY. N. CLARK, Modesto, Cal.

TOYON FARM ASSOCIATION

WILL SELL AT PUBLIC AUCTION

150---REGISTERED HOLSTEINS---150

NOVEMBER 10-11, 1920

STATE FAIR GROUNDS, SACRAMENTO, CAL.

The herds of Toyon Farm Association, Los Altos and San Francisco, are to be consolidated into one big herd on their Brentwood Farm. The herds now total approximately 350 head, and for the present the owners plan to carry only about 200 head, hence the sale of 150 head at this time.

100 MILK COWS IN THIS SALE

Their first individual offering will include approximately 100 head of cows and heifers in milk, of splendid type and breeding, many with large official records and out of high record dams. There will also be about 30 bred and open heifers, and about 25 bulls in the sale.

FEMALES BRED TO HIGH RECORD BULLS

The females in this sale are bred to SIR PIETERTJE ORMSBY MERCEDES 43RD, son of Sir Pietertje Ormsby Mercedes and Aaggie Wayne Peep, whose yearly records for five years exceed the total of any other cow; SIR AAGGIE MEAD, son of Sir Aaggie De Kol Acme out of a 1200 lbs. daughter of the 1142 lb. cow Aralia De Kol; a son of the 33-lb. cow Bonnie Lass Pauline; and a 30-lb. son of Johanna Bonheur Champion; and to SIR PIETERTJE ORMSBY CANARY, a son of Sir Pietertje Ormsby Mercedes out of an 862.88-lb. yearly record 3-year-old, whose dam made 1009.87 lbs. butter in one year.

A HEALTHY LOT OF UNBLEMISHED CATTLE

In this entire offering there are only three cows with blemished udders; no female of breeding age will be offered unless she is believed to be safe in calf; every animal is positively guaranteed to be a breeder; EVERY ANIMAL IS TUBERCULIN TESTED BY A FEDERAL VETERINARIAN AND SOLD SUBJECT TO RETEST BY THE BUYER.

Catalog free on request. Management

Auctioneers:
COL. BEN A. RHOADES, Los Angeles.
COL. JOHN W. DAVIS, Mantera

CALIF. BREEDERS' SALES & PEDIGREE CO.

C. L. HUGHES, Sales Manager, Sacramento, Cal.

A CHANCE FOR FOUNDATION HOLSTEINS.

(Written for Pacific Rural Press by Ralph Newman.)

There is no doubt about it. The day of the purebred sire has come. Moreover many dairymen are thinking of gradually swinging the whole herd over to the purebred column. These men want production first and must have production—steady production through the year—if they are to carry through the movement so well begun. They are not much interested in seven-day records or in records forced by unusual feeding and care. They want cows that under good dairy conditions will give a good account of themselves at the milk pail and at the same time bring forth calves that will be as good as or better than their dams.

Men with such ideas of a start in purebred Holsteins ought to be specially interested in the Peterposten herd. There is a fine registered herd that certainly meets the requirements of a large class of progressive dairymen. For example, there is a six-year-old cow that, in three months, has made 254 lbs. of fat and that now, four months after calving, is giving 68 lbs. of milk a day. There is a seven-year-old cow with 351 lbs. of fat from 8672 lbs. of milk in five months. A first calf heifer has made 283 lbs. of fat from 7969 lbs. of milk in 6 months. A five-year-old has made 456 lbs. of fat from 13,361 lbs. of milk in eight months. She is due to freshen in December and is giving forty pounds of milk a day right now.

So it goes. But what I want especially to impress on dairymen who would like some purebreds but are slow to try it for fear they will not make good unless "forced" and pampered and milked four times a day, is the fact that the figures I have quoted are cow-testing association figures, the cows were handled just as any decent dairyman would handle them, they had just the ordinary dairy ration, and they were milked twice a day. The difference between their production and that of a common herd is due to their breeding for production.

Undoubtedly there are young cows in this herd that could be "fitted" and made to come across with a 30-lb. or better seven-day record. That might mean something to a "professional" breeder, but it doesn't mean much to the dairyman. The fine, long-time production of this herd under ordinary dairy conditions does mean much to the dairyman who is looking for a profit from the cows he feeds.

KINGS COUNTY POLANDS AGAIN OFFERED.

Poland Chinas bred in Kings county have an enviable reputation all over California and beyond. Throughout all the time of high prices of feed and low prices of pork, the real breeders in this black hog country have staid in the business, and now have an offering that will make plenty of dollars for those who buy. Eleven consignors will offer 40 head of mostly sows and open gilts on the 20th inst., at Hanford.

This is the time to get into the hog business, as feed is at a point where it is now possible to feed market hogs profitably. Poland Chinas are one of the breeds that make gains the most economically and finish at a weight that is preferred by the packers, or will grow on into hogs of enormous size.

Col. Geo. W. Bell of Tulare will cry the sale, and he will tell you that if you will just "keep your head nodding" and you will soon buy a hog.

Poultry Breeder' Directory

Rate, 4c. per word. Cash must accompany all orders.

BARRED PLYMOUTH ROCKS — "Nothing Better in Poultry." Wonderful layers. Choice hens and pullets for sale; also fine cockerels that will improve your flock. Now booking orders for hatching eggs. I have made a specialty of Barred Rocks for over twenty-two years. That's why our birds win at all the leading shows. Catalog free. Chas. H Vodden, Box 3, Los Gatos, Calif.

RAISE FALL CHICKS—They are profitable Write for circular. See why they pay. Chicks every week. R. I. Red Barred Rock, White Leghorn. Also booking for spring delivery. Order now and get a desirable date. Safe arrival guaranteed. Stubbe Poultry Ranch and Hatchery, P. O. Box 67, Palo Alto.

PETALUMA HATCHERY — Established 1902. If you want good fall layers, get chicks in the fall. We guarantee satisfaction. There will be but few chicks hatched this fall. The wise ones are buying. Send for prices. L. W. Clark, 615 Main St., Petaluma, Cal

PEERLESS WHITE WYANDOTTES — Our 200-egg strain, bred for years for show qualities and high-egg production. Fifty cockerels, 100 pullets for sale. Trios and mated yards. Eggs for hatching. Catalogue free. J. W. Atkinson, Box 8, 130 Willard St., San Jose

RHODE ISLAND REDS—11 years breeding Reds, for dark color and heavy egg production. Get started right. Early hatch cockerels and pullets, baby chicks. Healthy, vigorous stock, hatching eggs. Wm. Larm, 3915 39th Ave., Fruitvale, Calif.

WHITE LEGHORN BABY CHIX from heavy-laying Hoganized Stock. Safe arrival of full count, live, strong chix guaranteed Price list and interesting literature on application. The Pioneer Hatchery, 408 Sixth St., Petaluma, Cal.

SPECIAL SALE—Barred Rocks, White Orpingtons, White Houdans. Old and young stock. Get your cockerel for spring breeding, $2.00 and up. R. P. Lutzi, 1217 20th Ave., San Francisco

DOLLAR EGGS COMING!—A few hundred White Leghorn pullets from early spring hatch for sale. Priced at $2.00 and $2.50 each in dozen lots and up. No culls. Geo. L. Horine, Winton, Cal.

GOLDCROFT BUFF ORPINGTONS. Columbian Wyandottes and White Leghorns. Heavy laying strains. Breeders and young stock. Samuel Abrams, Box 13, Los Altos.

PULLETS, $2.00 Cockerels, $5.00 each and upward; White Leghorn, Brown Leghorn, White Rocks. Mahajo Farm, P. O. box 597, Sacramento, Calif

HART'S MAMMOTH BRONZE TURKEYS—Large, well-marked, year-old hens. Thrifty young stock of both sexes. Albert M. Hart Clements, Cal.

WHITE HOLLAND TURKEYS — A few seven-months-old breeding toms at $10.00 each. A. P. Ward & Son, Calistoga.

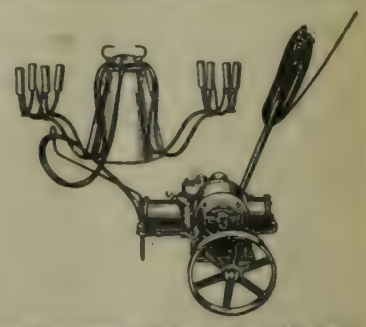
CHICKENS, DUCKS, GEESE, GUINEAS, Pea Fowl, Pigeons. Wm. A. French, 545 W. Park St., Stockton, California. Stamps.

EASTMAN'S "BRED-TO-LAY." Hoganized and trapnested. Barred Rocks. Fall Chicks. Fairmead Poultry Farm, Fairmead, Cal.

GUINEAS, MATED PIGEONS, CANARIES—Good stock. E. A. McKinley, R. F. D., Box 91, Ukiah, Cal.

BOURBON RED TURKEYS—Buff Orpingtons. The Ferris Ranch, R. 2-144D, Pomona Calif.

Sharples Moto Milkes



A COMPLETE MILKING MACHINE
For $385.00 San Francisco

A plant in itself, including power, at a greatly reduced price. Will handle from 8 to 50 cows, milking two cows at one time at an average of 20 cows an hour.

No Installation—No Pipes
No Pulsators—No Extra Charges

Ready to run when unboxed. Has the Sharples "Compressed Air Squeeze," which is the secret of successfully milking a cow. Will operate from 110-220 volt power line, or 32 volt farm plant. If you have no power, we will quote you on a Sharples Pipe Line machine.

Investigate this before buying a milking machine.

JORDON-HILL COMPANY

Western Distributors.

Corner Main and Market, **San Francisco, Cal.**

Poultry for Profit

THE EGG MARKET STRONG.

Seldom has the outlook for the egg producer been more roseate than at the present time. Eggs are going up and feed is going down — an ideal conjunction of conditions. So far as the average looker-on can see there is no immediate likelihood of a recession in prices in the local market barring an unexpected invasion of heavy egg consignments from the East or Australia—or misguided agitation by the Housewives' League. This prediction is based on official reports of the rapidly and steadily diminishing volume of stock at cold storage points the country over.

The drift of the cold storage movement may be obtained from the following figures—the latest available: On Oct. 9, there were put into storage in San Francisco 66 cases; there were withdrawn 2,282 cases, leaving a balance of 78,559 cases on hand as against 85,439 last year. Reports of cold storage holdings at New York, Boston, Chicago and Philadelphia on same date show 2,362,541 cases on hand, as against 3,119,631 last year, and heavy current withdrawals. It appears that the capacity for absorption of the consuming public is also on the increase. Working people are good spenders, especially in provisioning the table, and the fancy egg figures largely on the family menu. The propensity to free spending on the part of the wage-earning public may account also for the unusually wide spread between Extra Fancy pullets' eggs, which amounts over the retail counter in San Francisco to as much as 20 cents, whereas the normal spread is 5 or 6 cents. As illustrative of the willingness of the public to pay handsomely for a first-class product, it is reported that as high as $1.04 per dozen has been paid for extra fancy eggs at first class grocers in San Francisco.

For the past few days the receipts of eggs on the local market have been heavy, averaging over 40,000 dozen daily. As a consequence there is a decline at this writing of about 1 1-2c on extra quality eggs, other grades being affected in proportion. This, however, is regarded by dealers as a transient backset due to a transient condition. The scarcity of laying fowl the country over and the steady demand by the consuming public look like a dependable guarantee of continued high prices. However, some dealers are fearful that eggs will share in the general trend of commodities downward, and are buying conservatively.

LOS ANGELES POULTRY AND RABBIT SHOW.

The average poultry man does not realize that breeds and varieties of poultry include not only many queer types, such as the featherless-necked bantams and Transylvania horribles, but also many varieties that may fill exactly the wants of the poultryman. For insance, if a lover of Leghorns did not like white or brown colors he could still choose the buff. If one liked the characteristics of Rhode Island Reds but disliked the color, he could get single-combed Rhode Island Whites. If he didn't like single-combed reds he could get rose combs on them. If he wants something distinctive he can breed Sicilian Buttercups in whose combs a small bird might build her nest surrounded by a toothed railing. As white seems popular in California poultry, white birds may be obtained in the Plymouth Rocks, Minorcas, Rhode Islands, Leghorns, Wyandottes, Light Brahmas, African Guineas, or Holland turkeys, all of which breeds and many more were well represented at the Los Angeles Livestock Show. There were 1001 varieties of bantams and pigeons, and a great variety of rabbits. Mrs. C. A. Richey of Los Angeles county had a surprisingly beautiful exhibit of rabbit furs.

Some of the livestock men objected to the noise from the dog show, but as frequently happens most of the noise came from the minority, while perhaps 25 or 30 breeds were well represented, bulldogs and toy dogs combined to occupy most of the space; and these made no noise at all as a rule. The former were too much weighed down with the cares of this world—the latter were too busy thinking how aristocratic they were. But a collie, the prince of them all, really smiled back at the writer when we looked friendly at him.

EGG-LAYING CONTEST AT SANTA CRUZ.

The rules and regulations of the California Farm Bureau Egg-Laying Contest, beginning November 1, 1920, direct that:

Each entry will consist of 12 pure-bred pullets of the same variety and of a recognized standard variety, but only the ten highest birds will be considered as in competition, the two additional birds being included to take care of mortality losses during the contest year.

The entry fee will be $2.00 per fowl for the one year period, $1.00 to be paid when the entry is accepted and the balance any time before the fowls are sent to the Contest Grounds.

All birds must be shipped by express, prepaid, to the California Farm Bureau Egg-Laying Contest, Pacheco Avenue, Santa Cruz, California. Entries outside of the county should be shipped to arrive soon after the 20th of October, so as to give the birds a few days to get accustomed to their new quarters before the start of the contest on November 1st, 1920.

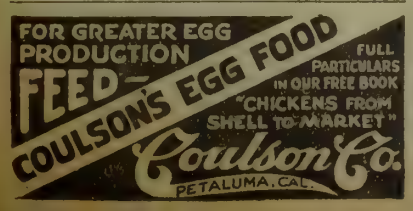
A complete copy of the rules and regulations governing this contest may be obtained by writing to the manager of the California Farm Bureau Egg-Laying Contest, Santa Cruz, Cal.

A RARE POULTRY DISEASE.

To the Editor: A few days ago I killed a hen which seemed fat and healthy, except when I opened it. The eggs, of which there was quite a handful, seemed turned to a substance resembling and of about the same solidity as a piece of kidney. The heart, which was about three times the natural size, was filled on one side with a substance about the consistency of cheese, and of a slightly yellow color. As the hen had been eating heartily and seemed all right externally, I would like your opinion as to what could have been the matter with her. —E. D. J., Morgan Hill.

Evidently this fowl was suffering from gangrene of the ovary, complicated by a tumor or cancerous growth that affected the heart. The most thorough investigators of poultry diseases are unable to account for the cause of this peculiar and rare disease of the ovary, and they seem to disagree as to the cause of these internal tumors, of which there are several kinds and not so uncommon as the first mentioned disease. None of these conditions can be successfully treated by the poultryman who is not also a skillful surgeon. If this hen had not been killed, no doubt she would have died suddenly within a few weeks.

Always select the cockerel that feathers first and then select them from the one that crows first. Early feathering and early crowing means early maturity. Early maturity means early profits.



Help your Moulters Moult

Moulting time is the time that a hen needs assistance. It is the off-season in the life of the hen.

Think of the amount of a hen's energy, vitality and red blood that's required to reproduce a thousand feathers! (which is only an average plumage).

A moulting hen needs good health, good appetite and digestion. That's just what Poultry Pan-a-ce-a does for a moulting hen—gives her appetite and good digestion, so that she'll eat more and digest more.

Dr. Hess Poultry PAN-A-CE-A

Helps your poultry through the moult. And starts your pullets and moulted hens to laying.

It contains Tonics that produce appetite and good digestion—Tonics that tone up the dormant egg organs—Iron that gives a moulting hen rich, red blood and a red comb. It contains Internal Antiseptics that destroy disease germs that may be lurking in the system.

No disease where Pan-a-ce-a is fed

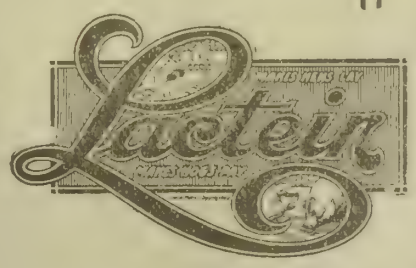
Pan-a-ce-a helps your poultry to stay at par during the moult. They don't become run-down, pale and thin. That's why a Pan-a-ce-a hen gets back on the egg job quickly instead of sitting around all fall and winter as a bill of expense while regaining her normal vitality.

Always buy Pan-a-ce-a according to the size of your flock. Tell your dealer how many fowls you have. He has a package to suit. Good results guaranteed.

90c, 60c, and $1.25 packages. 25 lb. pail, $3.50. 100 lb. drum, $12.00. Except in Canada.

DR. HESS & CLARK **Ashland, Ohio**

Dr. Hess Instant Louse Killer Kills Lice



Adds Profit to Any Feed.

The compounding of LACTEIN Condensed BUTTERMILK, with LACTIC ACID developed to the correct degree, imparts the condition of absolute digestion to all feeds. And this means that every feed is giving up its full strength to the poultry. Combined with this point is the fact of the REAL FOOD VALUE OF LACTEIN—and the health and strength it imparts to the system of poultry. The maximum poultry profit is obtainable through the use of LACTEIN Condensed BUTTERMILK!

VITALITY FOR MOLT

Especially in time of molt does the hen need invigorating, feather-building and body-building elements—AND THAT'S JUST WHAT LACTEIN furnishes—so beneficial—a proven fact that has created the enormous LACTEIN DEMAND; add vitality to the hens when nature demands. LACTEIN answers nature's demand scientifically.

ASK YOUR POULTRY SUPPLY DEALER FOR LACTEIN—feed it the year round—vitalize your hens to the highest point of efficiency and health. GET LACTEIN NOW.

LACTEIN CO.

Main Office - Factory
Modesto, California

Food and Beverage

Make no mistake! Nothing can take the place of Ghirardelli's Ground Chocolate—at your table or on your dealer's shelves. Because Ghirardelli's fills a daily household need—and fulfills *every* essential of food and beverage.

Ask for Ghirardelli's Ground Chocolate at the store where you do your trading. Never sold in bulk but in cans only. In this way Ghirardelli's retains its flavor and strength—the two most important elements of good chocolate.

Say "Gear-ar-delly"

D. GHIRARDELLI CO.
Since 1852 San Francisco

GHIRARDELLI'S
Ground Chocolate

Stoves *Once* Were Nailed to the Floor

Not so the modern oil heater. Filled with PEARL OIL it gives instant heat *anywhere*, at any time. It sees a continuous round of service — bedroom — dining room — kitchen — parlor — and bedroom again in the evening. PEARL OIL burns without smoke or odor. Economical. Sold in bulk by dealers everywhere and by our stations.

Order by name—PEARL OIL.

STANDARD OIL COMPANY
(California)

Home Circle Department

UPHILL.

Does the road wind uphill all the way?
Yes, to the very end.
Will the day's journey take the whole long day?
From morn to night, my friend.

But is there for the night a resting place?
A roof for when the slow dark hours begin.
May not the darkness hide it from my face?
You can not miss that inn.

Shall I meet other wayfarers at night?
Those who have gone before.
Then must I knock or call when just in sight?
They will not keep you standing at that door.

Shall I find comfort, travelsore and weak?
Of labor you shall find the sum.
Will there be beds for me and all who seek?
Yes, beds for all who come.

—Christina Rossetti.

THE BOY WHO WAS READY.

The boys' line was perfect. With heads erect, chins tucked in, and backs as stiff and straight as broomsticks they turned a splendid square corner and filed triumphantly into Room Five. Sunshiny Miss Fay did not smile at her faithful little pupils, however. Her dimples were all ironed out, the twinkle in her eyes had vanished, and worst sign of all, there was a genuine criss-cross frown between her eyes!

"How many boys are ready for something hard?" she demanded.

Twenty-four hands flew up. (There were just twenty-four boys in the school).

"Good!" exclaimed Miss Fay. "We can't play in Mr. Foster's field any more, boys. The principal got a letter from him last night. Now I want you boys to remind the little fellows to stay in the school-yard. I haven't forgotten how you stopped the snowballing last winter, and I shall count on you to help me."

The boys of Room Five tried to smile back loyally, but it was hard work. There wasn't any playground near the school, but for years the boys had spent their recesses in Mr. Foster's field, which was big enough for two baseball diamonds with room to spare for other games.

Everybody was unhappy the first recess. The children were crowded in their own yard, and all they could do was to sit or stand around. Phil Rice, Bob Lowe, Tom Whitney, and several other boys sat on the steps and looked longingly at the woods in the distance.

"Let's go to walk tonight right after school," proposed Phil.

"Let's" agreed everybody in the group.

Phil, Bob, Tom, and Jamie were the first boys out that night. They waited a moment for Chester, who always mixed the "e" and "i" in receive. As soon as he had written it ten times in yellow chalk on the blackboard he joined them, and the little troop started off.

They followed Parker's Brook for half a mile. Phil gathered specimens of any flower he didn't know, and Bob picked an armful of black alder berries for the painting lesson the next day. Tom tried to catch a fish with his hands and tumbled in head first. He was used to duckings and laughed the loudest of all.

Suddenly Phil stood still. His head was thrown back and he sniffed the air like a hound. "I smell smoke," he announced. The others shook their heads. But Phil stood his ground. "It's up in Mr. Foster's woods. Let's run up and see."

"Don't bother," argued Chester; "if we go up there we won't have time to go through the cave."

"Mr. Foster is as mean as dirt," sputtered Tom, "and I'm not going on his land, for one."

Phil didn't say a word but sniffed the air again and started to make his way through the tangle of vines and bushes. The other boys looked after him a moment and then followed on. It was hard climbing. The bank was steep and the way was obstructed by a growth of briers and brambles.

Phil kept on doggedly and the others pressed on after him. They stopped a minute at the summit to get their breath, but Phil's eyes shone like lamps. "There it is," he shouted; "come on, boys!"

It was only a little fire, but it was burning brightly. In a few minutes it would have been beyond the boys' control. Now they ground it under their heels, and soon the bright flames were conquered and only a heap of black ashes remained.

"Good for you," said a gruff old voice, and Mr. Foster came in sight. "I smelled that fire a mile away, but my legs aren't as good as my nose. I thought the woods would be gone when I came."

He looked at the boys keenly. "I didn't know boys were so useful." He fumbled in his pocket and drew out a shabby old purse.

"We don't want any money," Phil said promptly, "but we'd like the right to play ball in your lot again."

"You've earned it," said the old man. He scribbled a few words on his pad and gave it to Phil. "Give this to your teacher tomorrow." So at the next recess all the boys of the school got together. "Hurrah for the boys of Room Five!" they shouted.

Every boy cheered until he was obliged to stop for breath, and then Chester climbed the fence and waved his hands. "Three cheers for the boy who was ready and saw his chance," he shouted.

So the boys started cheering all over again until Phil sensibly reminded them that recess would be over and the new football untried. —Mary Davis, in Sunday School Times.

SOME THOUGHTS ABOUT "UPLIFT."

(Written for Pacific Rural Press.)

This writer lays no claim to wisdom and freely admits that he may be wrong, but someway "feels in his bones" that if any rural community is to be uplifted, it must uplift itself. A man may not be able to raise himself by his own boot-straps, but he may rise by grasping the limb over his head and pulling himself up. And this is a good deal surer and more satisfactory way of getting up than waiting for some outside force to come along and boost him bodily.

This observation is prompted by some things appearing recently in the press. For example, there is a self-ordained "commission" composed of city women for the study of rural sociology (whatever that is) and its appreciation to the uplift of rural life. Without a doubt these good women mean well. If they are not mere faddists who soon tire of one fad and then turn to a newer one, they may perhaps soon be proposing another organization to clutter the field already overburdened with organizations. And that is about as far as they will get.

For several years the Bureau of Education fostered a division devoted to the community activity idea. Now that has been given up but has bloomed again as the National Community Board. Of its city activities we have nothing to say, but in the country it proposes "the school-houses as their capitals." It will even furnish social engineers to install the machinery.

Now we submit that these and a host of other outside agencies springing up almost daily for the uplift of rural life are not necessary—are not advisable.

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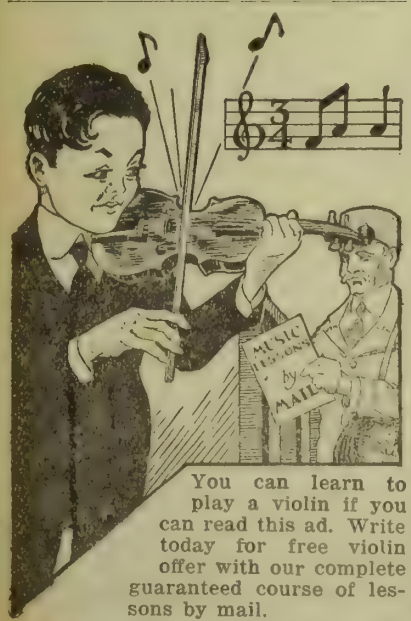

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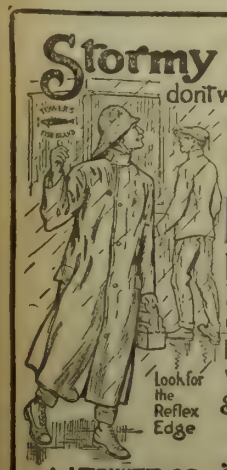

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Rural sociology is well enough worked out in and by the country now. We don't call it that and we can't see what good will come from mouthing over high-sounding technical words that are nothing but words, but we of the country have pretty clear ideas of what the country needs for its uplift—a mighty sight clearer ideas, too, than city people, however highly trained, can have.

Furthermore, we have all the agencies needed to do the job. And they are our own agencies, supported with our own money and within our own control. What are they? The consolidated school with the community church coming along, the Farm Bureau and the County Free Library.

The consolidated school is sweeping the country. In Iowa they are forming at the rate of one a day. In California they are coming so fast that we have ceased trying to keep track of them. And so it goes. Why? Because farmer folk themselves see in it their chance to solve their own educational and "Americanization" problem in their own way—an opinion backed by A. O. Neal, Chief of the Rural Division of the Bureau of Education, and in connection with the consolidated school, the consolidated church is beginning to "take." There are many of them in California and more coming. Davis is getting one in motion now that must prove a power, for it will touch the lives of hundreds of young farmers gathered at the University Farm. And the Land Settlement at Delhi is launching another that may become an object lesson for the whole state.

The Farm Bureau, as we have it in California, is the farmer's own. He may do with it what he will. He is doing with it marvelous things, for the betterment of rural life. So quietly does it move (country style) that the noisy city may not realize what is going on, but anyone who travels over the state and notes the concrete achievements of the Farm Bureau along scientific, social and economic lines, must realize, it seems to me, that in this agency, with one other to be mentioned, the farmer has all the community machinery he needs to work out the problems, social and commercial, that must be worked out to put our rural life on the plane it should occupy and must occupy if the nation is to prosper.

With the Consolidated School and the Farm Bureau supplemented by the service the County Free Library can render, what more do we need in the machinery line? Through these three public agencies we may reach out and grasp and incorporate into one rural life the best the world has to offer, and we may originate better things that the world now knows.

What is needed in California, anyway, is just that we use the agencies we have. And that is up to us. If there is any real, lasting, uplifting done we must do it ourselves. We are doing it. We get tangled up in the everyday details, our own individual part seems very small, local progress seems slow, and we may get a bit discouraged. We should not be discouraged. Community uplift, that amounts to anything, is an evolution, and here the mills of the gods grind slowly. Just sight by the land marks, though, and you will see that we are actually getting on. To one mind at least, we will do well if, instead of chasing off new methods and dividing our resources of money and energy the multitude of "uplift schemes," we plug away with the agencies we have—but all the time and all of us plug away.

CONSOLATION FOR THE WOMAN VOTER.

(Written for Pacific Rural Press.)

The other day we listened to the plaint of a farm woman who had just received a sample ballot. Her plaint was two-fold. She said that the burden of reforming politics rested on women. That the claim was made that when women hold the vote they would clean house. So far she couldn't see that much had been done and she wondered if women were equal to the job. Then she pointed out the appalling array of questions she was called upon to settle at the November election and wondered if she could ever get posted on all of them enough to pass an intelligent judgment.

For her comfort let it be said:

A great many sane people believe enthusiasts took in too much territory in their prophecy of what woman's vote could do. Woman was given the ballot, or should have been given the ballot, not because she would do this and wouldn't do that, but because she is a human being and a citizen and a tax-payer, and has as much right to vote as anybody has. If the only result of giving woman the ballot is an increase in the number of votes cast, still woman has a right to vote. If no change whatever results, if not a single reform follows, still woman has just as much right to vote as man has. Maybe, as a whole, women are not so far ahead of men after all as some suffragists thought they were. But if that proves true, don't worry. The ballot is not given to be taken from women even if some of the pre-election pledges go glimmering as such things have a habit of doing. Moreover, ladies, we are all willing to give you time to find yourselves politically. If we really think you will "change things" we do not expect you to do it all in one election. Take your time and don't worry.

As for that November ballot, maybe you think your husband, who looks at it so wisely, knows exactly what to do about every measure. Well, he doesn't. Nobody does. Nobody can.

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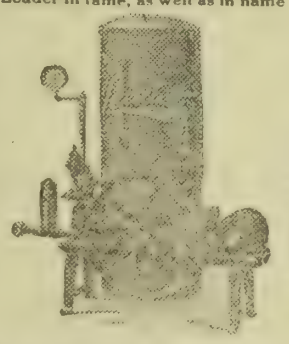

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THE MARKET REPORTS

SAN FRANCISCO.

San Francisco, October 13, 1920

WHEAT

[illegible]

OATS.

[illegible]

BARLEY.

[illegible]

CORN.

[illegible]

FEEDSTUFFS.

[illegible]

HAY.

[illegible]

EGGS.

[illegible]

HONEY.

[illegible]

POTATOES, ONIONS, ETC.

(Wholesale prices quoted by commission houses.)

A crop of potato potatoes is expected. Meanwhile sweets have encountered a good market. Onions are doing well and are steadier. A slight advance is noted on Australian growers. Vegetable receipts are heavy, probably largely due to the fear of producers that frost will nip the produce. The market however is easier for squash and egg plant which have advanced in price.

Turnips	$1.25@1.50
Peas, Halfmoon	12@13c
Beans, wax, lb.	5@6c
do, green lb.	7@8c
Carrots per sack	$1.25@1.50
Green Corn, sack	$2.50@3.00
Lettuce, local doz.	25@30c
Cucumbers, Alameda, lug box	75c@1.00
Tomatoes Alameda large box	75c@1.50
Summer Squash, box 35-40 lbs	90@$1.15
Egg Plant, box	75@1.00
Potatoes New River cwt.	$2.00@2.25
Onions, yellow, sack	85@1.00
do Red	75c@85c
Green Onions box, 25 lbs.	$1.25@1.50
Rhubarb, Strawberry, box 40 lbs	$1.50@2.00

BEANS

There is no change in the bean market. Continued inactivity prevails with increased dullness predicted.

(1920 Crop.)

Bayos	$8.25@8.50
Blackeyes	$4.75@5.00
Cranberries	$6.00@6.25
Red Mexican	$6.75@8.00
Pinks	$5.60@5.75
Large Whites	$4.75@5.00
Small Whites	$4.75@5.00
Limas, S. F. prices	$8.25@8.50
do. Baby, S. F. prices	$7.75@8.00

DRIED FRUIT.

The market is extremely dead. No buying is being done over the concessions and continued inactivity is expected for the near future. All prices are the same as quoted last week.

Apricots.

Extra fancy Moorpark lb.	30c
Fancy Moorpark lb.	23c

Growers Quality.

Growers quality—Fancy lb.	26½c
do. lb.	24½c
do. Choice lb.	22½c
do. Standard lb.	20c
do. Standards lb.	18c

Raisins—The following prices have been established as the opening prices of the California Associated Raisin Company for the 1920 crop of raisins:

Muscat Sun Maid seeded pkg. 36 16-oz.	21c
do. Fancy 36 16-oz.	18½c
Muscat Seeded Sun Maid 25 pkg. cs.	20c
do. Fancy Sun Maid 25 lb. boxes	20½c
Loose Muscat unbleached lb.	20c
do. Fancy unbleached lb.	24c
Layers 2-crown flat pack 5 lb. box	$1.30
do. 3-crown flat pack 5 lb. box	$1.30
Clusters 4-crown flat pack 20 lb. box	$1.70
do. 4-crown flat pack 5 lb. box	$1.40
Sun Maid 100 lb. boxes	$21.00

Thompson Seedless Sun Maid unbleached lb. 20½c

do. Sun Maid unbleached lb. 21c

Sultanas Sun Maid unbleached lb. 20½c

do. Fancy lb. 19c

Muscatels Sun Maid 25 lb. boxes 19c

do. Fancy lb. 19½c

Muscatels Sun Maid 25 lb. boxes 20½c

do. Fancy lb. 21½c

Muscatels Sun Maid 25 lb. boxes 22½c

do. Fancy lb. 23½c

Muscatels Sun Maid 25 lb. boxes 24½c

do. Fancy lb.

Barley hay, ton	$21.00@24.00
Oat hay, ton	$24.00@27.00
Alfalfa, Northern, ton	$25.00@27.00
do, local, ton	$28.00@32.00
Straw, ton	$ 9.00@11.00

WALNUTS.

The walnut crop of southern California is now being gathered and its quality is said to be fine. Yield, however, is put at 25 per cent less than last year's, which will give us a crop of 42,000,000 pounds. Prices named by the Association this year are:

No. 1	22½c
No. 2	16½c
Fancy budded	25½c

These prices are said to be 30 per cent lower than last year's. The demand is reported very good at the decline.

SPECIAL CITRUS REPORT.

Los Angeles, October 13, 1920.

The Valencia orange market has occupied a firm position for some time, theatening to move to higher levels, which has come to pass. The f. o. b. price for Sunkist moving from $7 to $7.50. Some brands are selling in New York as high as $11.00.

Lemons seem to have taken a boost. Boston report sales, $5.90 to $6.00; Pittsburg, $7.30; Cleveland, $4.90 to $5.65; St. Louis, $4.25 to $5.00.

CALIFORNIA FARM BUREAU MARKETING ASSN.

REPORT OF SALE.

Modesto, October 5, 1920—77, 194, $15.55, J. S. Jones; 20, 180, $15.55, J. S. Jones; 63, 211, $15.50, Virden Packing Co.; 4, 141, $14.50 Virden Packing Co.; 1, 310, $14.50, Virden Packing Co.; 13, 362, $13.00, Virden Packing Co.; 1, 320, $5.00, J. S. Jones. Two cars, seventeen consignors.

Tegner, October 6, 1920—83, 212, $15.15, Virden Packing Co.; 54, 183, $14.75, Siem & Son; 20, 149, $13.75, Siem & Son; 15, 306, $12.75, Siem & Son. Two cars, twenty-seven consignors.

Fresno, October 8, 1920—62, 212, $15.70, Joe D. Biddle; 28, 157, $14.70, Joe D. Biddle; 11, 146, $15.20, Joe D. Biddle; 5, 396, $13.70, Joe D. Biddle; 3, 120, $10.00, H. Hopkins. One car, seventeen consignors.

McFarland, October 9, 1920—85, 207, $16.00, Wilson & Co.; 98, 168, $15.60, Wilson & Co.; 93, 179, $15.70, H. A. Frame; 9, 320, $13.20, H. A. Frame; 4, 266, $15.20, H. A. Frame; 12, 134, $13.00, Claude Richardson; 48, 153, $13.50, Claude Richardson. Four one-half cars, twenty-one consignors.

MARKET COMMENT.

Grape Shipments Heavy.

With a liberal increased supply of cars and the fear of damaging rains the grape shipping districts are keyed up to high tension. Daily shipments are running from 275 to 325 cars, and possibly as many more could be used. The prices being obtained for all varieties is a revelation to the grape industry. Cars arriving in good condition are selling not lower than $2,500 to $4,000.

Condition of Crops of the Nation.

The Department of Agriculture forecasts the production of the country's principal crops, estimated from their condition October 1st, or at time of harvest. Spring wheat, 218,007,000 bushels; all wheat, 750,648,000 bushels; corns, 3,216,192,000 bushels; apples, 34,287,000 barrels; peaches, 44,523,000 bushels; Kafirs, 139,503,000 bushels; peanuts, 39,217,000 bushels; beans—six states—9,364,000 bushels; oats, 1,444,362,000 bushels; barley, 191,386,000 bushels; rice, 52,980,000 bushels; sugar beets, 8,970,000 tons.

Wine Grapes Becoming Popular.

Elsewhere in this issue we publish a letter from the California Fruit Exchange, commenting on the sale of wine grapes. Since the receipt of that letter we are in receipt of a sale made in New York, October 11th, showing sale of a car of Alacante Bouchet wine grapes that grossed $6,793.00, averaging $4.59 cents per crate of 24 pounds net. Further comment on the subject is unnecessary, other than it will be somewhat costly to the party who attempts to make wine of grapes that cost more than $400 per ton. However, as the country is dry, no one suspects that these grapes will be converted into wine—"Florida water," perhaps. At any rate, the ultimate decoction will be expensive.

Lima Bean Prices for 1920.

The California Lima Bean Growers' Association have set the following prices on the 1920 Lima bean crop, and the first allotment is now going forward to eastern markets. With all prices quoted f. o. b. the coast, the schedule is: Seaside beans in bags, 8 cents; baby size in bags, 7¾ cents; regular choice recleaned Limas, 7¾ cents; regular choice recleaned baby Limas, 7½ cents; Seaside Limas, in cartons, 40-25 to case, 9 cents; Seaside Baby Limas, cartons, 40-25 pounds to case, 8¾ cents. Buyers on this first quotation are guaranteed against the association's own decline until the arrival of cars shipped, and a limited number of cars is being sent to each market. When this order is exhausted new orders will go forward at prices that will be set when the next allotment is made. Opening price on Limas was 14½ cents last year against 7¾ cents this year.

Fall Pears Moving.

From ten to fifteen cars of fall pears are leaving the state daily the majority of which are from the Santa Clara valley. In these cars are some quinces selling around $3.50 per box of 40 pounds net. The Clairgeau pears are running from $4 to $5.50 per box. Placerville still has a few Bartletts, selling in New York from $4.50 to $6.00. There are also a few cling peaches selling from $2 to $2.25. The shipments of all tree fruits are practicaly over with the exception of apples, and they are being harvested as fast as possible on account of the drop as well as to avoid bad weather.

Cotton Yarn Prices Cut.

A Philadelphia concern claiming to manufacture more than 75 per cent of the handknitting yarn in the United States, has reduced prices of its production from 20 to 30 per cent. They state that economy in production and a recent decrease in the cost of raw materials made the cut possible.

MARKETING ASSOCIATION MEETS.

The annual meeting of the California Farm Bureau Marketing Association was held at Visalia, October 11th. Election of officers resulted as follows: C. A. Melcher, McFarland, president; W. J. Fulgham, Visalia, vice-president; D. H. Bitner, Bakersfield, secretary-treasurer and general manager; L. D. Trewhitt, Hanford, assistant manager and official grader. This organization has had a rapidly increasing business since its inception, November 1, 1918. During this time they have handled 1142 cars, containing 92,018 hogs, valued at $2,080,815.86. The prices usually obtained have been higher by a wide margin than could have been obtained by the farmer in any other way. With a continuation of the present management, nothing but a healthy growth and greater success of the business is the rational forecast.

FACING THE COTTON HARVEST.

About November first the harvesting of most of the cotton of the San Joaquin valley will begin (somewhat earlier for short staple varieties) and scores of ranchers will get their first real experience in this crop, which promises great things for the state. There can be little doubt as to the merits of the crop from a growing standpoint. From the market outlook things seem to be in a haze. As far as they can be understood from the information a grower can get the situation is like this:

Ordinary cotton, such as they raise in Georgia and neighboring states, is on the rapid down grade in price. The war brought prices sky high after the first market flurry settled, and now conditions are headed toward normal once more. Irrigated farming is far more expensive than rainfall farming; negro labor is a big thing in cotton picking, and from present indications low prices will nearly destroy the growing of short staple cotton in California. It is said that little of it is likely to be grown in the Imperial valley next year, though now cotton (all varieties) is the biggest single crop.

Pima cotton, long staple and high in price, is California's hope in cotton and the market outlook is puzzling. First, although used largely for auto tires and outside the line of ordinary cotton, it is still largely used in cotton goods, particularly those of the finer, silkier type. Consequently, low cotton can drag down Pima cotton prices, but it cannot pull them very far down. Prices of ordinary cotton are determined definitely cotton exchange reports; unfortunately there is no definite price at all times for Pima cotton. Sales in Egypt suggest that our prices will be high enough here, but just what our cotton will bring is a matter of more or less guess work.

The contracts that exist guarantee 60 cents a pound, plus whatever ruling prices call for. The buyers, who are manufacturers and not speculators, will evidently not want to pay any more bonus than can be helped, and it is a fair guess that until the great bulk of the contract cotton is delivered prices will not rise very high. After the contract cotton is delivered perhaps the buyers under the contracts would like prices to go up, so that their competitors will pay more than they did.

It is thought in the Shafter district that Pima cotton will bring $1.00 when the market settles, but the whole matter is largely guess work.

Prices for Picking.

Newspaper reports announced that ruling picking prices would be 2½ cents for short staple varieties and 4 cents for Pima. As to Pima, this is only partly right for Tulare and Kern counties at least.

The Shafter Association is contracting with a Mexican labor contractor for a complete harvesting of the crop at five cents straight. This means no more than four cents for the bulk of the crop, but the last picking is the hardest and under the picking contract the workers have to stay till the end to get the five cents. If only four cents were paid for the first picking most of the pickers would be likely to feel themselves rich enough and quit, leaving a third of the cotton on the plants with no one to pick it except at an outrageous price. A sraight price of 5 cents clear through is better than four cents for the first picking and whatever has to be paid for the rest.

Practically every acre of Pima cotton in the Shafter section is in the Shafter Growers' Association, membership in which costs $3.00 per acre. Much cotton outside the Shafter district will be sent there.

In the Lindsay district a growers' association is also being formed, the members joining the Shafter Association with the privilege and expectation of withdrawing membership and money next year to start a ginning plant of their own. The Shafter Association has agreed to haul the Lindsay cotton to the gin in truck and trailer, four tons of seed cotton per trip.

CALIFORNIA HOLDS CLEAN BILL OF HEALTH.

California has the distinction of being able to forward her fruits and vegetables to any port of the world without the subjection of quarantine scrutiny, according to Frederic Maskew, chief deputy quarantine officer. He says this has been brought about by California's excellent quarantine practices, which keep out of the State all diseased or insect-ridden plants and fruits. "No other State, no other country," says he, "can boast that none of its products are barred from foreign shores. Of course, there is inspection of California products, but nowhere is there any quarantine regulation barring fruits or vegetables or plants from this State. Most of the quarantine practices in the country today are patterned after California's, which have been developed during the last thirty years. In a paper read by L. A. Strong at the convention of the Western Plant Quarantine Board, recently held in Salt Lake, he stated, "The United States Government has made it possible to intercept plant material in the mail by providing that any person, firm or corporation who shall deposit in the United States mail any package containing plants or plant products addressed to any place within a State maintaining terminal inspection must plainly mark the package so that its contents may be readily ascertained by an inspection of the outside thereof. A penalty is fixed for failure to do so." This is a matter that should deeply concern all farmers and orchardists of the State. As a matter of fact, a visit to the office of the Plant Quarantin Service in the Ferry Building, San Francisco, would be an education to those interested in knowing what is being done and actually accomplished by this service to save California agricultural and horticultural production from foreign pest and insect destruction.

We Try to Help.

Editor Rural Press: I have to thank you for your letter of the 5th, enclosing check for $5. This is entirely satisfactory and I want to thank you for your trouble in the matter. I might add that I thought the —— people would drop the matter. Long live the Rural Press!—J. P. D., Tuolumne Co.

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FOR SALE — Hollister Ranch on Battle Creek, Shasta county, Cal. 316 A—80 A. best bottom land; 50 A. upland. Gravity ditches, perfect sub-irrigation system. Riparian water rights since 1860, together with deed to 666 2-3 inches water additionally. All equipment, horses, mules, implements. Face value any issue. U. S. Liberty bonds accepted in full payment. W. W. Hollister, El Nido Rancho, Route A, Box 85, Anderson, Cal.

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CROLEY'S BALANCED HOG FEED—The cheapest feed to fatten hogs. Write Geo. H Croley, Townsend St., San Francisco, Calif.

FOR SALE — Mariout Barley Seed—clean and good quality, weighing over 100 lbs. per sack. J. D. Rowe & Sons, Davis.

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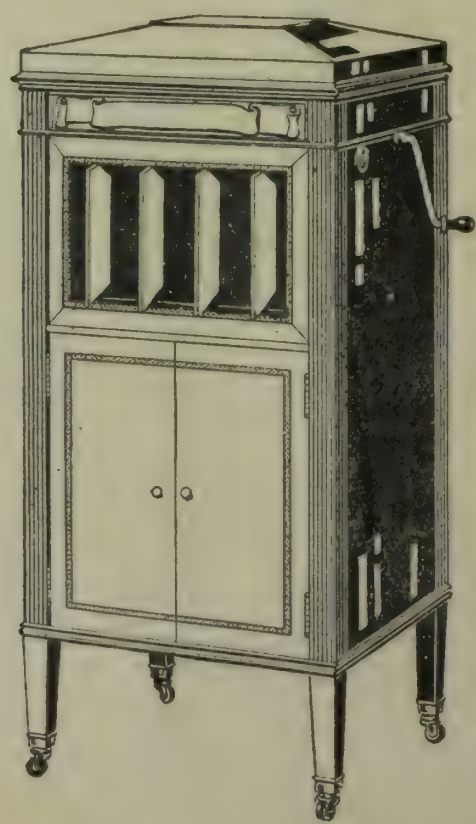

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THE PACIFIC RURAL PRESS

SAN FRANCISCO OCTOBER 23, 1920 LOS ANGELES

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A GOOD grain crop and a poor one resulting from practically the same amount of labor and seed under similar conditions of soil and moisture may be seen every year in almost every community, the difference being due to the time of seeding. Those who plant early generally get the biggest crop with the same cost of production per acre. But those who do not use tractors seldom begin their plowing until rains have soaked three or four inches deep. Then it is frequently found impossible to get enough horses and men to finish plowing and seeding early and at least part of the crop yields short because of late planting. Ranchers who use tractors are more and more generally getting part of their plowing done dry and considerably deeper than horses would turn the dirt. Then with their big gang plows, two men and a tractor can finish a big job of plowing early enough to tickle Nature to her highest production; and it won't cost any more than a poor yield if the tractor receives half as much attention after work hours as a plow team would require.

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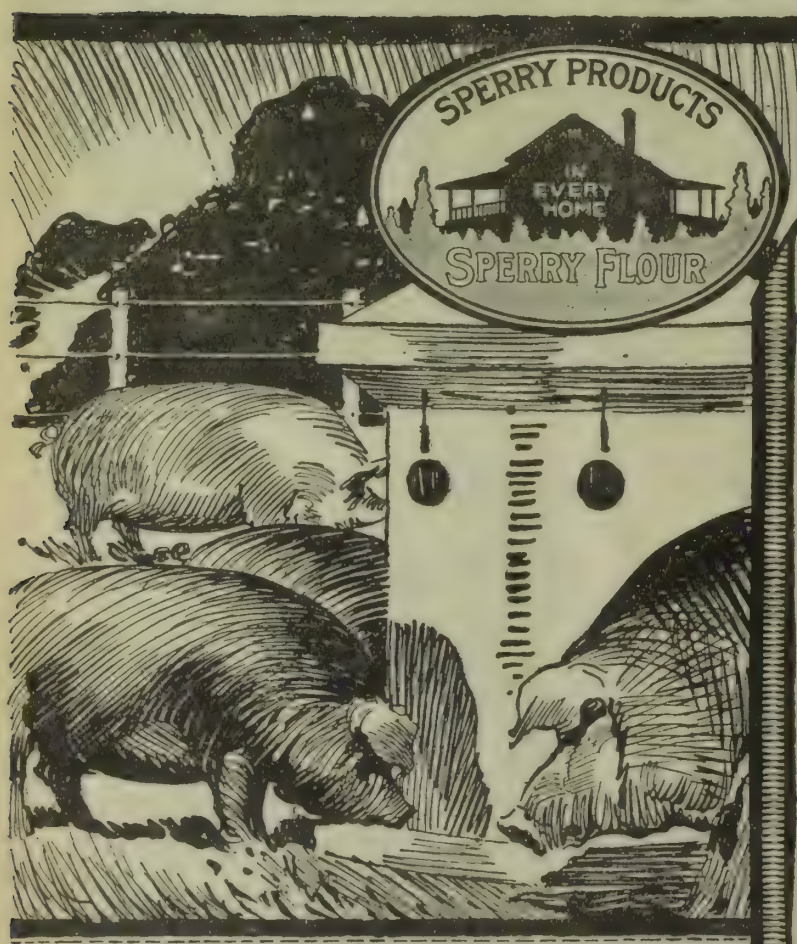

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Hog-raisers have found that feeding SUREMILK builds the porkers up and fattens 'em up. They have found it economical, too—because it is highly concentrated in feeding value and does not bulk.

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General Agricultural and Horticultural Review

AGRICULTURAL NOTES.

According to the 1920 census, Nevada has 3164 farms. This is an increase of 475 over the number in 1910.

Crops in Modoc county this year have been exceptionally good, particularly hay and grain. Bankers say the farmers generally in good shape.

The Globe Rice Mill at Woodland is rushing work to open the season for the annual rice run. Equipment is being extensively improved and increased.

Los Angeles County Farm Bureau ranks first among the county bureaus in the state in individual and farm membership with 13,013 farms, and 1892 members.

A co-operative plan for handling livestock, nation-wide in its scope, was proposed recently at a meeting in Chicago of producers from fifteen states.

The Merced and Stanislaus County Farm Bureaus are planning on a big picnic at the Merced river on October 30th, when a joint meeting of the two bureaus will be held.

The directors of the Farm Bureau are pleased with the Farm Advisor, D. T. Batchelder, and feel that Santa Barbara County Farm Bureau will be of great assistance to the farmers of the county with his help.

The Walnut Creek Grain Company has taken over a new 4000-ton warehouse near Sacramento on the San Francisco-Sacramento Railroad. It has a capacity of 100,000 sacks and will be used for grain storage only.

J. H. Richardson and others have bought the Pine Creek ranch near Chico for $75,000. Richardson plans to plant 400 acres of the ranch to alfalfa and the remaining 350 acres will be used for range.

The Tulare County Farm Bureau, according to the California Farm Bureau Federation, ranks second among the county bureaus in the state in individual membership and third in the number of farms represented in the membership.

Kern County farmers have a total acreage of 10,762 acres of cotton which is now being harvested, and according to reports from the several cotton districts, the acreage yield will be around three fourths of a bale to the acre.

President Wilson has requested Governor Allen of Kansas to forward to the Federal Trade Commission any information he has tending to indicate that the recent decline in wheat prices was due to unfair practices or competition or to other artificial causes.

Probably 25 per cent of the tomato crop is still on the vines and the moisture will undoubtedly cause a portion of the crop to rot; however, owing to the sluggish condition of the market a large percentage of the crop now remaining on the vine would have gone unharvested.

The farmers of the Weaverville district will be greatly benefited by the completion of the highway between Helena and Big Bar along the Trinity river canyon. The contract price is little under $250,000, making this the most expensive piece of highway in the state.

According to State Controller Jno S. Chambers, Kern county stands fifth in the state for its wealth of resources, as shown by report for 1920. It shows a total valuation of all property to be $123,796,489 and the total indebtedness on county property is fixed at $2,570,000 with a funded debt of the same amount.

Stocks of wheat in the U. S. on Oct. 1st totaled 608,000,000 bushels, according to estimates just made known by the U. S. Department of Agriculture. The amount represents 477,000,000 bushels held by farmers, 102,000,000 held at county mills and elevators, and 29,000,000 bushels held at points of accumulation on that date.

The beet growers of Santa Barbara county are standing together for the first time and holding out for a fairer contract. In Lompoc the growers have signed 90 per cent of adaptable acreage with a committee of growers and Farm Bureau directors who will negotiate the contract with the Sugar Companys.

W. B. Camp, U. S. Department of Agriculture Expert, who has been in charge of federal investigations of cotton growing in the southwest, has issued a statement declaring that he had visited practically all the cotton growing districts in California and Arizona, and nowhere did he find better cotton than is grown in Kern county.

An Inter-County Farm Bureau Exchange embracing Madera, Merced and Stanislaus counties is getting well under way. It is the intention to confine activities to a few lines at first but gradually take on everything the farmers have to sell. Now they are handling hogs, veal and grain. They have already sold $1000 worth of veal calves to the satisfaction of the consignors.

The Butte Rice Company has shipped to Rosenberg & Sons 10,000 sacks of 1920 rice at $3.75 per hundred. The price was made contingent and with the understanding that if a higher price is fixed by the Pacific Rice Growers' Association, Rosenberg would meet it. The price was for first grade rice, and is one of the first actual sales with delivery made this season.

The world's production of commercial cotton, exclusive of linters, grown in 1919, as compiled from published reports, documents and correspondence by the Bureau of the Census, was approximately 20,250,000 bales of approximately 500 pounds net, while the consumption of cotton (exclusive of linters in the United States) for the year ending July 31, 1919, was approximately 15,970,000 bales of 500 pounds net. The total number of producing cotton spindles, both active and idle is about 150,000,000.

The average yield of California hops per acre for this season has been over 100 pounds more than last year and 400 pounds more than a ten year average. In this connection it is interesting to know that California produces over 50 per cent of all the hops produced in the United States.

Local bean dealers of San Diego make the statement that several thousand tons of white beans, stored at Ensenada for the past three years, because the Ventura Ensenada Land Company refused to pay the prohibition export duty imposed by the Cantu Government, are to be moved at once to the California markets. They will be moved to San Pedro by Steamer.

HORTICULTURAL JOTTINGS.

A large pack of fancy figs is being sent out from Clovis, Fresno county this year.

Olive crop of Oroville district is a large one and the harvest will begin in about two weeks.

Texas almonds were damaged less by birds than any other variety in the El Pomar district, Nonpareils suffered most.

A dehydrating plant at Roseville, Placer county, is handling large quantities of Zinfandel, Tokay and Matros grapes.

California's output of canned apricots amounted to 2,312,000 cases this year as compared with 4,395,204 cases in 1919.

The condition of the apple crop is about 70 per cent of normal compared with 90 per cent a year ago. Prices are not up to a year ago.

By careful thinning a heavy crop of Muir peaches were picked this year from 4 year-old trees at Atascadero. Most of the Muirs running 10 to 14 oz.

The first car of Arizona grapefruit reached San Francisco the latter part of last week. It is said that ten cars of this fruit will be handled in San Francisco this season.

More than 200 acres of the Barton ranch east of Escalon, are being planted to French prunes. The land is rich river bottom and will grow the trees without irrigation.

Directors of the Associated Raisin Company have named S. Q. Brady, western sales manager for the Lipton Tea Company, as sales and advertising manager to succeed H. Thomas.

Apricots made a good crop this season in the Greenfield district, having come off early before irrigation lost its effect. One man sold the fruit from 20 acres green at $100 per ton f. o. b. car.

All raisin plants of the California Associated Raisin Company are running on full time, averaging an output of 25 cars a day. This output could be materially increased were it not for the car shortage situation.

Members of the Wyandotte Olive Growers' Association have leased the Sunical Packing Company plant at Oroville and will pack the 1920 olive crop themselves.

It is reported from Sacramento that the Heintz Food Company is contemplating the erection of another olive plant. Palermo, Oroville and Marysville are said to be considered as possible sites.

J. F. Luther, a large prune grower of Live Oak, Sutter County, has purchased the W. E. Mack ranch of 135 acres. A large portion of the ranch is now planted to shipping plums and pears.

Olive growers of Porterville, Exeter and Lindsay have called a meeting under the direction of the Lindsay Chamber of Commerce. Pooling the crop, uniform price and arranging sale of crops not sold to associations is the purpose of the meeting.

Farm Advisor Baade of Napa County says that he is receiving many demands for prune pickers who are wanted in the St. Helena and Calistoga districts. Growers are paying 35 cents per box.

Guava production will be tried out in the Oroville district. Horning & Cooper, owners of the Sunny Slope Nurseries at Bangor are making a nursery planting now, which will soon make available over 30,000 of the guava bushes for commercial planting.

More almonds are being planted than any other fruit. Earlier plantings failed to give satisfaction because no provision was made for interpollination. Now, the varieties being planted mainly are the Nonpareil with the Drake Ne Plus Ultra, for cross pollination.

Rainfall during the last two weeks has done little or no damage, the prune crop is practically harvested, raisins are nearly all dried or under cover, and no damage has been suffered by the rice crop up to the present time, except that harvest has been delayed.

Several boxes of Cacti pods, an esteemed Mexican delicacy, have appeared on the San Francisco wholesale produce market from Vacavile, Solono county. In Mexico and the southwestern part of the United States the pods are eaten raw and are also used to make jelly.

The fig crop of the Fresno district is now being moved into the packing plants of the California Peach Growers' Inc., according to a statement from J. F. Nieswander, vice-president and general manager of the company. We expect the crop to be about 10,000 tons this season.

The California Peach Growers' Inc. have handled about 18,000 tons of dried peaches at the Fresno plant this season, over one-half of which has not been shipped. Vice-president Neiswander, states that the crop will be slightly below 20,000 tons this year, against 27,000 tons last year.

Blue Jays and Woodpeckers are the worst pests this year in the El Pomar district (Templeton) among the almond orchards. The reports are losses as high as 60 per cent of the crop. The orchardists stand to take great losses each year unless something is done to control these pests.

The Valley Fruit Growers' Association have named the price for cotton picking in the San Joaquin valley. The price for picking short staple and Durango cotton is 2½ cents per ponud, long staple at 4 cents per pound. It is estimated that 6000 pickers will be required to care for the crop. Work is now in full swing.

With 3500 tons of raisins on the floors of the packing houses ready for shipment at Fresno, the California Associated Raisin Company is facing a car shortage that threatens the season's operations. Only 35 cars a day have been available, against a normal supply of 50 cars.

The Fairoaks Fruit Company held their annual meeting on October 12th. The company is a co-operative grower's concern, and during the year just 150 tons of pickled olives, 166 tons of closing handled 14770 boxes of oranges oil olives. They also handled 245 tons of almonds for the Almond Growers' Exchange.

County Horticultural Commissioner, A. L. Rutherford, of Stanislaus county has been authorized by the board of supervisors to take over the work of inspecting fruit shipments. The shippers will pay $5.00 per car for the inspection and $1.00 per hour for overtime. The inspectors will be sent out from the horticultural office at the request of the shippers.

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EDITORIAL

UNIVERSITY MAINTENANCE.

Whereas, the University of California is in need of an assured income for education and public service; and whereas, there is now before the people for adoption at the general election on November 2 a constitutional amendment to provide a millage tax for the University of California; and whereas, the future development of the College of Agriculture depends upon the passage of this amendment; therefore, be it

Resolved, That we do hereby indorse Constitutional Amendment 12 and urge that all the people, and particularly the farmers of the State, support this amendment and give it their votes on November 2.

We had the advantage of on-looking at the meeting of farmers, held in Berkeley on October 13, at which the above transaction was had. It was probably the most widely representative of California agriculture ever held because it was a delegated meeting and those present stood largely for hundreds and thousands included in the membership of the associations which they represented. There were about forty present and they came, not only from all the lines of farming, but from all parts of the state. The meeting was projected last spring by Dean Hunt, before he departed on his year's leave of absence, and was for the purpose of giving the farmers of the state an opportunity to make known what they desired the agricultural department of the University to be and to do. It was an agricultural referendum on the part of the University. We have always known our representative farmers to be fairly frank in their declarations of what the University should do in the lines of instruction, research and extension to make the many lines of food production more efficient and more profitable to those who gave their lives and their savings to farming, but we were surprised at the breadth and variety of the service which the speakers at the meeting called for. It clearly demonstrated that the farmers of the state are going on science, and that they believe that the going must be improved by more science and by greater effort to enforce existing science and new science upon the general farming practice of the state. This they called upon the university to achieve for them. The speakers intimated their ability to handle the business ends of the industry by their individual and co-operative enterprises, but they just as freely admitted that their success and progress depended upon knowing more about the nature of their conditions, agencies and materials, and upon the widest possible dissemination of what is already known and what can be known, among those who are following the farmers' vocation. After they had spent most of the day in explaining these things to each other and to the university authorities, it became clear that the institution could never discharge the obligations they placed upon it unless its maintenance should be generously and regularly assured by the people of California, and as their first step in the direction of securing such maintenance the resolutions which we have printed above were adopted and were subsequently signed by representatives of sixteen of the leading organizations in the various lines of California agriculture. It was a very significant transaction.

NORTHWESTERN "ECONOMICS".

To the Editor: In your issue of October 2 you write: "We are not usually deeply stricken with the theories of economics which emanate from the North Dakota districts. They seem to be indigenous to the latitude of Moscow, and are in conflict with American history and experience." I take this to be a slam at the Nonpartisan League. Is it not? I know of nothing else that would distinguish North Dakota from any other district, so far as their "theories of economics" are concerned.

Now, what is the matter with the Nonpartisan League anyway? Why are the peoples' theories of economics in North Dakota "indigenous to the latitude of Moscow" any more than ours here in California? Not only North Dakota but all states from Wisconsin to Washington are about to adopt the industrial program that the League stands for.

Do you think we should discredit this farmers' organization because it is in conflict with American history and experience? It seems to me the two greatest movements for the welfare of the nation ever experienced were in conflict with American history and experience, but are now accepted as proper and right by the nation. As this is principally a farmer's organization and will soon be active, no doubt in this state, I think we should know how the Pacific Rural Press looks upon it.—M. L. H., Denair.

When we "slam the Nonpartisan League" you will know it, for we are fairly outspoken in condemnation, when it seems to us necessary. As for "slamming," you seem to be coming nearer to it yourself for you intimate that the League is responsible for all the social and political evil and fallacy which is incubating in that part of the country. If we thought as you seem to, we would slam it all right. We do not think the League is as bad as that . It has done some good things and it holds to some ideas which seem to us sound and therefore desirable of promotion. It is working in a false social atmosphere and it has apparently been caught in bad company sometimes. If its influence extends as you intimate, it will need to purify itself or it will be short-lived. If it makes any hit in California it must purge itself. California farmers are too patriotic to enter a race for class domination; they are too wise to expect anything from class politics. Probably about 75,000 of them are now in organizations which represent broad California spirit in insistence on a fair deal for all people, to be secured by representation in all lines of political effort and legislative action, and nothing less just and broad than that is likely to get far in this state.

As for our dislike of northwestern "theories of ecnomics," their relation to Moscow, etc., we need not write at length because a better authority has spoken. There came by wireless from Moscow on October 13 an interview which Lenine gave to the International News Service. It says: "On Lenine's desk was a copy of an American newspaper describing the Farmer-Labor party convention. This is a most important and interesting development," said Lenine, glancing at the newspaper." And what Lenine commends has no attraction for us, but it would not have been fair to slam the Nonpartisan League for that. It seems to us that too many people in the northwest have not yet found out that they are citizens of the United States, and they have not learned that they are expeced to rule themselves in the true American way. They still think that things must come by revolution. As Congressman Albert Johnson, chairman of the House Committe on Immigration, said in Tacoma on Friday last, "Ten thousand immigrants are now landing on our shores every day. Coming out of the upheaval of Europe, many of them are unable to understand or accept American institutions. Such as these bring a ready-made revolt with them." That is what is the matter with the North Dakota district. No wonder Mr. Lenine says: "It is a most interesting development."

MORE AUTHORITY—LESS PRICE

To the Editor: We would like to see the price of farm produce regulated by law, or some other better way if it can be found, whereby the cost of production will be taken into account, a reasonable figure determined, and a reasonable profit added.—H. S. M., Delano.

Yes; that would be elegant and ideal, but any way to get at it except by the old process of barter and sale, does not seem to be coming this way very fast. The "cost plus" method does not seem to have done anything but make millionaires of shipbuilders and army supply contractors and the government got burned so badly along that line that they rushed to the other extreme in arbitrarily determining the prices of farm products and are burning up the farmers instead. There were several meetings in Washington last week which made declaration that farmers are being governed too much and that if the fiat methods of the authorities were abandoned, farmers would be more likely to get enough to live on. It was formally charged at a conference of farmers' organizations in Washington that—

"The statements given out by the Secretary of the Treasury, the governor of the Federal Reserve Board and the Federal Reserve Banks have been construed to the effect that commodity prices, particularly the price of farm products, were too high and that a pre-war basis or an approximation of a pre-war basis of prices must be reached within a short time. The consequent effect of these utterances upon member banks of the Federal Reserve system and the banking industries of the country generally was to cause them to withhold accommodations."

And this means, we take it, that the way to bring down food prices would be to declare them down, no matter what it cost to produce the food, and then keep them down by refusing loans to those who wished to hold or ship products to distant markets. This is not exactly law, but it is regulation by authority, and it creates serious doubt whether either bulling or bearing prices by authority would do good to anybody. The present fact seems to be that the bright idea of bringing prices down by making it impossible for anybody to hold supplies until needed by the near-by trade, bids fair to break up everybody who has put his season's labor and money into growing grain, cattle or cotton, and thus to engender not only discouragement but actual distress to producers. This was clearly set forth at the Washington conferences, where it was shown that Kansas wheat selling at $2.14 per bushel cost the grower $2.77; that cotton costing 38c was selling at 21c per lb.—causing a loss of $50 per bale., and other staple products in proportion. There is great rebellious feeling all through the central West and the South over the policy of forcing growers to sell crops by making it impossible for any one to buy beyond the dimensions of his appetite. And the farmers' committee in Washington declared:

"It is wrong as a matter of policy artificially to press down prices of commodities, and it is particularly wrong to begin with the raw commodities, for such a program inevitably forces upon the producers the heaviest burden of reconstruction and readjustment."

And all this makes us very shaky about attempts to determine prices by law. But our correspondent says: "Or by some other better way." Oh, yes; mebbe!

HEAR THE BIRDS SING!

To the Editor: I wish to tell you that I always read your editorials, and whether I agree with them or not I always enjoy reading them. You have a style all your own and an imitable way of "coming back" which convinces me that if you are not Irish, you ought to be. I want to assure you, for my husband and myself, of our appreciation of what you are endeavoring to do for the farmer through the splendid medium of your paper.—H. S. M., Delano.

To the Editor: The Editor is so generous in granting space to "knockers" that I would like to register a "knock"! I consider the Pacific Rural Press eminently helpful to the California farmer, whether his capital and time are invested in raising fruit, stock, or grain, and I appreciate the independent, sturdy editorials which show the editor to be not only a broad-minded man of vision, but also proves him to possess rare practical knowledge in solving the many problems brought up by readers of the paper week by week, "year in and year out." —R. P., Campbell.

To the Editor: You are giving a lot of farming folk a chance to be heard and when we have that chance we are more likely to believe in evolution than revolution. So you are doing your share. Your articles in co-operative movements are fine, and through them the farmer is able to get some

share of success which he would not get otherwise. It is because the farmers are kept "on edge" so much that they cannot think of pleasant things to write to you about; but it is a relief for them to get some things "off their chests" by writing to the editor of the Pacific Rural Press, whom they feel must understand a good many of their probelms.—H. E. K., Santa Rosa.

Some one unfortunately remarked to the publisher of this journal recently that he was not making enough fuss over his staff—that he was overlooking a good business point in not yelling more about the literary prodigies he was keeping at the subscribers' service by a generous handing out of meal-tickets. This informative person said he knew the agricultural papers of the country pretty well and he was perfectly sure that none of them was so top-heavy with talent! It hurts us to print such letters as the above; they ought to go flying into the waste basket, but the publisher's business—it must and shall be preserved! Therefore, perhaps the only way in which readers can protect themselves from such revelations of self-conceit on the part of our editorial staff, is for each of them to tell his neighbors how superior this publication is to all others of its class and thus bring the millnnium of agricultural journalism immediately to pass!

QUERIES AND REPLIES

By the Editor.

Inquirers Must Give Full Name and Address
Answered Questions also on other pages.

Analyses of Soils.

To the Editor: I am informed that I can get free information regarding conditions of soils and have soils analyzed. I have some heavy spots in my soil where some elements seem to be lacking. I would like to know what is lacking, and how to loosen up the soil in these spots and get the lacking elements into the ground.—D. D. V., Shafter.

Such information was formerly to be had from the University Experiment station and analysis was undertaken, when thought necessary, of samples taken according to instructions furnished. This work has been discontinued because soil chemists now hold that analysis do not satisfactorily show what a soil will do in production nor what the soil may need to do better. The old theory of finding out by chemical analysis what the soil had and what it lacked has been practically abandoned. The agricultural judgment from experience and plant-test of a soil has superceded the old idea of chemical interpretation. The cure for too heavy soil is organic matter (either barnyard or green manure) drainage, use of lime and timely and sufficient tillage. If the soil is alkaline gypsum and not lime should not be used. The fact of alkaline character is still determined by test or analysis, which can be secured through the county farm advisor in all counties supplied with such officer. Direct application to the experiment station for the examination of soil samples is no longer encouraged.

May Be Walnut Blight.

To the Editor: I send two blighted walnuts. I have two trees so afflicted. Can anything be done to eliminate it? If not should I take out the tree root and branch?—J. V. J., Hollister.

It is difficult without bacterial analysis to determine whether a completely blasted nut was destroyed by the bacterial blight or by sunburn or other agency, although the probability is that the specimens you send were invaded by this blight. It is easier to detect the blight earlier in the season while the hulls are still green for blight then manifests itself by definitely blackened spots or areas, while the rest of the hull is normally green. If such a spot occurs at the apex of the nut, where the blossom sat at first, it is pretty surely blight, because the spores enter the nut by that route generally. If you will consul your horticultural commissioner, Mr. Day, he may be able to give you sure answer from what he may see on the tree itself. Do not think of taking out the trees because of the blight. It does not invade and destroy the tree like pear blight may do, and it is irregular in its appearance from year to year and sometimes affects only a few nuts and does not materially affect the crop. Most growers charge blight injuries to profit and loss and pay little attention to it.

Mealy Bugs on Passion Vine.

To the Editor: I send a piece of a Tacsonia vine, which has become infected at the roots. The vine does not look to be far gone yet, but the leaves are falling and there are a few wilted branches. Should it be pruned back to a foot from the ground, and what would be good to spray it with? I had one vine-killer already. I do not care for anything poisonous.—E. N., Martinez.

Your passion vine is being overwhelmed with "mealy bugs." We have not tried such complete decapitation as you propose and therefore would cut back so to leave a somewhat longer central stem and some clean new growth if possible, and then spray thoroughly with carbolic soap wash made in these proportions: Fish oil soap, 5 lbs; crude carbolic acid, two quarts; water to make five gallons. Dissolve the soap in hot water completely, add the carbolic acid and heat to the boiling point for twenty minutes (reserve some water to add in case the mixture begins to boil over). For use, add one gallon of this mixture to twenty gallons of water and spray the leaves and brush the large stems. Watch and repeat as necessary. Remove some of the soil and clean the base of the stem. This is not particularly poisonous; besides, it is too nasty to tempt touch or taste.

Alfalfa Leaf-Spot.

To the Editor: Last year I noticed several articles in different papers that sulphur scattered over alfalfa fields produced heavier crops. Is it a fertilizer, or does it kill the germs that live on alfalfa leaves which stops its growth? I have a nice field and I notice spots of brown leaves and in other places specks all over the leaves. Around the specks the leaf dies until it falls off before cutting season is on.—A. T. D., Redding.

Application of sulphur is undertaken from the point of view of feeding the plant—if not directly then indirectly, by its influence upon other components of the soil. It is not considered as a treatment of disease. The trouble which you describe is "rust" or leaf spot. It is not usually of much moment and disappears after the alfalfa sets up more active growth and is helped to more vigor by irrigation. It is usually worse on dry land alfalfa or early in the season before irrigation begins. Sulphur might reduce it, but sufficient use of sulphur would cost too much to be profitable, even if it did cure it. The reasonable treatment would be earlier or more water for that would pay for itself in the increased growth.

Corn Crops and Young Trees.

To the Editor: When moisture in the ground is sufficient to feed both trees and weeds, does the presence of weeds hurt the trees? We are growing Egyptian corn between the trees, which makes it impossible to plow and get rid of the weeds until the corn is cut. What is the effect of corn which for two months tops the young trees? Does it in any way injure the growth of the trees on account of keeping the sun from them?—C. B., San Francisco.

There is no doubt that if the strong roots of sorghum or weeds are allowed to enter the soil mass while tree roots are trying to grow, it will be decidedly to the disadvantage of the latter. The shading of the foliage of the tree by taller vegetation will also depress its growth. It has long been the conclusion of practical men in this state that any kind of a corn crop (either maize or sorghum) is the worst that can be planted in a young orchard. Of course, the injury is reduced and possibly excluded by growing the tall crop only well in the middles and distant from the trees and cultivating the tree-strip thoroughly.

Fall Pruning Deciduous Trees.

To the Editor: I have a six-year-old apricot and almond orchard and I wish you would kindly tell me when the proper time would be to prune same. —P. E. V., Escalon.

Experience has clearly shown that the fall and winter pruning of deciduous trees can begin with advantage as soon as the leaves have finished their season's work, as is shown by going limp, yellowing and falling. Most of the pruning, which was formerly postponed until winter, is now done in the fall—with the advantage of more daylight, harder ground, etc., and getting pruning out of the way for winter spraying, plowing, etc. It should, however, not be done until the leaves show that they are quitting their activity because there may be still force enough to start buds out of season, which is undesirable. Early pruned trees and vines may be expected to start growth a little earlier in the winter or spring, and this should be considered in frosty places.

Plow Pan and Alfalfa.

To the Editor: I have land which has a plow pan six inches below the surface. Do you advise deep plowing or subsoiling before planting alfalfa? If this land is subsoiled this winter would it be advisable to sow alfalfa the following April, or would it be best to plant some other crop the season following subsoiling?—B. B., Corning.

If the plow pan is all that is the matter with the land you can turn that out by plowing ten or twelve inches deep. If that does not get it you can follow in the furrow with a subsoiler, or you can blast to advantage—if you can do it soon before the subsoil gets too wet to crack well. We see no reason to wait over a year. Blast now or subsoil as soon as the moisture allows it to run. Let the land lie rough and work down and seed to alfalfa in the spring. Unless you are in a very frosty place, it is hardly desirable to wait as late as April.

Farmers' Insurance Companies.

To the Editor: In our home state, Ohio, there were a number of very successfully operated Farmers' Mutual Insurance Companies. Losses are paid by assessment. There are no salaries and a small fee to cover expenses. Would not some such an arrangement be a good thing for Atascadero? How shall we go about the business of securing the charter, etc.?—E. H. H., Atascadero.

We have to go to Ohio for a president, but not for everything. California has a law providing for farmers' mutual insurance and describing in detail the way you have to go to get it. There are sixteen county insurance companies now in operation in California under the supervision of the California Insurance Commissioner, Alexander McCabe, 201 Sansome street, San Francisco. Probably if you apply to Mr. McCabe he will send you a copy of the law under which you must proceed.

Oak Grove Hog Pasture.

To the Editor: I have a few acres of oak grove of which I wish to make a hog pasture. The soil is a rich, sandy loam. What would you think best to sow in it? Alfalfa does fairly well. Can you tell me anything that would be better, or would it be advisable to mix some other seed with it?—S. S., Finley, Lake county.

We know nothing which will give you more or better stuff than alfalfa in the openings where it will get some sun. We should sow the shadows with orchard grass for that will grow where you will get very little alfalfa. Orchard grass should be started in the fall and alfalfa whenever it is safe with you.

Yellow Egg Goes It Alone.

To the Editor: In your issue of September 25, H. G. T. of Sacramento inquires as to a pollinator for the Yellow Egg plum. Experiments this year at the University Farm at Davis indicate that this variety is self-fertile. In a trial of one year, 11.4 per cent of the blossoms pollinated with their own pollen set and matured fruit. It will probably also set fruit when crossed with other European varieties blossoming at the same time.—A. H. H., Davis.

This result was foreshadowed by earlier observations at the University Farm, but it is good to have the actual figures from it. The percentage may seem small, but if you get that per cent of the bloom it will be about all the fruit the tree can carry to advantage.

CALIFORNIA WEATHER RECORD

The following rainfall and temperature record is furnished the Pacific Rural Press by the United States Department of Agriculture Weather Bureau at San Francisco for the week ending October 11, 1920.

Station— ending October 18, 1920.	Rainfall Past Week	Rainfall Seasonal To Date	Rainfall Normal To Date	Temperature Highest	Temperature Lowest
Eureka	1.58	7.39	2.76	58	42
Red Bluff	1.02	2.01	1.61	86	40
Sacramento	.80	1.29	.90	72	44
San Francisco	.40	1.94	.91	70	51
San Jose	.40	1.64	.84	66	40
Fresno	.29	.73	.64	72	45
San Luis Obispo	.34	.94	.99	78	42
Los Angeles	.20	.20	.38	76	51
San Diego	.02	.02	.34	74	52
Winnemucca	.10	.52	1.01	58	24
Reno	.06	.51	.85	64	28
Tonopah	.03	.12	1.63	60	24

What Should Be Done to Stimulate Farming?

(Written for Pacific Rural Press by R. Lovick Irvin.)

I have read with interest your article on "Who Shall Regulate Prices of Farm Products?" in your September 26 issue.

I think you could add "labor" to the number of those who fix prices at cost plus a percentage, because the basis of demands for increased wages is generally a statement of the cost of living plus an additional amount for saving or a higher standard of living. This would leave the farmer alone in a class that disposes of his product, which includes his labor, at a price entirely unconnected with the cost of production.

It is true that there is a great variation in the cost of production of any crop by different farmers, and that this difference is to an extent due to difference in farming efficiency, but there was the same difference in cost of production of many manufactured articles needed by the government at the time it was using the cost-plus plan so extensively as a basis of contracts, and the cost was commonly taken as the cost of the least efficient plants so as to make it possible for them to operate, and this gave larger profits to the more efficient.

As the waste and extravagance resulting from this form of contract benefited labor (?) and manufacturers and city dwellers, and placed an undue proportion of expense on the farmer it would not be unfair if in any system of fixing prices of farm products the country people should receive benefit at the expense of the city people.

But two wrongs do not make a right, and while farmers and their organizations are considering how to obtain a fair return for their labor they have no desire to profit at the expense of other groups of citizens.

Other considerations must also enter into the future prices of farm products, for while everyone is contemplating a return to pre-war conditions it must be known that such a return is neither possible nor desirable on the Farm, for in the future farm labor must be paid wages comparable to city wages, and farm laborers must be housed and employed in a manner to make their living conditions at least equal to those of city wage earners; and child labor on the farm must be restricted as it is in the city.

At the present time we are reading that the public cannot look for lower retail prices at present because merchants have their stores filled with goods they have bought at a high price, and they must dispose of these at a profit and buy other goods cheaper before prices can be reduced.

Farmers now harvesting crops raised at excessive costs are expected to sell cheaply so living can be cheap before manufacturing expenses are reduced to bring down retail prices.

Farmers organizations can undoubtedly improve conditions through cooperative selling, but to obtain a fair price for farm products based on cost, the farmers must demand and obtain for themselves the same treatment that has built up the cities, that is protection against foreign competition and the right to sell surplus products abroad at lower prices than on the home market.

It will not help to have a group of lawyers and financiers or legislators hand us a plan for improving farm conditions. We should have a Secretary of Agriculture in the Cabinet, who will really represent farmers and their organizations, and the Department of Agriculture should determine under what conditions farm products should be imported and exported.

It would be difficult to arrange prices equitably from the beginning if the farmers were in control of the situation, and it is not desirable that any group, even farmers, should have unchecked control of affairs of such importance as to affect the living conditions of all our people.

But if at first farming was overfavored it would be merely giving the country people temporarily the advantage given for years to the cities, and if labor was attracted from cities to the cuntry at first the prosperity of the farmers would soon restore that of the cities on a healthy basis.

We must conclude that the price of farm products can only be regulated through a department of the government that represents the interests of the farmers and acts in harmony with all other departments of the government when the policy of protecting the farmer is endorsed by the people and this can only be brought about by farmers' organizations making their needs known and showing the justice of their cause.

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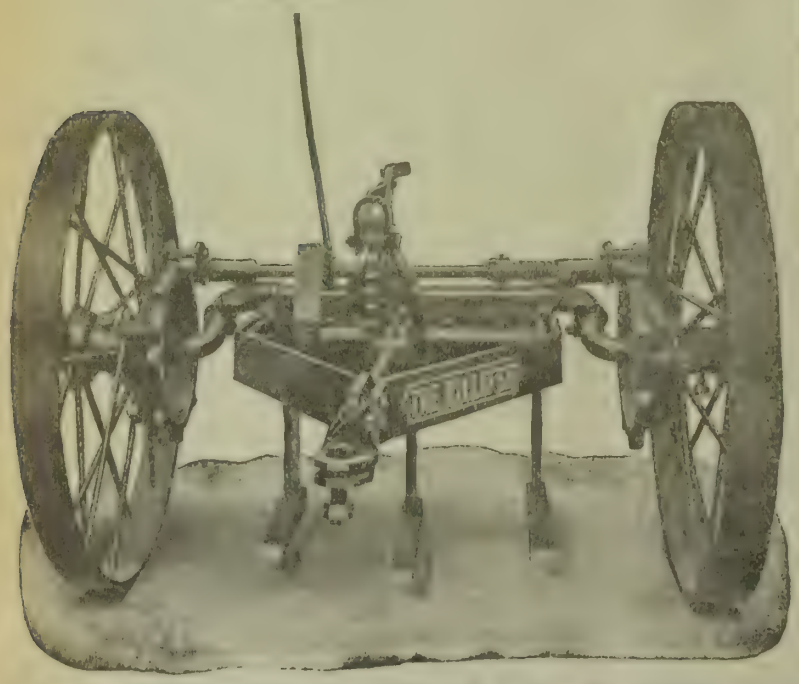

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Who Shall Regulate the Farm Prices?

(Written for Pacific Rural Press by J. M. Olberman, Sisson.)

To the Editor: In your issue of September 25th the question, "Who shall regulate the prices of farm products?" is asked and argued as to who is more fit, politician or producer. It seems to me entirely a question of regulating production if it can be done.

The products of the farm must be thrown upon the market, some within a few days, some within a few months of the harvest; even live stock at the present high prices of feed cannot be held over a season without loss. Now when there is an overplus of any product, is it not better for the farmer to sell than allow his produce to rot? Potatoes for hog feed, for an example, in the spring of 1918. Manufactureres can shut down and hold their goods for a better demand, while the farmer must go on producing and selling. Now, if some one can conceive and bring forth a simple, practical plan to keep production and demand somewhat evenly balanced, he would be hailed as a deliverer by the farmer tribe. There is no denying the fact that in this world class is pitted against class. Witness the howl about high prices for milk. The dear public would have the milkman work early and late 365 days in the year, feed high-priced hay and demand prompt service and pure milk and not care one whit if the milkman would go bankrupt.

It might be well to add that if the howl about the high cost of living forces prices down by increasing production, the future is dark for the producer. We are living in the bonded age—$28,000,000,000 for the last war; then add all the road bonds, school bonds, oil bonds, municipal bonds, and all other interest-bearing papers, and if the vocabulary of figures is not exhausted you will have a sum that even at 4 per cent interest will run into billions annually and this the producers will have to pay, and high prices for their products is their salvation.

Low, prices, on the other hand would redound to the benefit of the office-holder (of whom we have a few), and also the bond-holder, but it would be hard sledding for the bondsmen.

Southern California Fair at Riverside

(Written for Pacific Rural Press.)

The weather-man was scowling toward the latter part of the Fair and the rain was driving every one to cover. For all of a wet termination the fair was a wonderful success from every viewpoint—attendance, exhibits, and a good time. There is one thing sure, however, Riverside will have to provide some new buildings for the housing of exhibits and comfort of visitors. Years ago visitors and exhibitors alike expected to put up with inconvenience, but nowadays modern accommodations are expected.

The machinery display, including trucks and automobiles, was greater than ever and was a maze of wonderment combined with utility. The modern fair is mechanical to a very large extent and any especial line that is left out is missed by the visitors.

The Milk Goats always in evidence here were out in their usual large numbers and attracted much attention.

The pit stock and poultry were in evidence as a fair in California would not be complete without them.

Exhibits in the agricultural and fruit lines were exceptionally good, due to the great supply of material from which to draw and the large prizes offered for the displays. In the county exhibits San Bernardino county won first, Fresno second and Orange third. Where the county and community exhibits are encouraged as they are here with liberal prizes the display is sure to be of the best.

Livestock from all over the state and some excellent herds and flocks from outside made an aggregation only excelled at Sacramento and Los Angeles.

Dairy cattle were represented by competitive exhibits in the four leading breeds with the Holsteins having 13 exhibitors, Jerseys 12, Guernseys 4 and Ayrshires 3.

Beef cattle were not so plentiful, although 4 good herds of Shorthorns, one of Herefords and two of Aberdeen-Angus were on exhibition. Dibblee Estate of Santa Barbara had grand champion Shorthorn bull on Silver Cup and Wm. Bond of Newark grand champion Shorthorn cow on Ormondale Maid 2d. In the Hereford classes Romie C. Jacks won all prizes. Congdon & Battles of Yakima, Wash., won the majority of the ribbons in the Aberdeen-Angus, although the Lilac Ranch made a very creditable exhibit.

Horses were shown in the draft classes chiefly and by a growing number of exhibitors. Percherons, Clydesdales and Jack stock constituted the classes in line.

Swine were conspicuous by their numbers and quality. It has been said that the hog business is dead, but the corpse certainly came to life at Riverside. Berkshires were shown by 12 exhibitors, Poland Chinas by 14, Durocs by 21, Hampshires by 6 and Tamworths by 3. Seldom is there as good a showing at a county fair and never better. Some have thought that Southern California was the home of the Duroc-Jersey hog, but the Berkshire seems to be coming right along and the Polands are not out of sight as yet and safe to say never will be.

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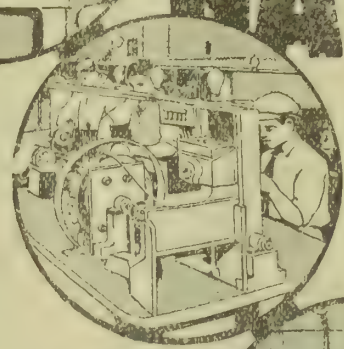

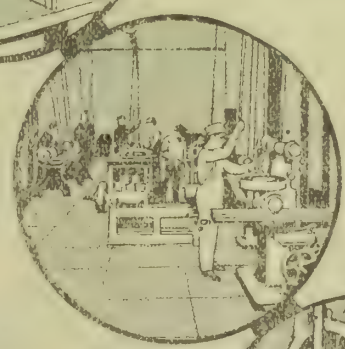

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A PERSONAL MESSAGE TO THE READERS OF PACIFIC RURAL PRESS.

"Labor is relatively the highest priced necessity the employer must pay for—yet its cost is cheap if the employe be efficient. A Man's earning ability is not measured solely by hours, but rather by his skill, his training and the fundamental knowledge he commands. I believe that every reader of the PACIFIC RURAL PRESS will agree with me that sound, practical training of the farm boy and employe will do most in solving the labor problem. With the exorbitant cost of farm power machinery and the high price of labor, it behooves every farmer to see that those who operate his machines and power-driven implements are properly trained and can be relied upon."

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Old Monterey's 100-Acre Patch of Strawberries

In Her Diadem of Horticultural Triumphs, California Boasts the Third Largest Strawberry Bed in the United States.

(Written for Pacific Rural Press by W. S. Killingsworth.)

One thousand tons of strawberries for the season of 1921 is the estimate placed on the output from a one-hundred-acre patch in Monterey county, the property of the H. A. Hyde Co. of Watsonville, known as the Oak Grove Berry Farm, located six miles east of Salinas. It is the largest strawberry patch west of the Mississippi river, and the third largest in the world, the largest being in Virginia and the second in North Carolina. Eleven months ago this strawberry patch was a beet field, but, believing that the soil and climatic conditions were ideal for strawberry production, H. A. Hyde, president of the company, staked his reputation and his capital on a "try out." For years Mr. Hyde has made a specialty of the culture of strawberries and bush fruits. Interested, as we are, in the production and advancement of the fruit interests of California, we accepted Mr. Hyde's invitation to inspect the plantings of the Oak Grove Berry Farm.

Soil a Decomposed Granite.

Standing on a plateau at the western approach to the farm the plantings stretched out before us towards the foothills—an hundred and sixty acres of rich bottom land, as level as a billard table. A little "rusty" in California's early history, however, Mr. Hyde informed us that this particular spot was an historic one. In the background towers Fremont Peak. Here General Fremont camped, and on this plain he defeated the Indian and Mexican forces under Costa and Monterey, in the early days when the fate of California was undecided.

As we gazed at this vast area, this potential undertaking, we were forcibly impressed with its numerous features of rare interest and value to the engineer and plant specialist.

Experienced Berry Growers.

These plantings are not the dream of a distorted mind of some speculative genius, but represent the culmination of years of experience and study on the part of the men responsible. Associated with Mr. Hyde is O. O. Eaton, one of the pioneer berry growers of the Pajaro district, and others who have had more than twenty years of experience in the problems of labor and the cultivation of berries. System is to be observed at every turn of the road. The entire planting has been subdivided into plots, which are sublet to groups of contractors who are responsible for the care, cultivation, irrigation and picking. The entire farm is laid off with that skill and accuracy employed by the landscape gardener, every row the same width, every furrow the same depth, every plant the same distance apart and every driveway—and there are miles of them—of the same width. We drove and we walked for miles, along the roads and down the rows between beds where the plants are true to type, vigorous, strong and well cared for, with each section carefully labeled and plotted to indicate the different varieties planted under each contract. We were told that on a visit by one of the leading horticulturists and plant specialists of this nation, but a short while ago, after viewing with a critical eye, he said in part: "The great wonder is the acre after acre of the same variety of plant, without mixture or variation from type, each of the same size and habit, true twin brothers and sisters of the rest."

Varieties Carefully Considered.

At a glance we saw that several varieties constituted the plantings, and upon inquiry we were told that it included most of the standard varieties—the Banner, New Oregon, Marshall, Nick Ohmer, Klondyke, the old stand-by, Malinda, a small planting of the almost obsolete Brandywine, the new Million Dollar berry—Dr. Burrell—and a few bare patches showing where the Progressives had just been plowed up—discarded because they require too much intensive care for commercial plantings. In the matter of irrigation nothing has been overlooked that might at some critical moment prevent prompt and sufficient application of water. A system of flumes, five miles in length, line the roadway, and it is through these 12x12-inch conductors water is carried with ease to all parts of the farm; the lateral flumes, however, are 8x8 inches. The water is secured from two sets of wells, each consisting of six 10-inch wells yoked together to a 7-inch centrifugal pump driven by a 25-horsepower electric motor. A flow of 1,000 gallons a minute is obtained from each group of wells, which are only 65 feet deep.

Welfare of Workers Provided For.

In the center of the farm in the midst of a group of oaks which gives it the name, the main camp is laid out. Here 23 cottages have been built for the contractors and their families. A large kindergarten has been built for the children, and a teacher has been employed to teach and care for the children when the mothers are at work.

During the height of the season a conservative estimate of the number that will be employed will be 400, who will be engaged in picking and packing. At other portions of the farm two additional camps, consisting of 8 houses each, have been constructed. After everything was in readiness the planting began, which was in December, 1919, and continued until April of 1920, when over 1,250,000 plants had been set out. This number has since been increased by setting runners between, until at present there are over 4,000,000 strong, well-rooted plants, ready to begin production next April.

Bush Berries as a Substitute.

No piece of land of any scope enjoys uniform fertility; such is the case on this farm. Where the soil was known to be ill-adapted to strawberries bush berries were substituted. The bush berries consist of Phenomenal, New Cory's Thornless, Dewberry, Himalayas and Logan. The Phenomenal has been considered by many as practically identical with the Logan. The Cory Thornless, aside from its easy handling, is a berry of fine flavor. A most remarkable feature of this vast undertaking to one interested in plant types and varieites is the many distinct strains of each variety planted under the same conditions and being tested side by side. The work here offers an interesting study in the possibilities of plant breeding and the results will give some valuable information to the scientist along these lines.

The "Banner" Berry Interesting.

Forty-five per cent of the plantings consist of the Banner berry. This variety has had a very interesting history. It was discovered on the Sweet Briar Ranch near Castella, Calif., in 1899. Mr. Loftus, the owner of the ranch, had a bed of strawberries of a standard Eastern variety. The old plants had been dug out and thrown aside. The following spring a plant was discovered which showed distinct characteristics entirely different from the others, and from this plant was developed the Banner berry of today.

Mr. Reiter, a prominent pioneer berry grower of Watsonville, learned of this berry and immediately investigated the variety. He recognized its possibilities. He secured plants for his place at Watsonville and encouraged its development. In 1904 Reiter and Driscoll formed a company and planted this variety extensively, marketing it under the "Banner Berry Farm's Brand." The source of supply was very carefully controlled and thousands of dollars were spent in keeping the stock away from other planters. No true stock was ever offered on the market before 1916, when Mr. Hyde formed a partnership with Mr. Reiter to market the Banner Berry plant. A great many substitutes have been offered and a great deal of mixed stock has been marketed as Banner's, but the true strains still live up to their early records. Last year, 1919, Mr. Reiter, on his fields at Mayfield, picked over 35,000 pounds of Banner berries per acre on ten acres of Mr. Hyde's best strain of Banners. This, as far as we are able to learn, holds the world's record for production.

The Popular "Nick Ohmer."

The Nick Ohmer was originally an eastern berry, and has become very popular since its introduction. About 25 per cent of the plantings of the Oak Grove Farm are of this variety. It is an early berry and the strains planted here are a wonderful sight—large, dark-green foliage, bearing heavy clusters of blossoms and fruit. This planting bids fair to surpass the highest record of this strain, which produced over 26,000 pounds per acre its second year in the San Juan Valley. About 10 per cent of the farm is given over to the New Oregon. The strain of Marshalls have been carefully developed over a period of years. Two fields planted from this strain in the Pajaro Valley on adobe soil produce heavier than any other variety.

30,000 Pounds Per Acre.

Over 30,000 pounds per acre were picked from these fields in their third year. Marshalls take up about 10 per cent of the plantings on the Oak Grove Farm. Klondykes have been planted with an eye for the early market, this variety bearing heavily several weeks before the Banner, and throwing a large crop of fine berries at a time when prices are attractively high. The old Brandywine has almost passed out of the commercial plantings in that district, but the renewed strain which has been given a chance seems to be showing up remarkably well.

One of the most interesting sights in the whole field is the planting of Malindas. The Malinda originated in the Pajaro Valley, by the late James Watson, and was named for his wife, and for many years was the only true everbearing variety in the Watsonville district. On the Eaton ranch at Watsonville, it made what is probably the world's record for continuous bearing, shipments being made for 14 consecutive months from one field. From constant replanting of California grown stock this strain has become devitalized and run down. Eight years ago Mr. Hyde took these to Oregon and is bringing back at the present time a stronger strain than he has ever had before. Last season, owing to the scarcity of plants, not only were the plantings curtailed, but in some instances inferior plants were used to fill out. Here we have a splendid object lesson in improvement of strains.

A 100-Per-Cent Perfect Stand.

One bed of Malindas planted from the improved strain is 100 per cent perfect, every plant strong, clean, healthy and vigorous. The other bed planted from California grown stock is spotted, over 40 per cent of the plants dead, the balance are irregular as to size, weak and poor. If it had been planned as a demonstration plot it could not have shown better the value of careful continuous care in the building up and maintaining of strains.

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Timely Work in the Orchard

(Written for Pacific Rural Press by W. S. Killingsworth.)

Control of Fungus Diseases.

What would be the object in planting an orchard or vineyard, carefully pruning and cultivating them until they arrived at the age of production, if proper care in the matter of control of the insects and fungus diseases, of which there are many, is not given at such times when it is necessary? It is unnecessary to remind the practical, up-to-date orchardist that in later years both the apricot and peach have been unmercifully attacked by twig and bud blight. The rather premature reference to the control of fungus diseases is intended primarily to emphasize the importance of great vigilance in checking diseases before they have become so well located that it will require additional time and expense to put them out of commission. Now that the harvest is over, no time should be lost in making preparations for spraying. While we do not recommend the use of spray before the major portion of the foliage has dropped, we deem it advisable to commence at the earliest possible moment after the branches and body of the trees are sufficiently exposed to receive the spray. In many instances growers prune their trees before spraying, this is done, of course, to save that portion of the material that would be lost on the wood cut away. However, don't let a loss of that nature cause you to lose a crop of fruit by not spraying at the right time. Those who are not familiar with the nature of this disease may learn of such by examination of the twigs, if they are affected, there will be small, brown spots located on the current year's growth. These may rest near the buds or scattered along the twigs, eventually they invade the buds causing their death together with some of the young growth. The most effective results may be obtained by spraying before the heavy rains set in. The old stand by, Bordeaux mixture, should be used, 5 pounds of bluestone, 5 pounds of lime, 50 gallons of water. Keep the agitator going at full speed. A pressure of 200 pounds should be brought into play as it is time and material lost to simply "lay it up" against the tree, the spray must necessarily be driven into every opening to attain results. The mere matter of having it said, "Well, I've sprayed my orchard, my trees are all right." They are all right, provided, however, care was exercised in the work, else one might just as well play the stream on the barn yard gate as far as results go. Don't rejoice in the thought that that is all the spraying that will be necessary, for it is not, there will be more to follow, all of which we will discuss at some future date, when the time is ripe for such.

Look Out for Scions for Grafting.

Where it is the intention to work over a block of trees to something better, it is advisable to look into the matter of selecting wood from the healthy, splendid producing trees. Select nothing but what shows healthy, well matured buds. While it is rather early to cut scions, no time should be lost in marking the trees from which they will be taken. This is done to prevent a mix-up should the trees be pruned without the knowledge of their selection for grafting wood purposes. It is customary with some workmen to cut their scions a month to six weeks before the work of grafting commences. When this is done the scions are systematically tied in bundles, not to exceed 200, and are heeled in, the moisture from the earth will keep them in splendid condition until time for use. Some workmen pack the scions in damp saw-dust and store them in a cool basement.

A New Trap for Codling Moth.

A. E. Caldwell of Columbia, Tuolumne County, has discovered what he believes to be a practical exterminator of the codling moth. He places a few old rags in the lower crotches of the trunks of his apple and pear trees, and the worms find this is an ideal place to form cocoons and pupate. When Mr. Caldwell thinks he has a fine "catch," which would be possibly every few weeks, he collects these rags and boils them. We would suggest burning, as cremation would be quicker and by odds the surest plan that the guilty might not escape. Naturally the soft rags make a much better winter home for the worm in which to prepare for the coming seasons, than under the bark. This plan may work well in the home orchard, but we fail to see how it could be worked successuflly in a commercial orchard of any number of acres, on account of the excessive amount of rags it would require, and the attempt to use good cloth at present prices of that article, it would bankrupt the Pear Growers' Association. How about that, Mr. Swett?

Deciduous Fruit Yield Per Acre.

The Pacific Rural Press is constantly called upon to answer questions similar to the following, (1) "What is the yield per acre of certain varieties of fruit, both in a green and dried state—provided it is drying fruit—in a certain locality of a certain county of the State?" (2) "What is orchard land in a certain section of a certain county of the State worth?" With all due respect to those who make such inquiries, we will say that such questions are on a parity with the time worn interrogation, "How old was Ann?" Unless one is familiar with conditions, age of trees, quality of soil, how the trees have been pruned and sprayed, whether irrigated or not, well cultivated or not, and last but by no means least, the climatic conditions under which the fruit must pass from blossom to harvest, it is beyond the pale of the best posted ones in the business, to answer in an intelligent and satisfactory manner. Trees or vines on adjoining properties may be of the same variety, planted with the same care and at the same time, and unless all of the foregoing stipulations are accorded the same rights on both places there will be, not only a lack of production but a lack of growth of the trees on the property neglected, while admitting that soil and climatic conditions are alike in both cases, but neglect in cultivation, pruning, spraying and irrigation, places an embargo on both growth and production, hence the matter of determining the production powers of such properties can be gained only by a close watch over each. It would be an injustice to draw a happy medium and say that the average production of such a section was so and so, that would be a boost for the neglected property, and a knock for the prolific. We would advise our readers who are in search of such information to take the matter up with the horticultural commissioner or farm advisor of the county in which the property is located when a trade is pending. We are sure the best results may be had in that way.

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Here is a much roomier touring car at a five-passenger price. A car that defies comparison. A car that you can count its advantages. A car that shows you instantly a generous policy.

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The same generosity that distinguishes the bodies is to be found in the chassis. We build these cars complete—so we save the profits that would otherwise go to outside builders. That accounts for the extras.

Examine the offerings at the Mitchell prices: *Six* passenger Touring Car, $1750; *six* passenger Sedan, $2900; *four* passenger Coupe, $2800; *three* passenger Roadster, $1750. F. o. b. Racine Wis.

You can't find a car that offers so much. So visit a Mitchell dealer at once.

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Heavy ground should be aerated by blasting around the trees (just outside the foliage line) when the ground is hard and dry in the Fall. Dig out the loosened earth and fill the holes with organic matter, manure, leaves or twigs.

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HERCULES FARM DYNAMITE

Send for a copy of the Hercules Powder Co.'s 68 page book "Progressive Cultivation". Every rancher or orchardist should have this book for it tells him how to plant trees, cultivate bearing orchards, subsoil, clear land, blast ditches and do many other things with the help of Hercules Farm Dynamite.

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SUTTER, WORLD'S BANNER PEACH COUNTY.

(Written for Pacific Rural Press by W. S. Killingsworth.)

"Let the women do the work." Reports reach us from Sutter county that in the recent cling peach prize contest it took a woman to show the old-timers of that county how to grow cling peaches. For the heaviest tonnage, best quality of fruit, and the best kept orchard, Miss Lanie May Wilbur of the Nuestro Farm Center captured the first grand prize silver cup, given by the Canners' League, and the Yuba County Chamber of Commerce cup, which was to be given to the farm center, of which the first prize winner was a member. In contesting for this prize Miss Wilbur entered an orchard of the Phillips cling variety. But where Miss Wilbur has made the cling peach growers of the world sit up and take notice was in her Tuscan cling orchard entry—trees up to six years old. This orchard produced 15 tons and 1862 pounds per acre on 22 acres. Not to be niggardly about this we will call it 16 tons. According to that the 22 acres produced 352 tons. The cannery price, as every one knows, was $100 per ton. Now let's see what happened when Miss Wilbur delivered those peaches f. o. b. cars at Bogue, Sutter county. The cannery that purchased those peaches handed her a check for $35,200. Can you beat it, on anything that grows above or below the surface of the earth, in California or any other state in the Union—we will not go outside as we know they can't?

Miss Wilbur will pardon us when we incidentally remark that she certainly had her nerve with her when she planted an orchard of cling peaches six years ago. At that time we can recall nothing that grew in the state, on tree or vine, that was as cheap as cling peaches. Six years ago the writer was in the fruit game on the Sacramento river, and well do we remember the trials and tribulations some of those growers had in disposing of their cling peaches. There was no price; they were in about the same class as a bogus quarter. It was really amusing to watch the cannery buyers. They wanted Bartlett pears, and where the grower had both pears and cling peaches he depended upon his pears to sell his peaches, and these buyers would shun a pear orchard where there were cling peaches in conjunction, as they would a pest-house. However, they had to come to time. They took the peaches, at a price that about covered expense of picking and delivery on river bank.

Perhaps when Miss Wilbur planted those cling peaches she was acting on the principle that "it's darkest before dawn." At any rate, she has set a pace that will make her neighbors go some before they will pack the roll she now displays. For this entry Miss Wilbur took first prize, a small silver cup. Down the line a little further she entered her Tuscan cling orchard—any age—for which she took first prize, a medium silver cup. In the contest on Phillips cling orchard—any age—she took first prize, a medium cup. On the same up to four years she took first prize also, a small cup, making a total of four first prizes, the Yuba County Chamber of Commerce cup, and the first grand prize. As to acreage in peaches there are several counties in the state that surpass Sutter, and there are several that produce a greater tonnage per acre as a whole, but when it comes to the matter of quality of the cling peach for canning purposes, we believe that we are safe in stating that Sutter county takes the lead. We are prompted in making that statement by the rivalry there is among the canneries for cling peaches produced in the county. Soil and climatic conditions are most favorable for both tree and its product, and now, by some extra care in cultivation, spraying and thinning, the growers have been taught the advantages of such, and due credit for which must be given the Sutter County Farm Bureau, who made it possible that this contest should take place.

Peter Huff of Ukiah has exhibited on the local market nine quinces that weigh eight pounds.

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It has been proven and so recommended by the University of California that if you sulphur your grape vines and orchards 6 times they will not be affected by MILDEW or RED SPIDERS.

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PLANT NOW—September, October and November are the best months to plant. Growers who planted last July and August have already harvested over 15 tons per acre, netting $1,000 eleven months from planting. For further information, write J. B. WAGNER, Rhubarb Specialist, 1550 East Villa St., Pasadena, Cal.

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NEW METHOD OF DRYING PEARS.

(Written for Pacific Rural Press.)

We understand that a new method of drying pears has been perfected by students of the Universty of California, which adds greatly to their value. It is further stated that the system dries the fruit in 16 hours, less than one-third the time taken by the old process, and as a consequence the dried fruit keeps a much greater amount of its body and flavor. We are from Missouri when one talks about drying pears—of any variety—in 48 hours "by the old process." There being "nothing new under the sun," a discovery may have been made to successfully dry pears in 16 hours. The writer has had many years of experience drying Bartlett pears and under the most favorable climatic conditions it would be from one to two weeks before we dared to transfer pears from drying trays to lug boxes, and when the pears were large we have held them on the trays for six weeks before they were in condition to be moved. Those who have had experience drying pears know that they are not dried from exposure to the sun. After pears have been sulphured from 36 to 48 hours they should be placed on the dry yard and allowed exposure to the actual heat of the sun for 48 hours, then the trays should be stacked in such a manner that there may be a free circulation of air between them. It takes time to dry pears by this process, but if allowed free access to the beating rays of the sun in a very short while the edges will curl up and turn dark red and the main body of the fruit will be of a dark reddish color, rendering it a worthless lot of rubbish that, when dumped from trays into lug boxes, will rattle like pears on a seasoned cow-hide. Far be it from our intention to criticise a new method by which pears may be easily, quickly and successfully dried, for anyone making that discovery will be hailed with delight by the pear growers of California. As the process of drying pears is in a class by itself, and if improperly done it is not only "love's labor lost," but a loss of the fruit, or to that extent that it's a drug on the market.

LATEST INFORMATION ON WALNUTS.

(Written for Pacific Rural Press.)

When the California Walnut Growers' Association made the opening price on the 1920 walnut crop, there was a little flurry among the trade, but the association reports that the reception the trade gave it is more satisfactory than had been expected, considering the general food product situation at the present time. We are reliably informed that 85 per cent of the Association's estimated tonnage has already been sold, and while the size of the average order is materially reduced from last year, a much larger number of orders were received which leaves the Association with only 15 per cent of its holdings yet to dispose of.

"It seems apparent," said General Manager Thorpe, "that the trade generally have ordered in quantity only sufficient to take care of their early requirements before Thanksgiving. As a result we look to see an active walnut market throughout the holiday season, and would not be surprised if we would shortly have to withdraw all offerings if replenishment orders commence to develop to the extent we anticipate. In fact, within the last week a number of our customers have added very materially to their original orders, which indicated that some buyers at least have already oversold the amount of goods originally ordered and are now again stepping into the market to cover their shorts."

The Association also reports that the trade generally were pleasantly surprised at the low price at which walnuts were quoted and as No. 1 Soft Shell will move to the consumer generally at a price of not over 35 cents a pound, it is thought that the trade in the California walnut will be particularly active this season, which should result in cleaning up the entire crop before the turn of the year. The Association estimates its output at 18,000 tons as against 21,000 tons prior to the commencement of harvest.

UNIVERSITY OF CALIFORNIA FRUIT SHOW EXHIBIT.

The University of California Fruit Show that is to be held on November 18, 19 and 20 will not only have on exhibit a large class of fresh fruits, but also a large variety of sun-dried and dehydrated fruits and vegetables. The Division of Food Products has brought together an exhibit of pears from the following sections: Lake county, Mendocino county, Sacramento River and Contra Costa county. Sun-dried specimens and dehydrated will be on exhibit from the different sections, which will show the different characters from the different regions of growth. Besides the above the following will be on exhibition: dehydrated grapes, peaches, apricots, berries, candied fruits, dried vegetables and dehydrated prunes. The method of treatment of each product will be fully explained.

The above-dried fruit exhibit should be of utmost importance to the growers of the state who dry their fruit.

TULARE OLIVES TO BE CANNED.

The olive situation in Tulare county seems to be in line whereby the growers will have their olives cared for by the Visalia Co-operative Cannery. Under the present conditions according to Jno T. Bair, district field representative for the California Co-operative Canneries. Under existing conditions according to Mr. Bair, there are now between 5000 and 6000 tons of olives in the valley between Reedley and Porterville. Equipment for the handling of about 200 tons will be installed in the local cannery, contingent upon securing contracts for a thousand tons practically all of the olives to be made into olive oil. Market conditions will not justify canning of olives.

REVENUE LAWS.

Senator Oscar Underwood of Alabama, author of the "Underwood Tariff Law," says: "No matter who is elected President, Congress will be called into extra session late in March or early in April to revise the revenue laws and place the United States on a peace-time financial basis. Our finances must be demobilized just as our army was."

When Fungus Eats Peach

It's fine for the fungus, tough on the peach, and takes the orchardist's profits. All this you know if you have failed to spray your trees before the arrival of heavy winter rains during the dormant season.

California Peach Blight, curl leaf and other diseases take this time of the year to get a good start on deciduous trees. But they are forced to quit before their attack is fairly under way when they find an orchard sprayed with

Orchard Brand

BORDEAUX PASTE, 32-36 lbs. or BORDEAUX-POWDER, 16-18 lbs. } **per 200 gal. tank**

If scale insects are present, or if more sticking qualities or penetration are desired, add Miscible Oil and Glue to the above formula as outlined in our Deciduous Bulletin.

Fruit buds and fruiting woods will be seriously handicapped later on unless you give them their chance now. And they haven't got a chance if injurious diseases are allowed to take hold during the rainy season.

Our Bordeaux sprays, made from the highest grade materials and combined by chemical processes, are standard. Their uniform composition gives the greatest efficiency. In the end, they are less expensive than home-made mixtures.

Our expert entomologist, Paul R. Jones, will gladly solve your spraying problems. Send today for your free copy of his latest bulletin on deciduous spraying.

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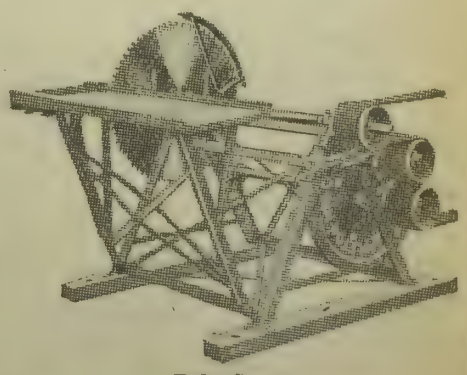

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SAN FRANCISCO LOS ANGELES

Here and There in the Fruit Business

Spend $250,000 on Fruit Plant.

The California Peach and Fig Growers are preparing to spend $250,000 in erecting a packing house for figs and peaches on the property owned by the association adjoining the box factory plant near the raisin plant. E. S. Moorehead of Los Angeles will have charge of the big experimental work in fig products, which is being carried on by the association since it took over the fig industry. Moorhead will direct considerable attention to preparation of fresh figs for cannng and preserving and for fresh fruit shipment.

It Beats Stacking of Walnut Trays.

Piling walnut trays nightly to avoid dew and fog and during daytime to avoid rain is a heavy job well avoided by Dr. W. L. Jerman of Los Angeles county. An opening was cut in the side of a building about the height and length of six piles of trays set end to end and six deep. A slat frame was built in this opening to support six trays one above the other and the width of the slats apart. It extends inward the width of a tray, and outward the same distance. Small roller casters were placed in the bottom of each tray to roll on the slats and make it easy to push the trays outdoors on the frame or pull them indoors at night or in case of rain. "It beats stacking all to pieces," says Mr. Jerman.

Fullerton Walnut Situation.

The Fullerton-Placentia Walnut Association in Orange county has overhauled its plant this season at a cost of $18,000, according to Secretary Arthur Staley. Innovations include cement cylinder bleaching drums, tried experimentally for the first time last year elsewhere. Liquid chlorine will be used in the bleachers this year for the first time. Several drums of it were provided ahead of time. The packing-house culling machinery is so much more convenient and uniform than hand culling heretofore done in the orchards, that a policy is adopted this year of picking up everything and letting the packing house to take out the culls. These are weighed back to the grower and may be cracked at the cracking plants. Sizes of nuts are larger this year than last in the Fullerton district, according to Mr. Staley, but the crop tonnage is lighter. There has been practically no spraying, but worm damage has not been noticed; nor does much injury seem apparent from the aphis which were numerous last spring. Blight is always with us, but is not alarming folks greatly. Not many walnut trees have been planted here in recent years, so most of the crop is from mature trees.

Fumigate Early.

Fumigation and spraying among citrus trees may better be done early in fall before planting the cover crop, as learned by W. A. Matern of Los Angeles county, a recent winter when fumigation killed the cover crop around trees and fumigators trampled the rest of it.

Wine-Making in Homes.

Justus Wardell, Collector of Internal Revenue for this district, announces that 200 gallons of dry wine may be made in each home. This news comes from Washington and is interpreted by Collector Wardell as an official construction of certain provisions of the national prohibition act. Apparently the order is not in the nature of a concession to the so-called wine interests of the country, but rather tends to indicate that a loophole has been discovered which modifies some of the more drastic provisions of the law. Heads of families, under the more liberal construction of the law announced by the Commissioner of Internal Revnue at Washington, may manufacture 200 gallons of dry wine without being subject to payment of taxes thereon under the internal revenue law. In event that more than 200 gallons being manufactured the head of the household must give a bond and pay tax on the excess wine. This tax is fixed at 16 cents, but the new ruling provides that if such excess is intoxicating, double the ordinary tax is due.

Long Pruning Proved Successful.

An interesting demonstration of the long pruning method for peach trees has been conducted this past year by Chas. Sanders of Modesto and the Stanislaus County Farm Bureau. Five-year-old Phillips Clings, long pruned, turned out 65 boxes to the row of 11 trees while those pruned short yielded only 31 boxes. No props were used on the long-pruned trees and while some branches broke, the damage was little or no more than occurs with the old method of pruning. Mr. Sanders will prune long again this winter.

STANDARD WEIGHT FOR BERRIES.

The Weights and Measures Officials of California have fixed a standard of weights for berries when sold in containers. They have also issued instructions relating to the enforcement of the law, among which they state:

"A careful survey of the basic, as well as contributory elements relating to the production, packing and marketing of berries, have been made for the purpose of fixing a uniform standard of weight for berries when sold, offered, or exposed for sale in containers. Section 6 of the Weights and Measures Act delegates to the State Superintendent of Weights and Measures the power to fix a standard net weight for berries and to prescribe such tolerances for same as he may in his best judgment deem necessary for the proper protection of the public. The section providing these powers also provides for a penalty for violation of such standards and tolerances. The fixing of a standard of weight extends a substantial economic protection to the consuming public and provides for the producer all the benefits intended from standardizing the container. Therefore, in the exercise of the powers conferred in Section 6 of the Weights and Measures Act, I hereby fix the following standards of weight for berries when sold, offered or exposed for sale in containers, and prescribe therefore the following tolerances, and any persons violating such standards or tolerances shall be guilty of a misdemeanor."

Strawberries: (Pint 33-6 cubic inches), 12 ounce minimum contents. Tolerance, ¾ ounce in deficiency, 2 ounces in excess. Loganberries: (Pint 33-6 cubic inches), 12 ounce minimum contents. Tolerance, ¾ ounce in deficiency, 2 ounces in excess. Blackberries (Pint 36-6 cubic inches), 12 ounce minimum contents. Tolerance ¾ ounce in deficiency, 2 ounces in excess. Raspberries (½ Pint 16-8 cubic inches), 8 ounce minimum contents. Tolerance ½ ounce in deficiency, 1 ounce in excess.

GREENFIELD FRUIT AND IRRIGATION.

A half-crop of apples is reported for the Greenfield district in central Monterey county by W. H. Livingston, one of the leading growers. These are about half and half Newtown Pippins and White Winter Pearmains. There are a few Delicious appls. These do well and are the only red apples grown here that command a good price. Pearmains this year are of small size on account of early drying up of the irrigation system, which gets its water by a diversion dam from Arroyo Seco.

The project for a dam in the Arroyo based on government surveys of a few years ago, is taking definite form. A meeting was held October 12 to determine who might wish their properties excluded from the proposed district. It is expected that a 10,000 acre district will be formed. Frank Adams of the U. S. Department of Agriculture and the State Engineer have recently reported favorably on the project.

The FRUIT GROWER says=
"for tree planting genuine GIANT is most satisfactory"

The Giant Farm Powders—Eureka Stumping and Giant Stumping—loosen and pulverize the soil instead of packing it and throwing it high in the air.

Western fruit growers have used hundreds of tons of these Giant Powders for blasting beds for trees. They have proved that blasting with genuine Giant Powders provides free drainage, increases moisture-storage capacity and insures vigorous growth and early bearing.

"My trees planted three years ago in beds blasted with Giant Powder are 75 to 100 per cent bigger and better than the trees that I planted in dug holes," writes H. H. Smith, Oregon City.

You will enjoy reading "Better Farming with Giant Farm Powders." It describes all the new and money-saving methods of blasting beds for trees, subsoiling established groves and orchards, clearing land, ditching, etc. Write for it now.

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216 First National Bank Bldg., San Francisco. Branch Offices: Butte, Denver, Los Angeles, Portland, Salt Lake City, Seattle, Spokane.

GIANT FARM POWDERS
STUMPING EUREKA

Place Your Order

FOR FRUIT TREES, ORNAMENTALS, ROSES NOW

WRITE FOR OUR NEW PRICE LIST

There will be a decided shortage of Fruit Trees again this year. We therefore advise our customers to place their orders as soon as possible in order that the stock may be reserved for them before the supply is exhausted.

We wish to call particular attention to our Improved French Prune and the New Double X Prune.

California Nursery Company
NILES, CALIFORNIA

Feed the Soil and the Soil Will Feed You.

We manufacture Complete Fertilizers of all kinds.
The oldest established and largest producers of Bone and Blood Fertilizers on the Pacific Coast.
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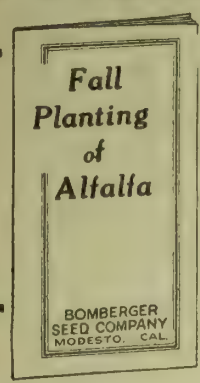

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Selected Seeds

selected for each soil and moisture condition. Send us your growing conditions, let us tell you of the type which has produced more and lived longest under similar conditions.

BOMBERGER SEED COMPANY

Write the store nearest you for seed and planting information.

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THROOP Land Leveler

"The Leveler Supreme."

"There's a Throop Leveler for every Tractor."

FEATURES

—Mfg. in six, eight, ten and twelve-foot sizes.
—Exceptionally well built.
—Operates as easily as an auto.
—Enormous capacity.
—Positive action under all conditions.

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17 S. Aurora St., Stockton, California

Dealers Wanted.

PURPLE VETCH AS HUMUS AND NITROGEN PRODUCER.

(Written for Pacilc Rural Press by C. R. Peteler.)

"The best is hard to obtain". Ask anybody. The California orchardist knows it well, for it was three years ago that Mr. Mertz of the University of Califirnia Citrus Experiment Station concluded from his experiments that Purple Vetch was the champion cover crop. Ever since, Southern California citrus growers have been searching for an adequate supply of seed. Bad luck followed them in Oregon, where the world's supply of seed was nearly lost through a severe attack upon the growing plants by Oregon aphis. To renew the supply more was started for the orchardists by Humboldt County farmers, and a local seed house now announces that enough has been grown that they will release a limited quantity for cover crop purposes this year.

The many advantages of the cover crop of green manure crop, as it is perhaps more properly termed, have become well known to the California farmer in a short time.

In every day Purple Vetch wins as a cover crop. It starts more readily in cold ground than any other, which is desirable because the best way to start cover crops is in the Fall following a thorough irrigation, often leaving the ground cold. Purple Vetch grows far better in the cool winter months than any other cover crop so far tried out. This is perhaps its greatest single point of superiority, as it enables a maximum tonnage to be turned under at the earliest date in the spring.

The United States Department of Agriculture states that Purple Vetch will withstand a temperature of 15 degrees above zero with no apparent injury or delay in growth. This establishes it as the most hardy cover crop. Its rapid growth affords the maximum protection to the ground surface during the period of heavy rainfall, enabling the soil to store more moisture than it otherwise would, and preventing erosion. The soil is opened up to a great depth by the vigorous root system, allowing the water to be stored more deeply. A large quantity of water is turned under with the cover crop, and the soil is left in such a shape that it can hold much more moisture.

Leguminous cover crops are capable of taking nitrogen from the air and "fixing" it so that it becomes available to other plants. Purple Vetch is outstandingly triumphant as a nitrogen gatherer, 228 lbs. per acre being turned under with the green tops alone, in comparison with Melilotus Indica at 152.0 lbs. per acre, and Common Vetch at 129.6 lbs. per acre. Besides this an enormous amount of nitrogen is left below the surface of the ground. It is estimated that one and a half tons of Nitrate of Soda would be required to place an amount of nitrogen in the soil equivalent to that produced by the Purple Vetch. This amount of Nitrate of Soda would cost over $120 per acre applied. In the form of some organic fertilizer, the only form of nitrogenous fertilizer now acceptable to most Southwestern farmers, this amount of nitrogen would cost in excess of $170 per acre.

Mertz in 1918 published the results of the effects of various cover crops upon a succeeding yield of corn. Land formerly occupied by Purple Vetch produced at the rate of 3,091 lbs. of shelled corn per acre, in comparison with a yield of only 2,125 lbs. per acre on land following Common Vetch, while the land cover cropped with Melilotus Indica produced 2,724 lbs. per acre. Purple Vetch gave an increase of 50 per cent above land not cover cropped.

It is well known that both the quality and quantity of fruit is greatly increased in orchards which are carefully cover cropped. As Purple Vetch gives such a huge yield of green material and nitrogen, the results in this regard are the maximum.

The Hollywood Farms' dairy ranch has recently completed a second brick silo, 15½x40 feet.

FAGEOL WALKING TRACTOR

This tractor walks on its legs or "grousers" with positive traction in all soils; it turns short, and has no projections to damage trees or prevent it going close to them, and it does not pack the soil.

There is no loss of power from slippage, and it works entirely satisfactory on the steepest sidehills.

Exclusive Fageol Features
Increase their operating range
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See your local dealer immediately. He has a new plan that will make delivery when you want it certain

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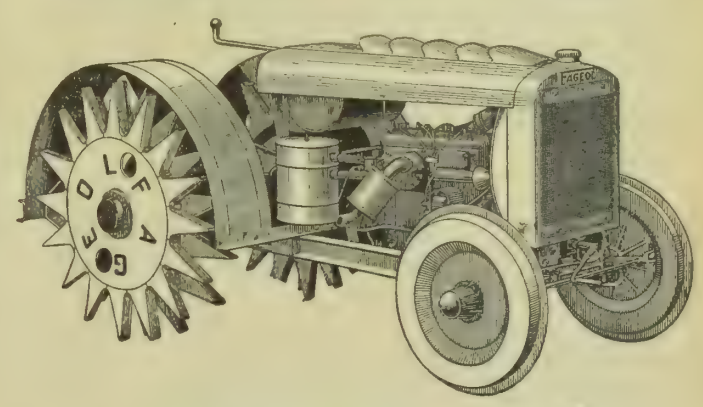

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IS THE BEST SCRAPER ON EARTH

And we can prove it. Write for circulars

The above is a cut of the Famous Miskin Scraper, which in operation, easy draft, greater capacity, and better work has many advantages over the common Fresno and wheel scrapers now on the market and is guaranteed to take twice the dirt per trip with the same horsepower.

Made in 2-horse, 3-horse and 4-horse sizes. Can be operated by small tractors from the tractor seat by the tractor driver.

Send for descriptive circulars, with prices, or ask your dealer to send for one on approval. We pay the freight.

MISKIN SCRAPER WORKS, UCON, IDAHO

Your Soil Needs Humus and Nitrogen Bacteria

Melilotus Indica Supplies Both

Now is the time to plant it. Buy only seed that has a quality test tag on every sack. It protects you against seed of low germination.
Buy from your local dealer or from

Aggeler & Musser Seed Co.

Look for the Tag — LOS ANGELES, CAL.

Allwork Kerosene Tractor

Strength Service and Economy

Allwork Kerosene Tractor pulling an 8-foot double disc plow in drift sand, near Wineville

Designed particularly for use in orchards, vineyards and grain crops, the Allwork Kerosene Tractor has many advantages. It is built especially to fit the needs of California Farmers. It requires no special carburetor yet burns kerosene, delivering great power at low cost.

Allwork "Measures Up"

It is suited for low growth orchard work—54 inches high, 52 inches wide, with a 9-foot turning radius. Other distinctive features are its weight—4500 pounds—Timpkin Bearings, extra strong crank shaft, individually cast cylinders, oil enclosed governor, swinging drawbar, and three speeds forward and reverse.

Opportunity for California and Nevada Dealers

The Allwork's present popularity is only an indication of the future demand for this exceptional farming implement. We will gladly explain terms and territory to any dealer.

You may inspect every detail of construction and equipment at our salesroom, 234 North Los Angeles Street.

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Knapp Orchard Disc Plows

Killefer Farm Implements, Service-parts and the complete Killefer line in Los Angeles County

SIXTH ANNUAL AGRICULTURE CLUB CONVENTION.

(Written for Pacific Rural Press by Ralph Newman.)

Perhaps some of us do not realize it, but the gathering of boys and girls from the California Agriculture Clubs at Davis, October 14-17, was one of the most significant meeting of the year.

There were 425 boys and girls from Del Norte, Imperial and nearly every county between. They represented one seventh of the club membership of the state and were enrolled in calf clubs, pig clubs, poultry clubs, sorghum, potato, and sugar beet clubs.

The visit to Davis was a reward for tasks intelligently and well done. They are the living embodiment, these boys and girls, of the fact that agricultural instruction for rural communities is here, and here in an ideal but perfectly practical form. These youngsters have taken the science of the school right to the farm and there have applied it. They are creators and walked the campus with the confidence that comes to those who have actually brought forth something worth while. It was an inspiring sight to see them going from one point of interest to another, but the thing that got under your skin and thrilled you was the conscienciousness of the great potentialities in this movement that is giving to so many of our youth the real, honest to goodness farm spirit and point of view.

And you must hand it to Professor Crocheron and his aides. What can be done in two days will 425 live boys and girls dropped onto the campus from every corner of the state? Where shall they sleep? How shall they be fed? How held in line so as to really get something from their outing? Well sir, as these born (and trained) leaders of youth worked it out, there was "nothing to it."

On arrival, what might have been a crowd became an army—and that's all there was to it, so far as decipline was concerned—except that the leader called the boys "fellows". It was perfectly spontaneous and it turned the trick.

They slept in tents, each one furnished with an abundance of clean straw which, with the blankets brought from home, made a good enough bed for anybody. They were fed at an army kitchen with an abundance of well cooked and wholesome food.

For work, they were divided into three groups and rotated in such a way that in two days everybody had a glimpse of every phase of the school work and a practical talk by an instructor. And everything and everybody moved with as much precision as though they had been doing that very thing all their lives.

In the demonstrations I was privileged to attend, the instructors were on their metal, the fellows were all attention and the results—well the future years alone will reveal them. It bodes well for the future of California agriculture that such a gathering as this is possible.

RECORD CROPS IN CANADA.

Statistics recently isued by the Dominion Government Bureau of Statistics indicate that Canada's 1920 wheat crop will break all records of yields and other cerial crops will also show a great increase. Estimated yields by Provinces in the three Prairee Provinces are: Mantoba, wheat 40,305,000 bushels; oats, 61,328,000 bushels; barley, 19,895,000 bushels; rye, 4,349,000 bushels; flaxseed, 605,000 bushels. Saskatchewan, wheat 136,880,000 bushels; oats, 173,003,000 bushels; barley, 11,640,000 bushels; rye, 3,535,000 bushels; flaxseed, 9,288,000 bushels. Alberta: wheat, 82,972,000 bushels; oats, 124,958,000 bushels; barley, 12,227,000 bushels; rye, 1,936,000 bushels; flaxseed, 924,000 bushels. A splendid showing for what might be termed a "New" country, however, it boasts of a variety of soil and climatic conditions, that offer inducements for almost every branch of agriculture and horticulture.

SEED WHEATS AND BARLEYS

From Farmer to Farmer

BUNYIP, BAYAH and DART IMPERIAL SEED WHEATS

Hard White Australians; California acclimated; best milling; higher price for products.

MARIOUT and BELDI SEED BARLEYS

Large yields; quick growth; early maturity; more drouth resistant than other varieties known to us.

There is in California a very limited quantity of choice wheat and barley seed of these varieties. All our seed grown on new soils, one irrigation only. All water from deep wells; no Bermuda, Johnson or Morning Glory. Orders booked as received, shipments following consecutively.

We also have limited quantities Early Baart, Sonora, Diener's Hybrid-Baart and Diener's Hybrid Sonora Seed Wheats. This is our first year with last two varieties and data not yet sufficient to permit our making definite conclusions or recommendations. Both tiller well, permitting light planting, and neither shatters so badly as Sonora.

In our judgment Bunyip, Bayah and Dart Imperial wheats and Mariout and Beldi barleys yield more on less soil moisture and shatter less in wind than any grains we have grown.

We are also now booking cotton seed orders for late fall and winter delivery. Pure strains, Durango and Mebane, grown by us in selected, hand-rogued fields. We do our own ginning, carefully avoiding seed mixing.

We invite trial of our seeds for results with less moisture.

Write for prices, stating quantity desired.

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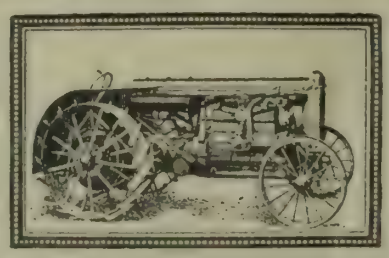

Allis-Chalmers Farm Tractors

The 1830

A four plow tractor with 20% surplus power for ANY unusual load.

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SWEET POTATOES SETTLED.

Never before have California sweet potatoes brought such prices as they did at the opening of the present season, and never before has there been such a large acreage to ship, according to G. J. Hunt of Hunt, Jewett & Boutz, one of the shipping firms recently designated by the Merced-Stanislaus Sweet Potato Growers' Association to market their crop. First express shipments, which went out about two weeks later, around the middle of August, brought eight cents a pound to the growers. The price soon slid down to seven and six and a half cents. Carloads opened at six cents to the growers. The price dropped to five cents, then to four, and about the middle of September the Association set three cents as a fair price for themselves and one which would move the crop as stated by President G. H. Winton, whose acreage is near Livingston. This of course is for standard shipping sweets. Lower grades are coming in at 2 and 2½ cents, while the smallest roots and tubers were selling for hog feed at one cent a pound in August. All sweet potatoes are sold on an f. o. b. basis.

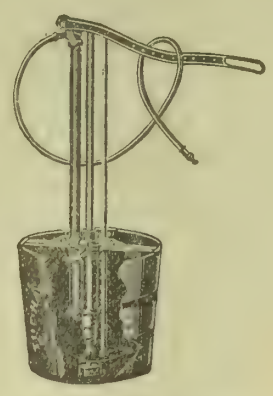
Though the association includes about 80 per cent of the growers, it will have to exercise firmness and good judgment in marketing the crop for at best there will be a considerable quantity to store for winter and spring markets. Storing the Jersey variety last winter even under the extremely favorable conditions provided by Hunt, Jewett & Boutz at Turlock, proved a great loss, and that firm will store no Jerseys this year on its own account. It was thought at first that the loss was due to a faulty heating system, but Mr. Hunt now believes it is inherent in the Jersey variety as produced in California generally from run-down seed. If any are stored in the big curing house, it will be for account of the association. As this firm stored the crop from about 1500 acres last year and one of the canneries took 500 acres, which they are not handling this year, it throws 2000 extra acres on the market besides the slightly increased production predicted by the U. S. Bureau of Crop Estimates, September, 1920. However, the association management is keeping in close touch with market requirements and the sweets improve in sweetness and weight until the early frosts.

INTERMOUNTAIN VALLEY FAIR.

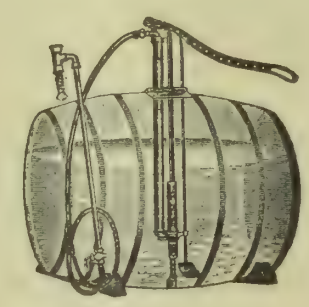
(Written for Pacific Rural Press by J. B. Lillard, State Supervisor of Agricultural Instruction.)

I have just returned from a trip to northeastern California, part of the time of which I spent at McArthur, where they were holding the Intermountain Valley Fair. There was participation in this Fair by residents of Shasta, Lassen and Modoc counties. The Fair Association owns unencumbered about twenty acres of land, an excellent grand stand that will accommodate three or four thousand people, and a fence encircling most of the property. On account of the short growing season because of the elevation of these mountain valleys, it is extremely difficult to grow some of the farm crops, fruits and vegetables common to lower altitudes. In spite of this handicap the still exhibits were exceptionally fine. I was especially interested in the farm exhibit of the '7 J Ranch,' owned by Mr. N. Reynolds of the Hat Creek Valley. (By the way, when Mount Lassen was especially active a few years ago, it sent out a large quantity of volcanic ash, most of which flowed down Hat Creek.) Mr. Reynolds' exhibit consisted in part of eleven varieties of nutritious grasses; nine varieties of clovers and other legumes; twenty-two varieties of vegetables and other farm crops; thirteen varieties of fruits; butter; cheese; honey; and canned fruits, vegetables and meat. On the first day of September Mr. Reynolds still had in his cellar apples and potatoes harvested the previous Fall. Mr. Lewis Carrigan, Secretary-Manager of the Northern California Counties' Association, was so impressed than an exhibit is probable at the next State Fair.

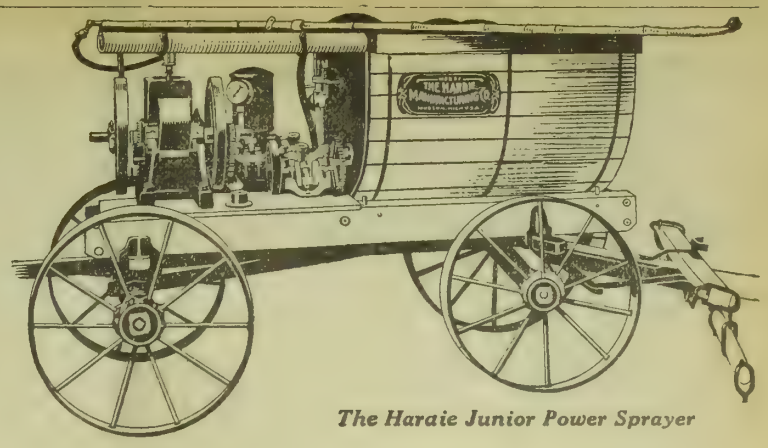
For growers who need greater capacity and pressure, there is the famous Hardie Triplex Sprayer and other models.



The *Hardie* all-brass bucket pump, the only bucket pump on the market with mechanical agitator, 200 pounds pressure with 35 strokes per minute.



Hardie barrel sprayer—mounted on the side for low height and freedom from upsetting. Pumps out all the liquid. Equipped with agitator.



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Hardie Spraying Equipment for the Small Grower

There is a *Hardie Sprayer* for every spraying need.

The *Hardie Junior* is the very best power sprayer for the small grower. Its price is low, its quality is high. It is guaranted to supply two lines of hose and maintain a pressure of 200 pounds. The tank has a capacity of 150 gallons. For growers whose spraying is unusually light, there are *Hardie* bucket and barrel pumps of just the size you need. Mechanical agitators are a part of every *Hardie* outfit.

Hardie hand sprayers are the easiest to operate and the lightest two features of unquestionable value.

We gladly offer you our twenty years experience in helping you select the right sprayer—we carry a complete line of sprayers and sprayer accessories.

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For 20 years the foremost, exclusive manufacturers of hand and power sprayers, including the FAMOUS HARDIE ORCHARD GUN

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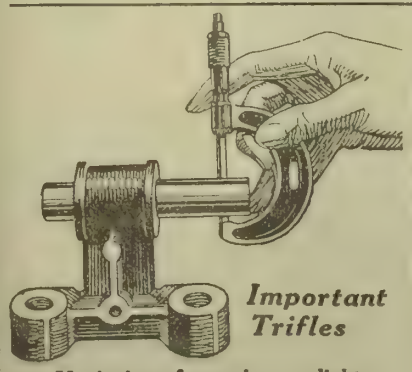

Important Trifles

Variations from size so slight that only highly accurate instruments can detect them may mean wasted power, lessened tractor life or increased upkeep cost; hence they are not tolerated in the construction of the "Caterpillar" Tractor. "Accuracy"—a booklet we have ready for you—tells how errors of even 100,000th of an inch are detected by Holt Standards.

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In Answer to Barley Planting Questions

To the Editor: I am farming a small general ranch with cows and hogs, and cut all my grain hay and use all my straw, some for cow feeding and bedding, and some for horse feed. I imagine Four Thousand and Tennessee Winter barley a little better for me than Mariout, yet at times late in getting seed bed ready when Mariout would be good; also the fact that in dry years Mariout produces well makes it very valuable because in these years barley is high in price, so intend to always have some of each. My land is a heavy fine Tehama silt loam, underlain at 2½ to 5 feet by clay. Sand gets manured once in four years. Want to have a rotation, including Milo and barley. Have found that Milo leaves a most excellent seed bed for barley. Last year produced two tons hay with 8¼ inches rain. Last winter plowed eight and nine inches deep and followed with three horses on spring tooth set to limit. This brought up clods, letting fine stuff fall to bottom. Clods were mashed up very fine with a stone clod breaker with flat one-half inch teeth at rear. Barley drilled 5 inches deep, 60 to 80 lbs. per acre, produced 10 sacks, while neighbor's grain prepared and seeded at the same time, but not worked so fine, made but ½ ton of hay, much not heading.

Harvey Campbell, of S. P., advocates row seeding and cultivation. I notice in your increase nursery that grain is in rows.

(1) Is there enough increase in yield to make that method pay for extra labor on a 30-acre ranch?

(2) In annual cropping, you advocate a second shallow plowing several weeks after the first deep plowing. May I ask what is the object of this. I would think that disking and harrowing would kill the weeds. How much does it increase the yield?

(3) Sixty pounds of plump seed, recleaned, drilled 5 inches deep the first week of last January on a fine seed bed, really made too thick a stand, and I harrowed it when 5 inches high. An article in Pacific Rural Press, August 7, 1920, giving experience of Salinas Land Co., states that they proved 50 lbs. too much, and would use 40 lbs. this year. How can this be reconciled with your seed of 80 lbs. drilled? I feel inclined to use 50 lbs. this winter.

(4) Last winter barley drilled 5 inches deep came up before there was any more rain. Is there danger of deeply drilled seed rotting in case of heavy rains, before the shoots appear?

A 5,000-acre farmer told me that 400 acres of barley sown in the dust before the heavy September rain three years ago, made 30 sacks to the acre, and that the same field prepared immeditely after made but 9 sacks. This seems contrary to your experience. Doubtless the 9-sack barley was on an unsettled seed-bed and there wasn't enough rain to settle it until after the barley was well started. I notice you say nothing of promoting bacterial action, no doubt, because moisture conservation means the same thing.—R. D. K., Tehama county.

(Answered by Prof. Geo. W. Hendry, University Farm, Davis.))

In reply to your inquiry number one, we do not think it would be advisable to attempt the cultivation of small grain in this State by the row method, as advocated by Mr. Campbell. The added expense would not justify the increased yields which might be secured by this procedure, especially where the rainfall is above fifteen inches. As to the advisability of replowing grain in land prior to planting, would say that this is generally necessary in order to turn under volunteer grain and weed growth, but if the land is clean or has been fallowed during the preceding summer, an equally good or perhaps better seed-bed might be prepared by silmply disking or cultivating. In regard to the most suitable rate of planting barley, I would say that we have tested this question out extensively by planting at all rates from 20 lbs. to the acre to as high as 150 lbs. per acre, and have found that, providing a good mellow seed-bed has been prepared, that the yield is not influenced materially by rates ranging from 50 to 110 lbs. per acre. In dry seasons like the past one, however, the lower rates have been found to be more satisfactory, while in seasons of abundant rainfall the heavier rates have given slightly better returns. Under average conditions, however, we feel that about 80 lbs. of seed is most suitable for either wheat or barley where 18 to 20 inches of rainfall may be expected. When spring planting, that is after February 1st, is practiced, we should advise cutting down the rate to 50 or 60 lbs. per acre; but where early fall planting is practiced, we have had the best success by using in the neighborhood of 80 lbs. per acre.

In regard to the depth of planting, we have found this to be largely a question of soil texture. It is preferable to plant seed three to four inches deep in light soils, but to reduce this 1½ to two inches on the heavier soil types.

We have not had good success with dry planting as a general thing, but there are conditions under which dry planting has turned out wonderfully well. It is often satisfactory on the lighter soil types, but is very apt to be a failure on heavy soils. We feel about this matter that dry planting is taking rather a long chance, since you depend so much upon the weather for your success, whereas, the preparation of a good seed-bed after the rains have fallen, and the planting therein, the maximum amount of risk is eliminated.

CHINO-L. A. SUGAR BEETS.

American beet sugar acreage for 1920 in the Chino-Los Angeles district includes about 7,000 acres, on which the yield is averaging about nine tons per acre and the beets are testing about 18 per cent sugar, according to Agricultural Adviser A. V. Riggins at Chino. These beets are being shipped to the Oxnard factory since they do not justify running the Chino factory. Beet land has been overcropped here; and drouth and alkali on the beet fields from Chino to Los Angeles and southward are responsible for many of the poor stands there. So it is difficult to get enough acreage to justify running the Chino factory. Much of the land formerly in beets has been planted to trees, alfalfa, etc.

MUCH LIMA STRAW BALED.

All through Ventura county we have observed crews baling lima bean straw. One outfit is charging $6 per bale and the buyers feel they are getting cheap feed at about twelve to eighteen dollars per ton delivered. A great deal of the straw is hauled many miles by motor truck. Even for short hauls, baling is considered economical in view of the extra labor of men and horses that would be required to haul the light stuff lose. A good deal of it would blow away in transit; and storage room also would be costly for the loose stuff. Even in bales there is considerable waste, since the straw is so short that it is hard to confine with three wires. A common practice in this country is to fatten stock on beet leaves and pulp and then harden them on lima bean straw.

HOMESTEAD LAND OPENED.

Approximately 6,300 acres of homestead and desert land in the Eureka and Sacramento land district of California will be opened to entry December 3, as announced by the Interior Department. The land is classed non-agricultural mountain land, and entry will be reserve to ex-service men 60 days after opening, as provided by the law. This information comes from Washington, D. C., and any information desired may be gotten from the Interior Department at Washington, D. C.

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Significant Agricultural Pointers

Lima Bean Markets Weak.

Lima bean markets are being affected adversely by several factors, according to Manager R. L. Churchill of the California Lima Bean Growers' Association. The general decline in raw food products is having its effect on limas. All dealers are afraid to buy until they think rock bottom has been reached. The 200,000 bags of poor quality Madagascar limas, imported last winter and held over, are offered at 3½ to 5 cents in warehouses with duty paid. Michigan small whites formerly commanded better prices than California limas; but this condition is now reversed to the detriment of the lima markets. Michigan beans recently declined in two weeks from 6 to 4½ cents f. o. b. Michigan. This means five cents per pound delivered in consuming centers. The lima bean market had declined two cents when the association made its first quotations, September 27, 1920, hoping to stabilize prices at 8 cents for Seaside brand limas in bags f. o. b. California. But this price means about $9.29 per hundredweight delivered in Chicago. As compared with 5 cents for small whites, the difference is too great to move many limas. Moreover, independent dealers demoralized the markets immediately after the association named its first quotation, by cutting under the latter. The 1920 Madagascar crop is not harvested until December and is not likely to appear on our markets until May, so there is little need for alarm on that account except regarding the holdover mentioned.

Association prices named September 27 and not guaranteed against decline except until arrival at markets were 8 cents for Seaside limas in bags, $7.75 for Seaside baby limas in bags, 25 cents less than above in each case for choice recleaned beans of the respective varieties. In two-pound pasteboard cartons, hand-picked Seaside grade limas were priced one cent per pound higher than sacked Seaside. These cost 1½ cents per pound more to pack, including labor and packages, but the ½ cent is absorbed by the association in order to introduce the package. Notwithstanding this, the package sales were a disappointment, because in the congested centers, people want a one-pound package. Since this would practically double the cost of packing the same tonnage, one-pound packages are out of the question. Last spring and summer, about 30,000 cases of 40 cartons per case were shipped. The Seaside grade itself is improved this season by enlarging the mesh of grading screens to remove more of the small sizes. This grade has been characterized by a trade paper as the equivalent of the choice recleaned grade of the California Bean Dealers' Association. This is not true, for while they have similar specifications regarding dirt, foreign matter, damaged beans, etc., they are graded over a larger screen (⅜ inch mesh as against 21/64 inch mesh) and the joker in the Dealers' Association specifications is an addendum permitting 1 per cent variation from the specifications. Seaside specifications were raised this season to exclude absolutely all but 1 per cent total of all foreign matter and damaged beans, but permitting 2 per cent of good clean splits.

First quotations of the Growers' Association are not intended to indicate later prices, which will be governed by market conditions. Growers feel hard hit by the present low prices per pound in view of the high costs of production per acre, and this year's half crop per acre following last year's half crop. Threshing reports have not greatly changed association crop estimates, which, as given by Mr. Churchill, are for 750,000 hundred-pound bags of regular limas (50,000 less than last year) and 250,000 bags of baby limas mostly grown in San Fernando valley, which is 50,000 bags more of the babies than were produced last year.

Sugar Beet Yield at Oxnard.

The sugar beet crop in the Oxnard and San Fernando districts is yielding an average about nine tons per acre with a sugar content averaging 20 per cent, according to J. W. Hartung of the American Beet Sugar Co. The Oxnard district figures would be a little higher alone than these averages. One field on which harvesting was recently finished yielded 26 tons per acre testing sixteen per cent sugar.

Cotton Growers to be Financed.

Cotton growers of the Southwest are to be financed to the extent of $2,500,000 by Los Angeles banks, who recently joined forces for the purpose Pima growers will be able to borrow up to 20 cents per pound and short staple growers up to eight cents per pound on proper warehouse receipts or bills of lading through their local banks, who will get the money from Los Angeles. Cotton notes not over 90 days until maturity will be accepted by the Federal Reserve Bank.

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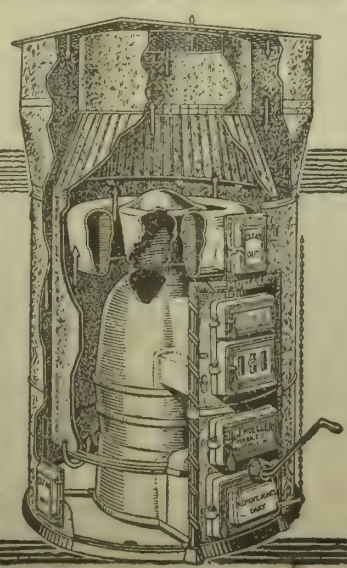

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Tell Us Your Tractor Troubles.

You carry advertisements of tractor companies telling farmers what the company says each tractor will do, but I never see anything from the farmers in regard to what the same tractors do in actual service under the varied soil conditions in this state. With the number of tractors still in the experimental stage, which are dumped onto farmers by good salesmen and run about 30 days, then are broken down all the time, the farmer, instead of having something to do his work with, spends most of his time running to town for repairs. So why, if a farmer has had a rotten deal (and he gets plenty of them) could he not tell his brothers through their paper the facts and actual results of whatever make of tractor he has.—C. W. A., Sacramento county.

Every subscriber who feels that he has had a rotten deal is urged to tell the details to our power editor, who will undertake to bring about an understanding that will be satisfactory to all reasonable parties. Your memory seems short in regard to articles in this paper regarding farmers' experiences. Practically every week for the past five years, the writer has personally seen that one or more farmers' experiences with tractors were related. In recent years, we have omitted the name of the tractor except in news paragraphs, because to mention the name would give undue free advertising to whatever machine we might most frequently find in the field. To mention in our columns the name of tractors with which trouble has been experienced would be as unfair to them in a great many cases as to condemn a nurseryman for selling trees to a man who will not plant them right. We will continue to point out weaknesses and faults for our readers to investigate before buying any tractor, and we will continue to point out the details of proper care of tractors. But to allow opinions to be published indiscriminately by every man who is too lazy or stupid or foolish to study these points and practice proper care, would be unjust to the machines and to those who take pains enough to make them do what they claim to do. Each case would require a careful investigation of its history before the blame for trouble could be properly fixed, and this would be impracticable. We believe that 95 per cent of all tractors which have been actively pushed on the California market for a year will do all that could reasonably be expected of them. Our belief is based on the large number of successful experiences we have personally found on the ranches. Tractors newly put on the market should be more carefully investigated before investment is made, because some manufacturers do not realize the great strain that will be put on various parts in field work, and many salesmen unscrupulously claim more than their machines can do.

You are invited to tell us whatever troubles you have had and the reasons for such troubles. If it is clearly the manufacturer's or dealer's fault and the latter will not make good, at our request, we will publish the facts of the case if you will furnish proof that will protect us in court.

How Large a Pump?

How large a centrifugal pump could be used lifting water from 20 feet below the surface of the ground to three feet above it, using a five horsepower gas engine.—V. C. K., Placer county.

A five horsepower engine can lift 400 gallons per minute 25 feet with a good centrifugal pump. This would be the rated capacity of a four-inch centrifugal.

How Large an Engine?

How deep can water be pumped to grow alfalfa at a profit in the Farmington district of San Joaquin county. How many horsepower engine does it take to run a six-inch pump lifting from a depth of 80 feet.—E. N., Mendocino county.

Plenty of people lift water 80 feet for alfalfa, to bale and ship out to market. Profit or loss depends largely on cost of land and labor and price received for crop. Farmers of San Joaquin county might lift water farther profitably than you could, because of their nearness to alfalfa-consuming sections, and possibly a more plentiful supply of labor, which would enable them to profitably put more money into the water than you can. A 40-horsepower engine should deliver the capacity of a six-inch pump with an 80-foot lift.

Johnson Grass is Unlawful.

Is there any law by which the Horticultural Commissioner can order Johnson grass killed out?—T. D. C., Sutter county.

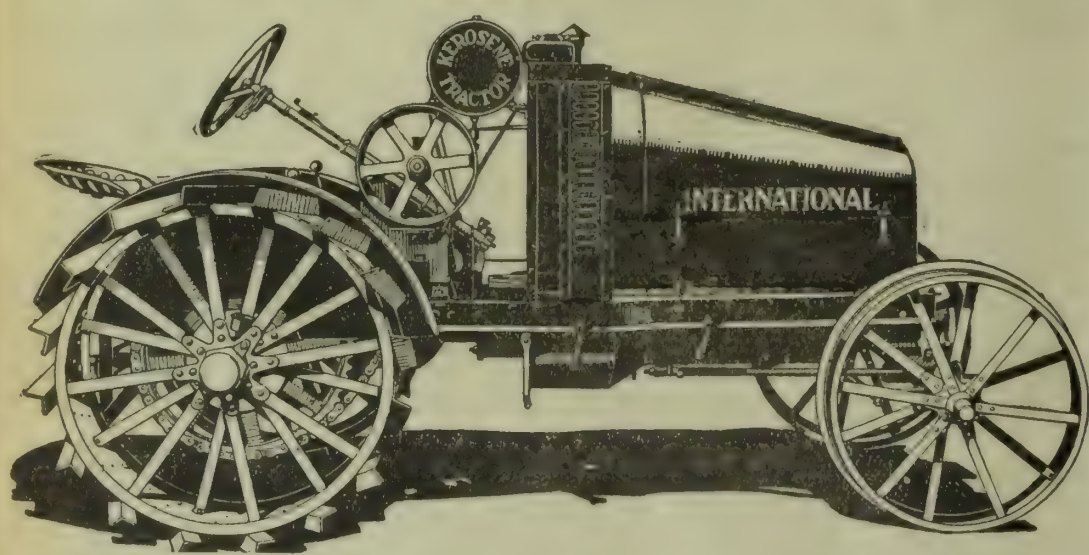
"The county horticultural commissioners are empowered to cause any and all such nuisances to be at once abated in a summary manner." Thus saith the law after declaring Johnson grass and other pests a public nuisance. The same law makes it the duty of every county horticultural commissioner "whenever he shall deem it necessary to cause an inspection to be made of any premises in the county; and if Johnson grass or other specified pests are found, he must notify the property possessors and require them to eradicate or control such pests to his satisfaction within a specified time. If they do not obey, it becomes the horticultural commisisoner's duty to eradicate or control the Johnson grass or other pests and charge the cost to the county. This amount becomes a lien on the property "paramount to all other liens upon the said land" except for taxes. The notice of lien is filed with the county recorder, and within 90 days of that date, action shall be commenced in court to foreclose the lien by forced sale of the property. Here is everything that any law could do to enable horticultural commissioners to eradicate such pests. If they fail to live up to their opportunity, it is generallly because they are either too busy to get at it or they are politically prevented, or are not allowed the financial support necessary.

Regulating Grain-Drill Feed.

I have had difficulty in getting the proper regulation of feed on my grain drill. Have been told that the wheels should be jacked up and the feed regulated then.—W. R. H., Calaveras county.

On grain drills which do not have indicators from which the pounds per acre may be figured, the only way to regulate them to a given number of pounds is to try them out with varying regulation until the right amount is secured. Some people guess at the regulation but watch the area seeded with a given amount of grain and then regulate it right. Others run the drill over a flat hard surface and figure it out. Probably a better way is to jack up the wheels, mark a certain point on their rims, and turn them as many revolutions as would be required to plant a quarter acre. Then weigh the grain, and regulate the feed. A canvas under the boots is convenient to catch the grain. To figure the turns necessary to cover an acre, divide the width of the drill in feet into 43,560 (the number of square feet per acre). This will give the number of feet forward that the drill would have to travel to seed an acre. Measure the circumference of the drill wheel in feet and divide this into the latter number to find the revolutions necessary to cover that distance. A quarter of that many revolutions will drop the grain that would be seeded on a quarter acre.

The Heart of the International 8-16



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But it isn't only the "heart" of the 8-16 that is built right; every detail of its design and construction, from the quickly adjustable drawbar to the well-placed, wide-face pulley, is made with the same conscientious regard for operating thoroughness—for **satisfactory service to the purchaser.**

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SORGHUM "LARUP" NEW AND POPULAR.

(Written for Pacific Rural Press.)

A new agricultural industry to California has arrived. For the past few years it has been in experimental stages, not only from the standpoint of growing the raw material, but also in regard to marketing the finished product. Right now, as we go into almost any part of the State where grain sorghums thrive, we find people making or talking about making sorghum syrup. Perhaps one of the oldest commercial "sorghum" makers in California still in the game is L. R. Bright, who this year superintends the making of more than 12,000 gallons in the factory of the Hughson Sorghum Syrup Co. of Stanislaus county. For five years, Mr. Bright made sorghum syrup near Riverbank in the same county. In 1919, he was instrumental in organization of the Hughson Co., and the building of a factory which made over 4,000 gallons last year. Associated with him in the work is J. C. Power, an old sorghum maker from Missouri.

Reasonable Expectations of Sorghum.

In any country where grain sorghums have been successful, there is little question regarding success of the sweet sorghums. In the Hughson district on the basis of last year's experience, there are about 150 acres in 1920, mostly planted in small patches; for considerable labor is involved in the harvest. Most of it is second crop, and enough of this was ripe so the mill "ground" out about 250 gallons of syrup before the State Fair at which a creditable exhibit was made. The mill began running day and night about the middle of September and Mr. Bright expected to continue until Christmas. The sweet sorghums, according to Mr. Power, yield about 20 tons of stripped cane per acre, for which the growers this season get $8 per ton. About a ton of seed per acre is valued at $40 and the kernels are almost as big and valuable for feed as the regular grain sorghums. Growers strip leaves off the canes as they stand, using a knife for the purpose, and these leaves make the finest kind of fodder. The canes are cut by hand and headed on the ranch. Seed in the heads is one of the best chicken feeds. Last year the sorghum yield averaged 15 gallons per ton of stripped cane, varying from 10 to 20 gallons. Large canes yield most.

Markets Insistent and Expanding.

Can all of the sorghum syrup be sold? Last year the local merchants were afraid to stock up. They bought a little at a time until it was all gone and then kept coming for more. It was all sold, however, by the time the season's grinding was finished. This year they placed orders before grinding commenced and no difficulty is anticipated in selling the entire production promptly. Growers get it at wholesale prices. The retail price this year which the writer paid is $2.25 per gallon. In the process of manufacture three different "foams" are skimmed off. The foams are sold at $5 per barrel for hog feed. The pomace is given back to growers for fertilizer. We question its value on sandy soil; but on clay at Riverbank it loosened up the ground, and Mr. Bright noted improvement to the line where it was applied. Wheat made a foot taller growth after it was applied in the fall.

While the harvesting labor is considerable, it comes just after a great many fruit harvest hands are through; and so far, no labor shortage has been experienced. But the present hand methods are surely laborious and will be changed shortly by machinery. We have heard of a stripping machine and there seems little reason why a corn binder could not be adapted to the cutting. We have recently seen drawings of a new machine for mechanical loading on wagons. Growers feel that the cane can be economically hauled as far as four miles by horses; and even in this period of high prices a motor truck driver recently offered to haul some eight miles at $1.75 per ton.

Varieties and Culture.

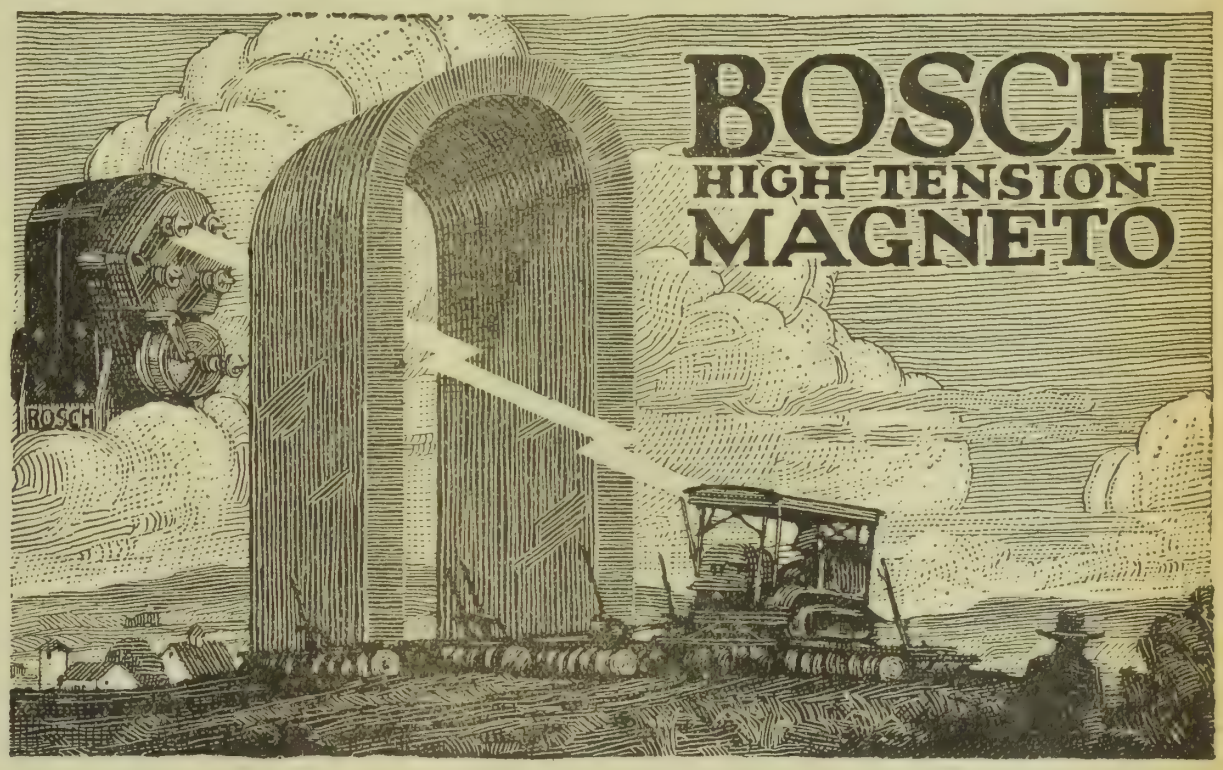
Several varieties are grown at Hughson. "Golden" cane is said to be the same as Honey sorghum or Texas Seeded Ribbon Cane or Mexican Seeded Ribbon Cane. Amber cane and Orange cane are also grown. Orange syrup is considered about the best. Very little difference in time of ripening is noted. Stubble ground flooded the last of May and planted about June 15 produced ripe cane 90 days later. But heavy rich land is said not to be so desirable as lighter soil. Culture is similar to any grain sorghum. Harvest must not begin too soon; for the juice from green cane is not sweet enough, and it foams so badly that it cannot be boiled down to a syrup. The stalks turn a yellowish color and seed turns from green to brown at ripening. Some day laboratory tests may be required in order to standardize flavor and quality and to insure greatest yield of sorghum per ton; but that day is not yet.

Making the Syrup.

The stripped cane must be ground within three or four days to prevent its souring. It is piled in ricks between posts set for the purpose alongside a track on which cars run for convenient delivery to the rolls. The cane longest on hand is ground first. The loaded car is hauled up to the rolls on the second story of the mill by means of cable and drum.

"Grinding" at Hughson consists of running the canes between rollers fourteen inches long at the rate of about a ton per hour, a 7½ horsepower electric motor being used for the entire works. After the juice is squeezed out by the rollers, it runs through excelsior to take out any coarse pieces of cane. The excelsior is washed, scalded, and used repeatedly. The raw juice runs through a tank, in which partitions force it over and under to get other impurities out. Then it runs into the evaporating vat, a flat, gently sloping copper pan with partitions which carry the juice back and forth crosswise until it has traveled about 100 feet. An oil burner under the pan gives greatest heat at the start; a lower temperature being maintained under the lower end, because the juice would burn more easily as it becomes thicker. A continuous stream passes through the vat. The finished sorghum runs off through a jacketed pipe around which cold water circulates. This cools it considerably before it reaches the tank from which it is finally drawn into tin syrup buckets. Water from the jacket gets hot enough to serve for washing utensils and scrubbing off the cement floors. Foam skimmed off as the juice passes through the vat is run into a separate tank for stock feed. Enlargement of the mill is contemplated next year, and other mills will be located close to producing ranches as the business expands.

The average yield of California hops per acre for this season has been over 100 pounds more than last year



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Eureka.....Bair's Garage, 6th & D Sts.
Fresno.....Electric Laboratories, Inc., 1347 Van Ness Ave.
Hanford.....Cousins Tractor Company, 110-18 E. 7th St.
Lindsay.....Central Calif. Electric Co., 182-6 N. Sweet Briar Av.
Long Beach....A. C. Walker, 342 American Ave.
Los Angeles.....Bosch-Rayfield Service & Sup. Co., 922-4 S. L. A. St.
Los Angeles.....E. A. Featherstone, 958 S. Los Angeles St.
Marysville.....Geo. W. Roberts Electric Works, 324 D St.
Merced.....Launsbury & Shaffer, 625 M St.
Modesto.....Frank Andrews, 714 Ninth St.
Oakland.....The Motor Car Electrical Co., 2324-2330 Broadway.
Oxnard.....Herbert Hedges, Inc., 427 A St.
Pasadena.....Guarantee Auto Electric Works, 97 W. Colorado St.
Red Bluff.....Hartman's Electrical Machine Works, 600 Main St.
Redlands.....Ray Ignition Works, 338 Orange St.
Riverside.....Mission Auto Electric Company, 450 Main St.
Sacramento.....Kimball-Upson Company, 609-11 K St.
Salinas.....Salinas Auto Electric Company, Alisal St.
San Diego.....Young & Chamberlain, 1130 Front St.
San Francisco...American-Bosch Magneto Corporation, 1262-72 Post St.
San Jose.....Auto Electric Service Co., 439 S. First St
San Luis Obispo California Garage, 879 Higuera St.
Santa Ana.....Orange County Ignition Works, 302 E. Fifth St.
Santa Barbara...Western Machinery & Foundry Co., Cota & Anacapa Sts.
Santa Rosa.....L. & T. Company, 300 Fourth St.
Stockton.....W. S. Maxwell Company, 207-9 N. El Dorado St.
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But you cannot get such a tractor unless its ignition system is high grade and dependable. Poor ignition means lack of power, waste of fuel, delay, trouble and expense. Perfect ignition gives economy, power, quick work, dependability and long life to the tractor.

The most efficient ignition system for tractors is the Bosch High Tension Magneto. It gives big, full, flaming sparks in the cylinders—sparks so big and hot that they fire even low grade fuel instantly. And it gives sparks with perfect regularity—rain or shine, winter or summer—dav in and day out, for years.

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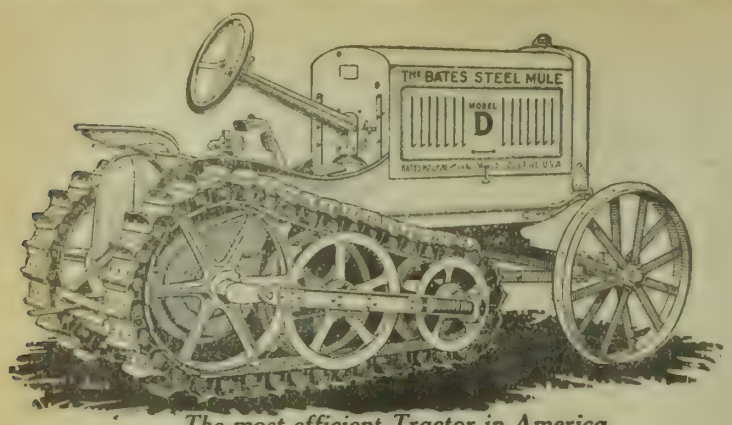

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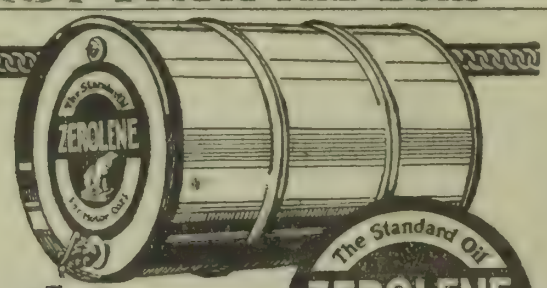

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Electric Plants of Many Conveniences

(Written for Pacific Rural Press.)

Supreme convenience of electricity in the home, coupled with inability of many ranchers to get it this season, and the dissatisfaction of others on account of increased rates and interrupted service of power line companies have been responsible for a greatly increased sale of small generating plants for individual farms during the past two years. These plants are all operated by small gas engines, and all store current in storage batteries so it may be available without starting the generators every time electricity is wanted. But there are various conveniences in which one excels another, and it is in regard to details of efficiency or convenience that a study of different makes of farm lighting plants now on the market is of value.

The Delco light is well known to our readers, but three new models have recently been put on the market. Generators of ½ kilowatt and one kilowatt capacity with pulley attachments permitting their engines to be used independently for power are new, as is also the one kilowatt machine without such pulley. Prices for the eight sizes from ½ kw. to 3 kw., their largest size, range from $465 to $1860. The largest will pump 70 gallons per minute with a 30-foot head, supplying all home and garden and barnyard needs. Portable outfits for use in construction camps, dredgers, etc., have no batteries but deliver ¾ to 3 kilowatts, according to size. A new Delco machine is the Newlands truck-and-tractor lighting generator, simply boxed 4x4x7 inches with magnets outside and a generator core made of disks. It is run by chain drive from the engine.

The Willys Light was recently publicly exhibited for the first time on the coast. It is manufactured by the Willys-Knight Corporation and the engine has their sleeve valve construction, which has minimized carbon troubles and eliminated valve grinding in automobiles of that make.

Three sizes are made of ½, ¾, and 1¼ kilowatt capacity. The medium size is operated by a two-horsepower kerosene-burning, air-colled engine, and has a storage battery of extra large cells capable of storing 225 ampere hours. The engine normally runs 1100 revolutions per minute; but if anything goes wrong so the speed drops to 700 r.p.m., it automatically stops and does not labor on. It is started for generating purposes by a hand lever, which turns current from the battery into the generator, which acts as a self-starter on the engine. The fan is part of the flywheel, and air from it not only cools the engine but also the generator.

Refinements newly put into the Lalley Lighting system make it much more accessible than before and remove certain annoyances. To get at the cylinder head formerly required taking the whole engine block off but now it is accessible by removal of four bolts. Where it formerly required a whole kit of tools to disassemble the plant, two different-sized wrenches and a screw driver now release every part. Yet the plant is more compact and exposes fewer parts to dust than before. Gasoline is kept within its base now instead of using a separate tank. The switchboard, flywheel, and the commutator brushes are enclosed. A sight feed has been put on the governor oiling system. A flexible coupling between engine and generator permits reassembling the plant with less particularity to get the engine and generator shafts exactly lined up. A Cutler-Hammer automatic switch line has been installed. An overflow pipe in the carbureter prevents flooding. An Atwater-Kent ignition system replaces the magneto. Capacity is increased from 1000 watts to 1250 watts.

Western Electric Power and Light features the power uses of this machine for little motors about the house; and the engine is fitted with a pulley so it may be used independently for mechanical power. Constant speed of engine and generator is obtained by a governor which "tapers" the charging of the batteries and "makes them last longer." Without the governor, an ordinary generator builds up its own voltage as much as 50 per cent over its rating when the load gets heavy, as it does when the batteries are nearly full-charged. The engine develops 3¼ h.p., which is ½ h.p. more than is required to charge the big batteries. The Western Electric Co. are planning to put out 15,000 plants of this size in 1920 and twice as many in 1921 of three sizes, including this one. The other sizes are of 600 and 3,000 watts capacity. They build a 12-kilowatt machine and also one of ½ kilowatt, which consists of an I. H. C. engine belted to an ordinary generator, both fixed on a solid base.

A Silent Alamo Electric plant has been run full blast standing on three ordinary drinking glasses to illustrate "lightness" and absence of vibration. This outfit was shown first in California at the 1919 State Fair and was described fully in our report of that exhibit. One party in Sonoma county has since then paid $700 to get an extension of a power line to his place to do only such work as the Silent Alamo would do with the same investment and at less cost of operation.

The Matthews Full Automatic self-starting self-stopping power and light system is new here and has attracted much interest. An electric governor controls the charging rate and stops the engine when batteries are fully charged except when an overload is being used. Then it continues without overcharging the batteries. When 15 per cent of the battery storage has been used, the generator starts itself and runs until batteries are fully charged. In tests, these plants have been started and stopped 3,500 times by connecting and disconnecting power loads such as flatirons, etc. Matthews plants range in size from 300 watts to 25 kilowatts.

The Owen full automatic is a neat outfit whose engine starts automatically when the owner is using more electricity than the batteries can supply or when the batteries are partially run down. It stops automatically when the batteries are fully charged.

TRACTOR DIGS AND HAULS BEETS.

Beet digging does not worry G. M. Shear, who has 250 acres of the sugar-producing roots in eastern Los Angeles county. He has a 30-18 track-type tractor which digs two rows of beets at once with a digger made at the local blacksmith shop. Five or six acres could be dug in a day; but four hours work is enough to keep ten Mexicans busy all day topping and loading. The digger requires a 3500-pound pull. But this is light work for the tractor, as shown by a dynamometer test on the loaded wagons it pulls out of the soft field at 6,000 pounds on the draw bar. After digging about four hours, the tractor is hitched to a wagon and hauled through the field while all the men load it. Two gallons of distillate per hour is said to furnish the power. The tractor has special "beet tracks" narrow enough to run between rows without damaging beets, and 54 inches apart center to center, just the right distance to straddle three rows at once.

NEW MONARCH MUCH BETTER.

The expanding-shoe clutch formerly used on Monarch tractors has been replaced by a twin disk clutch in the flywheel, adjustable by hand without tools, according to Roscoe Anthony, general sales manager for Robert H. Green, the recently appointed distrib-

utor of these tractors in California. This is a great improvement, as the expanding shoe clutch has given some trouble by sticking when it was necessary to stop the tractor without killing the engine. The Beaver motor, temporarily displaced on these tractors, is being installed on all present deliveries. Formerly some trouble was reported by the tracks splitting when turning in soft dirt. They are now made heavier to avoid this, and the sprockets as well as the track are now of manganese steel. A manganese steel final chain drive with three speeds forward has been installed. A special truss radius rod holds the tracks in line. The former radius rods were not always found satisfactory, as they allowed the chain sprockets to wobble. The weight of the tractor rests on a bracket supported by the main driveshaft. This bracket broke on some old machines, so it is now made stronger. Steel is used in a number of places where the iron castings used before were not deemed strong enough.

TWELVE-FOOT ONE-MAN LEVELER.

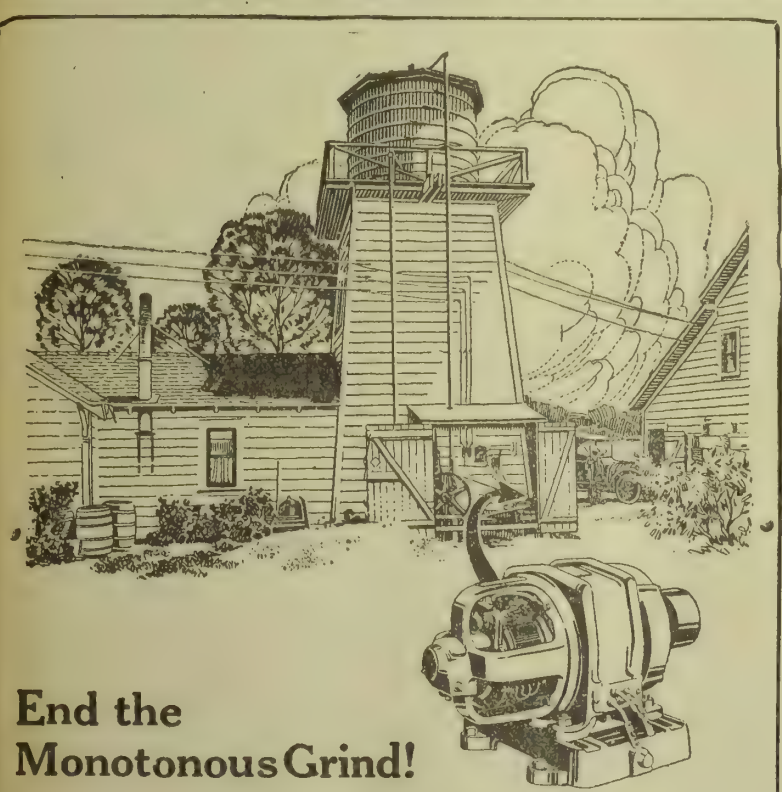
The largest Schmeiser land levelers are now equipped to be handled by the tractor driver alone. Air compressed by a machine on the outfit is regulated by a hand valve beside the tractor driver's seat to raise or lower the heavy scraper whenever the driver sees the need. This eliminates a great deal of waste motion and irritation in cases where, with two-men outfits, the driver steers to a hump and the scraper man fails to notice it, even though he may be an experienced man. Not always can the scraper man see things anyhow, on account of the cloud of dust which makes life unbearable to him, though an operator from the tractor seat is practically out of the dust. This machine was devised on the Douglas Renfro ranch in Nevada.

POWER NOTES.

A plow should be pulled on an even keel. Setting its nose deeper by hitching higher on its beam simply makes it ride more on its nose than on its heel and makes it wear faster. Varying the depth at which a plow works without varying the line of pull has just that effect. So the John Deere Plow Works have designed a hitch for a plow beam which rises automatically as the plow goes deeper, and thus keeps the latter level.

A new land leveler, the Compton, rides on wheels whose axles extend beyond the ends of the six-foot scraper. The latter is balanced by counterweights on long arms to aid the tractor driver in manipulating the hand levers which load and dump the scraper.

Twenty-nine minor improvements have been put onto Hart-Parr tractors within the past three or four months. Several of them are far more efficient lubrication, several others are better material or greater strength in places where such seemed needed.



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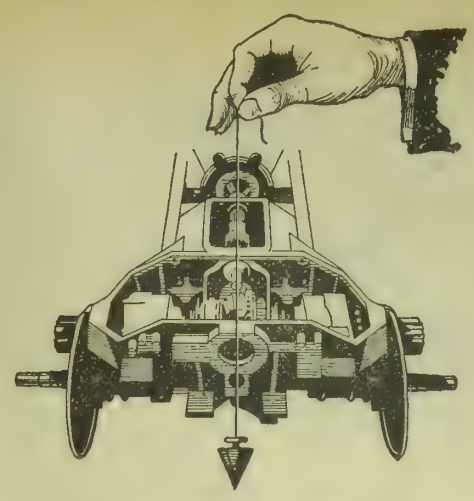


Straight as a Plummet

One-piece steel casting for housing transmission and cross-shaft assembly prevents expensive wear at vital parts

Just let a drive shaft, on any piece of machinery, get the least bit out of line and see what happens to the bearings and gears, to say nothing of the loss in power. This is particularly true of a tractor where big power is passing through drive shafts and gears.

That is why, in the Best Tracklayer, we have housed the entire drive-mechanism from flywheel to track sprocket, all in a single-piece steel casting. Absolute alignment is guaranteed at all times and under all conditions.

This is simply another of many features of the Best Tracklayer that account so largely for its remarkable performance in plowing, harvesting, threshing, road building, hauling and other heavy-duty work. Best design and choice of materials are the outgrowth of long years of tractor-building experience.

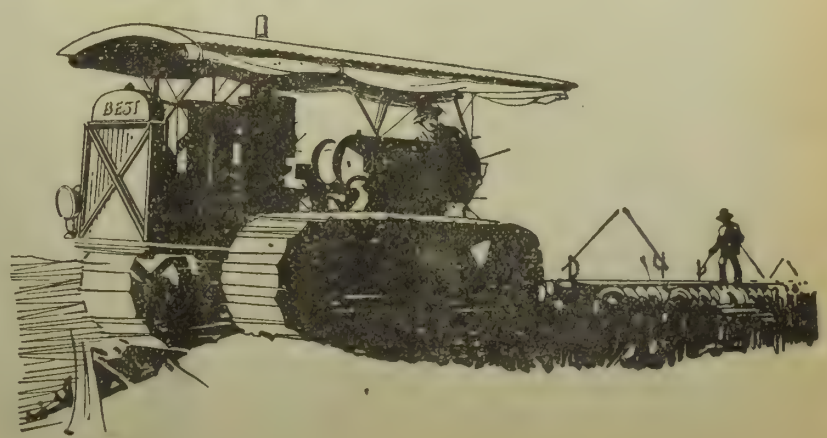
The Best Tracklayer engine is our own make—simple and powerful. Tracks independently operated—tractor will turn in its own length—and the links are joined by a greaseless frictionless rocker joint. Three-point suspension takes jars, jolts and twists off motor, transmission and frame. There are 36 Timken and Hyatt bearings throughout the tractor. Working parts are completely housed. Grease cups are practically eliminated—saves you an hour each morning "greasing up." 60 horsepower at the pulley—35 at the drawbar. If interested in tractors, send for our complete catalog.

C. L. Best Gas Traction Co.

SAN LEANDRO CALIFORNIA

BEST TRACKLAYER SIXTY

60 H. P. at Pulley
35 H. P. at Drawbar



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Western Meat Co.
San Francisco, Calif.

California's Experience in Newer Wheats

(Written for Pacific Rural Press.)

Some of the most interesting facts brought out by the recent survey of the wheat industry in California by the Agricultural Department of the Sperry Flour Co. show that gains have been made in every direction by farmers who are raising wheat.

In 1917 they distributed a small quantity of early maturing wheat and in 1918 launched a campaign which resulted in the distribution of enough Early Baart and Bunyip wheats to plant approximately 176,000 acres. It was common talk at that time that the quality of wheat raised in California was inferior as compared to the quality of wheat grown in other Pacific Coast states.

It was also claimed that the wheat land was worn out and that it was impossible for the farmer to raise wheat at a profit. Both of these theories have been proved entirely wrong.

The seed distributed to farmers two, three or four years ago has produced a quality of hard white wheat that is equal to any wheat of this class grown on the Pacific Coast, and in addition to this the so-called worn-out lands of a few years ago have grown larger crops than at any time during the many years they have been farmed.

The standard of quality has been raised by the distribution of varieties of wheat adapted to California soils and climate and while the seed was not what we would call strictly pure seed it was the best wheat and the truest to type that could be secured west of the Rocky Mountains.

Importance of Better Farming.

The quantity of wheat raised is the direct result of better farming. Only a few years back most of the farmers figured that it took a large acreage to produce a given amount of wheat and today many of these farmers are producing the same amount of wheat on half the acreage of land formerly farmed. Deep cultivation and more thorough cultivation has been made possible by the use of tractors and other modern farm tools. The early maturing wheats have also helped increase the yields for the reason that they ripen from eight to ten days earlier than the old varieties commonly grown in California, and on this account produce a plumper berry, which on the average during the last three years has weighed from two to three pounds more per bushel.

In the Salinas Valley.

One of our trips led us through the Santa Clara and Salinas valleys, where for the past few years barley has been the king of crops. We found a certain proportion of the farmers growing the early maturing wheats, and on well tilled lands the production was from 10 to 15 bags per acre, weighing from 135 to 140 pounds each. In the upper end of the valley around King City these same varieties produced from 14 to 16 bags of wheat per acre on summer fallowed land and we were advised that sixty per cent of the wheat sown in that territory this year would be either Baart or Bunyip varieties. Talks with some of the oldest farmers in that district brought out the fact that excellent yields of wheat had been raised in years gone by and many were of the opinion that at the present market price wheat would produce a much more profitable crop than barley in many sections of this territory.

In the San Joaquin.

We also visited numerous farmers throughout the San Joaquin Valley as far south as Tulare Lake, and both Baart and Bunyip wheats have many admirers throughout this section. In Madera county many of the farmers favor Bunyip wheat, while right across the river at Mendota, under slightly different conditions Baart wheat is the only variety the farmers can be induced to plant. On the Boston Land Company's holdings near Westhaven, quite an acreage of Bunyip wheat was sown last year and the yield was entirely satisfactory on this tract.

In the Tulare Lake district Mr J. D. Heiskell, who is one of the most widely known grain buyers in that district, as well as a large farmer on his own account, told us that while he was against Baart wheat when it was first planted in the Lake section, he had changed his mind and now believes it to be one of the best varieties ever grown in that territory. Superintendent Heffner of the Gates Co., one of the largest farmers in the Lake district, advised us that he intended to sow a large acreage of Baart wheat every season.

The quality of Baart wheat in the Lake section is especially good as compared with other wheats grown and the yield compares favorably with that of other varieties on many farms.

In central California, especially in San Joaquin and Stanislaus counties, the early maturing varieties are practically the only ones now sown. While this has been a dry season, which has affected some of the lands, yields all the way from 6 to 15 sacks have been secured on summer fallowed black lands, while a 20-sack crop is not uncommon on irrigated lands and as high as 30 bags have been secured in some instances.

In the Sacramento.

The experience of those who have grown these varieties in the Sacramento valley has been very much the same as in other sections. Baart wheat on the Burt Brothers' ranch near Red Bluff produced 9 bags of wheat per acre on summer fallowed land as against 7 bags of White Australia, formerly regarded as the premier type. Bunyip wheat in the vicinity of Honcut near Marysville produced 15 bags per acre. Baart wheat on the American Farms Company's ranch near Arboga produced 33 bags per acre on bottom land.

The Wheat Outlook.

The use of substitutes for wheat flour during the extreme shortage of the world's wheat supply taught the average American just what bread will do to reduce the high cost of living and has resulted in the greatly increased consumption of this commodity at home.

All European countries are showing an inclination to take wheat in preference to any other cereal. While some of these countries expect to produce normal crops in the next year or two it will evidently be a long time before Russia, the largest factor in wheat production before the period of the war, will raise enough wheat to affect the world's market. If it were possible to raise even an average amount of wheat in that country today there would be no way of transporting it to points where shipment could be made.

We also found on our trip that a certain portion of the barley farmers figured on planting wheat this year as prospects for barley are somewhat uncertain. In former years 250,000 to 300,000 tons of barley were used at home for feed. Today finds the tractor and the automobile taking the place of the horse and the consumption of barley at present market prices would probably not exceed 100,000 tons per year. This means that we have to look to other states and countries for a market. There barley comes into competition with various feed by-products and a cheaper class of coarse grains. A few years ago such countries as Denmark imported barley from California for feed for hogs and cattle as well as for brewing purposes. Today these same countries are buying their feed requirements from Asia in the form of oil-cake meals and other by-products that can be laid down at European points for considerably less money than barley.

The successful farmer today is not putting his hopes on any one crop. If he has land that is adapted to both wheat and barley, he plants part of his crop to wheat and part to barley and if adapted to more than one or two cereals he raises a diversified crop.

Cattlemen Considered Vital Measures

(Written for Pacific Rural Press by R. E. Hodges.)

Some changes will be proposed in the organization of the California Cattlemens' Association at its San Francisco convention Dec. 11. Laws which the association will urge the Legislature to enact will be discussed. Laws already on the statute books which need better enforcement will receive attention. County representation on the Board of Directors rather than Zone representation as at present will be strongly urged. Pres. Fred H. Bixby stated at the cattlemens' meeting at Los Angeles, October 7, that the State Association is organized on the cheapest basis of any in the world; members' dues are in arrears $6,000 at that! But there is a great deal for the association to do; but the officers "can't cut the mustard without something to grease the wheels." The association has about 2200 members, which is a majority of all cattlemen in California. The gain since January 1, 1920, has been twice as much as the total membership on that date.

Cattle hereafter will be considered perishable freight, provided the shipper notifies the Association. This is the result of conferences with Southern Pacific officials and has already been in action where passenger trains were recently side tracked to keep cattle moving.

Pointers on Marketing Cattle.

"Don't ever ship cattle on consignment", urged the President. It ruins the market worse than does the dressing of old tubercular dairy cows and selling their tough steaks to people who eat less of them because it takes so much longer to chew them. Shipping on consignment gives an unfair advantage to the commission man over the packer who buys outright from the producer. Cattle shipped to Portland should arrive very early Sunday morning and be well fed before selling time Monday morning. Local fat cattle auctions in California proved successful though they weren't held according to Mr. Bixby. The second sale was in Northern California but it didn't come off! There weren't enough fat cattle for it; because when the buyers heard of it, they scoured the country and bought all the fat cattle at good prices. The first one didn't come off because the cattle were not fat. Some two or three hundred head were sold at the first auction and they were supposed to be fat but they would have made good feeders. We can't have fat steer sales unless the fat cattle are there. Santa Barbara county is working out a sales agent system to collect small lots of cattle into carloads and sell at better advantage. This is the proper way, and the system should be extended on a county basis.

The brand inspection fee should be paid by the seller because he is the one protected and benefited by it. Mr. Bixby always guarantees satisfactory inspection on cattle he sells, and so far has not benefited in price; but the day is coming when such a guarantee will bring extra money. H. A. Jastro emphasized the necessity for continuing calf inspection before slaughter. This is where thieves in tin "Lizzies" do most damage to cattlemen. One county which was shipping 600 to 700 calves per week for veal dropped to 300 per week when inspection was put on according to the Attorney for the State Cattle Protection Board.

Dehorned Steers Prohibited.

A vital menace to the cattle business of the State is the anti-vivisection measure on the ballot to be voted Nov. 2 as pointed out by Los Angeles City Veterinarian J. P. Bushing. This prohibits all operations on animals in good health and all feeding experiments where the animals might suffer for lack of certain food elements. Dehorning and other operations necessary for economical production of prime beef would be unlawful and steer steaks would be a thing of the past. Cattlemen in self defense must vote no on the proposed anti-vivisection amendment No. 7. The value of dehorning was pointed out by Mr. Bixby's experience in shipping fourteen carloads of cattle to Portland. The price for horned and dehorned stock was the same; but the dehorned cattle gained eight pounds per head before sale at the stockyards while the horned stock lost 56 pounds per head.

THE HORSE OUTLOOK IMPROVING.

Feed is coming down and gasoline and kerosene going up. Then too a farmer can raise feed for his horse and he cannot raise oil or gas unless he "strikes oil" on his farm, when he usually loses interest in agriculture as a means of livelihood.

Altogether it looks as though the horse especially the drafter was slowly but surely coming into his proper sphere of usefulness again. Not that he will displace all the tractors any more than the tractors and trucks will displace all the horses on the farm and in the city.

Much can be said in favor of the tractor but when we commence to talk about upkeep and depreciation the horse has all the best of it as he can and does take care of himself to a great extent and the mechanical substitutes never help themselves in the least. It is true the horse should be fed regularly but after feeding the replacement of tissues goes on regularly and the motive power shows up absolutely "as good as new" every morning year in and year out.

A tractor or truck is never "as good as new." Some of them in the hands of experts last a long time but the repair work all has to be done by an expert and in these days experts certainly cost money and lots of it.

The horse that is coming back or that has already arrived is not the common ineffcient "plug" but is the highly developed animal, the result of years of careful selection and mating. The kind of a horse that is outlined in a recent communication from the Horse Association of America in which they say:

"The buyers call for horses standing at least 16 hands, with depth of chest equal to one-half their height, strong backed, powerful coupled, deep ribbed and heavily muscled throughout, with proper set feet and legs, clean quality and sound. Such horses sell readily in any community at greater premium than any other kind of horses raised on farms."

One qualification not mentioned is that of weight. It is true that a horse that stands 16 hands with the rest of the points mentioned will not be a little horse but a good sized animal. While a weight of 1400 pounds may be all right for some purposes, those animals weighing not less than 1600 pounds will be found generally more profitable and effficient.

BUY PUREBRED LIVESTOCK NOW.

(Written for Pacific Rural Press.)

Nevada alfalfa growers want dairy cows to eat hay that is not selling for as much money as it did a year ago. Men who have sold their dairy cows and other livestock expecting to make their pile selling the hay are now looking for cows to eat it. Of course they want good ones. Cows that will produce as they have learned by experience that poor cows don't pay.

Grain also is much lower and the price of hogs and milk remain about the same. Where it was seemingly impossible to avoid bankruptcy by feeding high priced grain to hogs they are coming along fine on two dollar barley.

It will be possible during the next month at various points like Sacramento and Modesto in the north to buy pure-breds in Holsteins, Herefords and Shorthorns. At Pomona in the south Poland Chinas of excellent type and breeding will be offered. Therefore it would seem as though livestock would be desirable property in the future as it has been in the past. Only at the periods of very extreme high prices of hay and feed is livestock not good property and then the man who sticks to it comes out on top as he will now unless all signs fail.

Those who have alfalfa can convert it into more cash if fed to dairy cattle such as they can buy at the Kounias sale at Modesto ot Oct. 28, when he will disperse his entire herd. This is a high production aggregation and an unsurpassed opportunity to secure foundation stock and bulls to improve grade herds. Later the Toyon Farm Association two day sale at Sacramento has an especially attractive offering.

People who are in need of purebred livestock in either beef or dairy lines this fall need not go east for it as the offerings here will be unequalled. In fact eastern breeders are looking toward California for Holsteins and cattle of this kind to go for high prices at eastern auctions.

CATTLEMEN'S MEETING SUPREME

(Written for Pacific Rural Press.)

Fifty years ago if someone had suggested a meeting of cattlemen of what is now the twelve western states he would have been thought unusual to say the least. Times and conditions change, however, and people that were six months apart a half a century ago now can assemble at some appointed place in almost the same number of hours. Interests that formerly were hedged in and confined within the limits of a county or two now find themselves affected by happenings on the far side of the globe. Such being the case it becomes necessary for their welfare, we are tempted to say for their very existence, that such interests get together and plan for and act in unison along certain lines.

The California Cattlemen's Association through it's secretary, D. J. Stollery, seeing the need of concerted action among the range cattlemen along legislative, marketing and financial lines issued a call for those interested in the cattle business in the twelve western states to meet in Salt Lake City, Utah, during the early part of December. Other meetings are slated for about that time at the same place and for the benefit of the livestock men.

It is the aim of those who have issued the call that an attempt be made to plan for handling grass fat cattle in such a manner as to avoid a glut during the early summer months, secure sufficient financial aid to carry through the season, preferably from Federal sources, and to prevent the marketing of half-fat cattle as killing stuff.

Replies from over half the state associations have been received indicating a strong sentiment in favor of such a gathering and intention of attending. There is no reason to prevent concerted action by any class of men interested in agriculture and its allied industries except the inbred idea that we all have, that each one of us has a little kingdom of our own and can live independently of all the rest of humanity. Such an existence was possible once and may be yet, to a certain extent, but there is no question but that a federation of forces would be of great benefit to the cattlemen west of the Rocky Mountains.

"LITTLE THINGS"

That Guarantee Little Trouble and Little Expense

Besides the supreme United States qualities of close skimming, easy turning and easy cleaning—features of which the owner is conscious in every-day use—here are a few of the construction details that stamp the United States Cream Separator as a fine, long-lived, finished mechanism:

One-Piece Sanitary Frame—easy to clean; heavy enough to prevent excessive vibration.

All gears enclosed; no wear from grit and dust.

Automatic oil-splash system—introduced by the United States; imitated by others.

Low and most practical—shaped supply can.

These and many other superiorities guarantee freedom from disappointment and frequent repairs.

Write for catalog and convince yourself that your next separator is to be a United States.

Vermont Farm Machine Corporation

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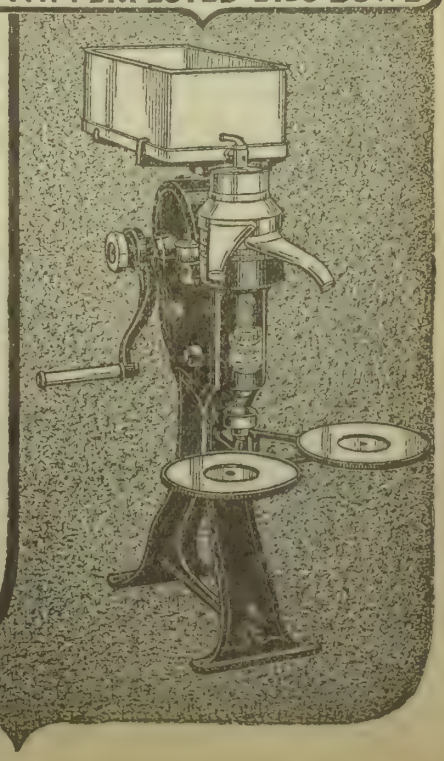

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What dairyman is buying more land or putting up better buildings or placing money in the bank out of profits from scrub cattle? You must have the best dairy blood in order to make a success out of dairying today. You must have good cows, cows that yield heavily enough to compensate for the high price of feed. Purebred Holsteins fill this requirement. They are the most economical producers of milk and butter. They are large, healthy, and easy to care for. They are the cattle for the man who plays the game to win.

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ABSORBINE, JR., for mankind—an antiseptic liniment for bruises, cuts, wounds, strains, painful, swollen veins or glands. It heals and soothes. $1.25 a bottle at druggists or postpaid. Will tell you more if you write.

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SHIRE HORSES

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More is required of Horses than ever before hence the need of more size, weight and power. Large geldings never were higher. Shire Geldings usually top the market. Use Shires to raise larger and better horses.

For information on Shires, write W. G. Lynch, Secretary, The American Shire Horse Association, Tonica, Illinois.

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BOOK ON DOG DISEASES And How to Feed

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LIVESTOCK LOSSES IN TRANSIT.

Written for the P. R. P. by Ned Niccoll.

A little booklet entitled "Livestock Losses and How to Reduce Them", has just been issued by the Committee on Bruised Live Stock, Institute of American Meat Packers, 22 West Monroe St., Chicago, Ill. Any one interested in shipping live stock will find it well worth while to write them and request a copy.

The booklet is intended to show how livestock losses in shipment occur and how they may be reduced. According to the records of the various members of the Institute, 29 per cent of the cattle slaughtered under Federal Inspection in 1919 were bruised in transit and the actual loss in meat on account of such injury was 3¾ millions of pounds. The losses in meat on account of bruised hogs during the same period amounted to 15¼ millions of pounds valued at 3½ million dollars. These losses include only the value of meat actually rendered unfit for consumption and do not include the loss due to reduced value of the balance of carcass. All of us have seen carcasses of cattle where the bruised portion removed did not amount to more than a few pounds but the value of the remaining portion was materially reduced.

The Committee found the following to be the principle causes for bruised animals: Mistreatment and abuse in loading and handling, delays in shipment or in transit, defective cars and equipment, improper bedding of cars and overloading. While it is impossible to eliminate these losses it is the belief of the committee that they may be greatly reduced by the use of care, common sense and co-operation. "Throw away the club and prod pole. Remember every blow means a bruise and that bruise means wasted meat." Examine the inside of the car for protruding nails, spikes and cleats, watch for imperfect door fastenings, see that cars are properly bedded and remember there is no money saved by overcrowding and overloading.

All of the above suggestions of the committee to the shipper are timely and in these days of shortage of cars and slow runs it falls to the shipper to do everything possible. Order your cars in plenty of time, if you feel at all in doubt about getting them, wire headquarters. A few cattlemen this fall have advised the California Catlemen's Association of the date they wanted to ship and the number of head and the Association has arranged for transportation. This arrangement has apparently been quite satisfactory to all parties concerned. By a little care and close co-operation California Shippers can not only reduce the number of livestock killed and crippled in shipment but they can minimize another loss which has not yet been mentioned and that is shrinkage in transit.

Miscellaneous Livestock.

Ranchers in the Livermore valley are organizing a department in the farm bureau for marketing livestock.

The livestock marketing work is progressing in Mendocino county Farm Bureau.

The report comes to our office that some cattle have recently died with blackleg in the Santa Ana district of Orange county. Five head that were accidentally peppered with shot by careless hunters laid down on some muddy ground, were infected and died before.

Dairymen and others interested in a clean crop of hay from the first cutting of alfalfa may be interested in the methods of the Smith-Riddell Co., who disk and cross-disk their alfalfa fields in the winter and sow about 20 lbs. of Beldi or bald barley on the ground. The disking eliminates the most of the weeds and the barley and keeps the remainder down so that a clean palatable first cutting is assured.

George Phillips, shepherd for the University Farm, while in Scotland purchased 16 Shropshire rams. They have arrived at the Farm and are distributed to the University Farm, Butte City Ranch, Thornton, S. Glide and Kirk Swingle.

Semi-Dispersal Sale

75--Registered Holsteins--75

Westlawn Farm, Fresno, Calif.

WEDNESDAY, DECEMBER 1, 1920

Mr. H. E. Vogel has spent 20 years in the development of the great herd at Westlawn Farm, and in this sale will make a complete dispersal of his milking herd.

We rate this as the greatest group of good individuals that we have yet sold out of one herd, the herd for many years having been noted for its excellent type. Good breeding and high records add further attractiveness to make this a noteworthy offering.

BETSY LAMB PRILLY, with a 35-lb. record, Grand Champion at San Francisco in 1919, is a star attraction in this offering. She is one of the very greatest young cows ever offered for sale in the West, and was originally selected to be one of the world's record consignment that represented California in the St. Paul sale, but her owner refused to part with her at that time.

Watch later issues for details.

Auctioneers:
COL. BEN A. RHOADES, Los Angeles.
COL. GEO. W. BELL, Tulare.

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Calif. Breeders' Sales & Pedigree Co.
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BREEDERS OF

RAMBOUILLET SHEEP

Have for immediate sale

50 Registered Yearling Ewes
50 Non-Registered Yearling Ewes
350 OTHER EWES

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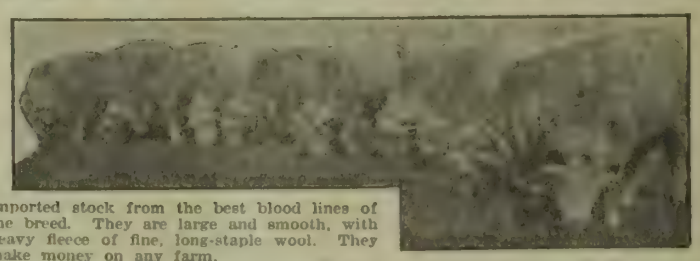
KIMBLE RAMBOUILLETS



Imported stock from the best blood lines of the breed. They are large and smooth, with heavy fleece of fine, long-staple wool. They make money on any farm.

Rams, Yearlings, and older Breeding Ewes. Call or write for further particulars.
CHAS. A. KIMBLE, Hanford, Calif. IMPORTER AND BREEDER

HILLCREST STOCK FARM

Shorthorn Cattle

Won at Sacramento Both Championships

7 Firsts and 5 Second Prizes

Shropshire and Merino Sheep

RAMS AND BULLS FOR SALE

Single or in Carload Lots

T. S. GLIDE, Prop. DAVIS, CALIFORNIA

ABORTION IN CATTLE

CAN BE TREATED SUCCESSFULLY AND YOUR COWS MADE PROMPT, REGULAR BREEDERS BY

STERILOID

TREATMENT: If STERILOID is used at the first sign of abortion the cow will go her full time and have a healthy calf. If your cows or heifers do not come in season, or fail to get with calf, use STERILOID. Cows get with calf after only one treatment. Write today for FREE BOOK. It explains the causes and symptoms of Abortion and tells how to treat Abortion, and make your cows regular, healthy breeders with STERILOID. Also contains letters from breeders who have used STERILOID successfully.

STOP LOSING CALVES

GUARANTEE: We will refund money in every case when STERILOID FAILS to make good. PRICE, $1.00 plus 4c tax. Mailed Postpaid, in plain wrapper.

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TO CONSUME OUR ALFALFA HAY

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Reference, L. E. Cline, U. S. Dept. of Agriculture, Fallon, Nevada.

Address NEWLANDS PROJECT ALFALFA ASSOCIATION, Box 478, Fallon, Nevada

Warranted to Give Satisfaction.
Gombault's
Caustic Balsam

Has Imitators But No Competitors.
A Safe, Speedy and Positive Cure for Curb, Splint, Sweeny, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.
As a Human Remedy for Rheumatism, Sprains, Sore Throat, etc., it is invaluable. Every bottle of Caustic Balsam sold is Warranted to give satisfaction. Price $1.75 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address
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STANISLAUS COUNTY
A. M. BIBENS, President
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"ORMSBY"
Means Quality and Production.
Get a young bull sired by
King Korndyke Hengerveld Ormsby 7th
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REGISTERED HOLSTEIN-FRESIANS
Prize-winners at all Shows.
Inspection invited and satisfaction guaranteed. Write for prices.
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THE CHAMPION SHOW HERD
The herd of high records.
STOCK FOR SALE.
Visitors Welcome.

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REGISTERED HOLSTEINS
Route C. Box 196, Modesto, Cal.
Animals of both sexes for sale.
Herd tuberculin tested.

BULLS FOR SALE
From 1000-lb. sire and high-producing dams that carry same blood as Belle Faskie DeKol Witkop, the highest prize winner in the Holstein-Friesian Association of America last year.
FREEMAN (E. E.) & EDWARDS
Modesto, Calif.

Auction Sale
At the W. C. Gallaher ranch, 7 miles southeast of Hanford, October 26th, at 10 a. m. As we are dissolving partnership we will sell our entire dairy and farm equipment: 52 head young well-marked, large Holstein cows; heavy milkers and paying more per head than any other dairy in Kings County. 18 Holstein heifers, 9 months to 2½ years; 2-year-old Holstein bull; 8 head work horses. If you wish to improve yur herd, this is a rare opportunity to secure some of the best cows ever offered at auction in this county.
Terms: Cash. Free lunch at noon.
W. C. Gallaher,
V. W. Spafford and Son,
Owners.
H. M. Bernstein, Auctioneer.
J. J. Hight, Clerk

THE DUAL-PURPOSE COW.

What is a dual-purpose cow? This is a question that has been asked many times during the past 25 years, many times in all seriousness, sometimes to provoke argument and occasionally in derision. Some twenty years ago the question was an especially live one in the Middle West. The beef men paid but little attention to it, but the advocates of what they termed the "true dairy type" claimed cattle were either only fit for beef or were milk producing machines, that after a life of usefulness at the milk pail had enriched their owner to such an extent they were entitled to a first-class funeral—casket, hearse and all—when they came to the "end of the trail."

At the time mentioned the late Governor Hoard of Wisconsin was the leader in support of the straight dairy type as the only cow returning a reasonable profit to her owner, while the late Prof. Thomas Shaw, then head of the Animal Husbandry Department in the University of Minnesota, was perhaps the leading advocate of what he termed as the "dual-purpose" cow.

For several years the controversy was quite strenuous in the leading farm papers and dairy journals of that time, and gradually several breeds of cattle were segregated and classified at the leading fairs as "dual-purpose" or "milk and beef" cattle. Included among these were the milking Shorthorns, the Red Polls and Brown Swiss.

No doubt the reason for this controversy was the fact that breed type was being studied more and more carefully all the time and certain standards being adopted descriptive of various breeds. The Shorthorns, Herefords Aberdeen-Angus and Galloway adopted standards as beef breeds, so far as conformation was concerned, that were very similar. The Holsteins, Jerseys, Guernseys and Ayrshires established standards that were much alike as dairy animals. Along between these to unprejudiced judges came some very popular breeds in their native countries and localities that did not conform very closely to either the beef or dairy types. These included a strain or strains of Shorthorns descended from the Bates and Booth cattle, and the others mentioned above.

The dairymen claimed that it was impossible to grow beef steers from dairy sires and dams, or putting it the other way, cattle of beefy characteristics would not make dairy cows that would produce milk profitably .

On the other hand, men who were growing beef cattle could see nothing good in cattle of dairy conformation, and it soon became so that black and white steers, those with mealy Jersey muzzles or a yellowish Guernsey hide, were not popular in feed lots.

The dual-purpose disciples stoutly claimed and continue so to do that their cows will yield milk profitably, continuously and persistently. At the same time the male calves can be grown into steers excelling any other type of cattle for quality and quantity of marketable flesh.

In California the dual-purpose animal has not received much attention until recently. As usual the milking Shorthorn is the leading pioneer in this type, although there are also two herds of Red Polls and at least one of Brown Swiss they are not as numerous as the first mentioned.

The Red Polls are very tidy, compact animals, of medium size, good red color, and the steers dress out well. They are among the old English breeds, and hornless.

The Brown Swiss are natives of Switzerland, and make steers that feed and kill well. In size they are between the Shorthorn and Red Poll. As they are natives of more or less mountainous country they give a good account of themselves on rough pasture. They are fully as quiet in disposition as any of the dual-purpose kinds.

We cannot classify the dual-purpose types with either the beef or dairy cattle, and could not enter the showring and win in either class. They are hardy, will produce well under adverse circumstances and respond quickly to good treatment.

Lone Oak Holstein
Dispersal
ON NOVEMBER 6TH AT MODESTO
J. W. BENOIT will sell his herd of about 60 head of Registered Holsteins under the management of the
STANISLAUS COUNTY HOLSTEIN BREEDERS' ASSOCIATION
This is one of the older herds of the Central section of the State and should attract buyers from all sections of the State.
SIRES WITH GREAT PRODUCTION BREEDING
Mr. Benoit has used good bulls from the start and the blood lines of this offering are especially good. There are
15 Daughters of El Pardo Wayne Colantha
a 30-lb. grandson of Colantha Johanna Lad, all of which are bred to Lone Oak Terzol Korndyke, a 32-lb. bull, whose dam also has a record of 21,000 lbs. milk and 900 lbs. butter in 10 months.
17 Daughters of the 32-lb Bull
Lone Oak Terzool Korndyke
bred to Lone Oak Valdessa Finderne, another 30-lb. bull, whose dam has a yearly record of 18,377.7 lbs. milk and 790.97 lbs. butter.
49 FEMALES, 2 GREAT HERD SIRES, and 9 YOUNGER BULLS IN ALL.
A splendid opportunity to secure a foundation herd at your own price.
Write to E. M. MORROW, Secretary of the Stanislaus Co. Holstein Breeders' Association, Modesto, for catalog.
Auctioneers:
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JAVA COCOANUT CAKE MEAL.
Made where the cocoanuts grow.
Sun-dried—not smoky or rancid.
Carried in modern ventilated steamers. Shipped in solid cakes.
Ispected and ground in San Francisco
Has your past experience in feeding cocoanut cake meal been satisfactory?
We particularly request a trial of our meal by those who in the past have been disappointed.
Your feed dealer may not have our brand in stock but can obtain a large or small lot promptly.
Trade INSULINDE Mark
Look for it on the sacks
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JERSEYS
The Breed for Profit!
IN the Ohio test, 1917, Jerseys did the same as they have done in every great test for economic production ever conducted. They produced more pounds of butterfat per thousand pounds of feed than any other breed.
Jerseys are the Economic Cows—The Profit Breed. The Jersey Information Bureau will gladly tell you more about Jerseys and the profits you can make with them. Address—
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LEONARD FARM
JERSEYS
Bulls for sale from Register of Merit Cows.
Write for information.
W. J. HACKETT,
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REGISTERED HOLSTEINS
Creamcup Herd offers service bulls and bull calves of 34-lb. breeding. Females offered for foundation stock.
Tuberculin tested.
M. M. Holdridge, San Jose, Cal.
R. D. "A," Box 437,
Two miles out North First Street.

The Newest American Breed of Cattle

(Written for Pacific Rural Press by R. E. Hodges.)

The newest breed of livestock in America is perhaps the most certain to prove its prepotence when crossed on grades, scrubs, or on purebreds of other breeds. In conditions where horns on cattle are necessary as a means of defense, this breed will not thrive so well as horned breeds; but elsewhere there is theoretical reason and practical evidence that there is real value in diverting the feed elements that would make horns and using them to produce more necessary and valuable parts of an animal's carcass. No one denies that there is more or less real damage done to cattle in feed lots, on board cars, and even on the open range by the horns of their fellows. Removel of horns seems also to act like removal of revolvers from drunken men—less effort is made to use them and both animals and men are quieter. Quietness in cattle means better feeding and more economical gains, other things being equal. Removal of horns also means fewer gored attendants. For these and other reasons, it has seemed notable that dehorned or polled feeder cattle in eastern stock yards have commanded a premium over others for the feed lots. These reasons are responsible for the expensive practice of dehorning cattle in many herds. They have resulted in a remarkable popularity for the newest of naturally polled breeds—the Double-Standard Polled Hereford.

Generally it is an expensive, long-time proposition to convince the public in any district regarding the merits of a breed previously little known to them. Not so in this case. In 1901, a questionnaire sent to all members of the American Hereford Cattle Breeders' Association revealed fourteen Hereford animals naturally hornless. Seven females and four males were collected by B. O. Gammon of Des Moines, Iowa, and the first entries were made in the American Polled Hereford Record, of which Mr. Gammon became secretary. Their offspring, along with some other naturally polled Herefords, had multiplied to 500 registered in the Record in 1909, 5,000 in 1915, 10,000 in 1917, 20,000 in January, 1920, and 23,725 on September 1, 1920. No animal is eligible to the American Polled Hereford Record until it is nine months of age, to prove its hornlessness. No animal can be registered in this Record until it has been registered by the American Hereford Cattle Breeders' Association. This insures only the pure Hereford blood dating back to the beginning of that breed, and thus accounts for prepotency of the animals. But Polled Hereford cows bred to horned bulls, produce about half horned and half polled calves. The latter are eligible for both records—the former for only the record of horned cattle. Polled bulls get 65 to 85 per cent of polled calves from horned cows and these are eligible for the double registry. All Polled Herefords have the pure blood and the same characteristics, except horns, as the well known breed from which they sprung.

It is only within the past year that naturally Polled Herefords have been seen in California, the Diablo Stock Farm being a pioneer. They bought a foundation herd at the first breed promotion sale in California at Sacramento in 1919. Other herds have since been established; and the exhibition of this breed at the Los Angeles Livestock Show was a revelation to stockmen of the West. Mr. Gammon himself came out to help conduct the sale at the Los Angeles Show of 37 head of the muley money-makers selected from leading herds of the central states. See the report of this sale in other columns. Also note the prize-winnings of polled animals in competition with horned animals in the same classes.

C. C. A. DIRECTORS MEET.

Fred H. Bixby, president of the California Cattlemen's Association, was in the chair at an important meeting of the Board of Directors of this organization at the Palace Hotel, San Francisco, on Monday, the 18th of October. Regular business was transacted as well as some other matters of importance.

Mr. Bixby, in speaking of what had been accomplished, mentioned the arrangement with the railroads to run livestock shipments on a "perishable commodity" schedule if the shipper will only write or wire Secretary Stollery so the traffic management may be notified. It has been found to be of great advantage when used.

Ventura county has enlisted the assistance of the C. C. A. to secure 60 head of calves or yearling steers (Herefords) for a calf club feeding contest, to be carried out during the coming year and ending at the time of the Ventura fair next fall.

The calling of a meeting of the cattlemen of the 12 westernmost states was discussed and President Bixby and Secretary Stollery were authorized to go ahead with the promotion of the affair for the middle of December.

President Bixby wants the widest publicity given the annual meeting of the California Cattlemen's Association on Saturday, December 11th, at 10 a. m. in San Francisco. Not only should all members arrange to be present but every range cattleman in California should attend and hear what is said and take part in the discussion. For those who get hungry there will be a banquet in the evening.

Some discussion of legislative action the coming winter was indulged in, especially with reference to the fencing and squirrel laws.

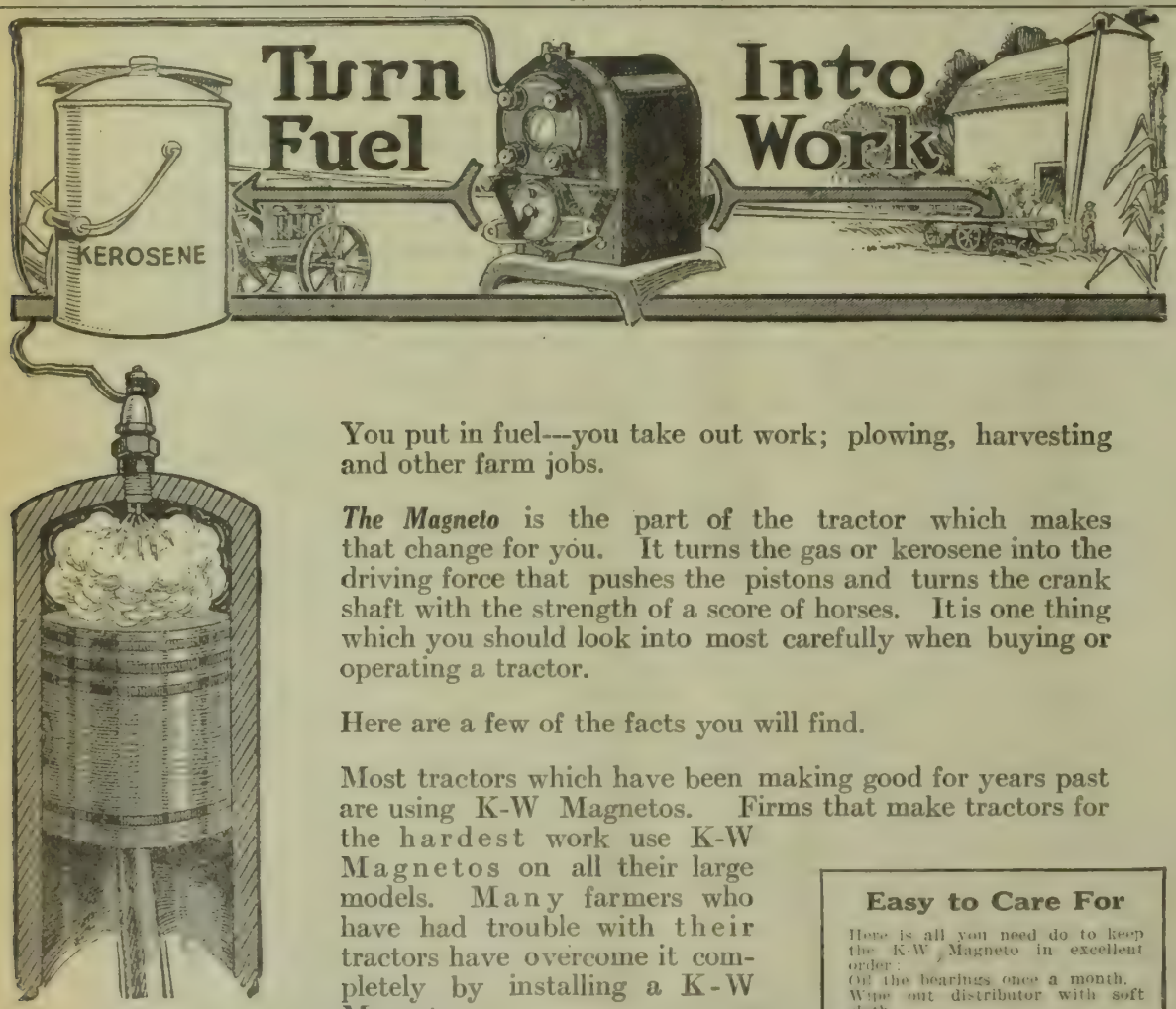
The future prospects for the cattle business were considered good. It was the general opinion that the bottom had been reached and with the slaughter of calves and she-stuff to excess in some range localities the prospect for future high prices was good.

Do not forget the annual meeting December 11th. Be sure and attend, cattlemen, it is to your interest.

ANOTHER PROMINENT HOLSTEIN BREEDER RETIRES.

Breeders regret the fact that press of other business has decided George Kounias of Modesto to disperse his herd. He has worked faithfully for eight years and has succeeded in developing one of the really good herds of the state, both for type and production. The older breeders know the herd, but dairymen who are beginning to get the purebred fever and would like to start right, should not overlook the fact that Kounias has twenty-two daughters of a bull carrying the blood of the greatest living sire of 1000 lbs. yearly record daughters. Nor should they forget that in this herd are a number of young bulls of Ormsby breeding and out of dams with fine long distance records. There never has been a better opportunity for new men to pick up the very best possible foundation stock than the sales of this fall are affording, and there may not be another like it for a long time to come. If you want purebred Holsteins, brother, you couldn't do a better thing than camp in Modesto until November 6th, while these great herds are being dispersed.

A survey by the United States Department of Agriculture shows that people are eating 8 per cent less meat than they did twenty years ago. In that time the consumption of dairy products has increased 8 per cent, of vegetables 4 per cent and fruits 8.



You put in fuel---you take out work; plowing, harvesting and other farm jobs.

The Magneto is the part of the tractor which makes that change for you. It turns the gas or kerosene into the driving force that pushes the pistons and turns the crank shaft with the strength of a score of horses. It is one thing which you should look into most carefully when buying or operating a tractor.

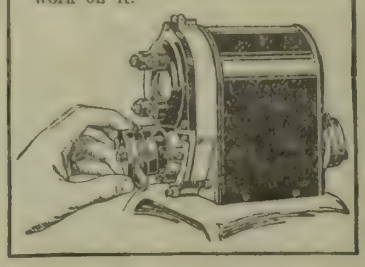
Here are a few of the facts you will find.

Most tractors which have been making good for years past are using K-W Magnetos. Firms that make tractors for the hardest work use K-W Magnetos on all their large models. Many farmers who have had trouble with their tractors have overcome it completely by installing a K-W Magneto.

If you want to get a K-W Magneto on your new tractor or install one to improve your present tractor, write us for information.

Easy to Care For

Here is all you need do to keep the K-W Magneto in excellent order:
Oil the bearings once a month.
Wipe out distributor with soft cloth.
Inspect the "circuit breaker," which can be completely removed and held in the hand while you work on it.



Our Free Book Tells All About Magnetos

Not a catalog, but 24 pages of plain facts and illustrations showing just what a magneto is, how it works, how to get best service from it.

THE K-W IGNITION Co.
2889 Chester Ave. CLEVELAND, OHIO, U.S.A.

TRADE K-W MARK Magneto

Fires Any Fuel—Gets Maximum Power Out of Every Drop.

Depend on him

You "scratch" the *soil* to grow good crops! Make your *ballot* count for California.

to fight for the rights of ranch and farm

New attacks are now launched in the East against the agricultural interests of California. Now, of all times, the experienced leadership in Washington of Senator Phelan is needed. His fighting record for California's rights calls for no idle promises or platform patter. Senator Phelan—none other—is best fitted to stop prosecution and persecution of your agricultural interests.

Senator Phelan worked and voted in the Senate for legislation favoring farmers' co-operative organizations. He is progres sive in thought and action. In the face of a nation-wide demand. he secured priority orders for tin plate shipments to California to meet the home needs of our canneries. His vigorous protests challenged increase of freight rates on cantaloupes and vegetables. The Department of Agriculture acted on his demand to combat the boll weevil in Imperial Valley, and San Joaquin Valley cotton was saved from attack thereby.

For a Tariff on Beans and Rice.

Senator Phelan is a recognized champion of the Farm Loan Law. He secured for California a big share in that law's benefits. He is a strong advocate of a protective tariff on California rice and beans, as a barrier against Oriental importations. G. H. Hecke, Director of Agriculture for California, wrote to him:

"Your efforts in Congress are appreciated by those at home. I know those interests recognize the value of your efforts toward safeguarding the agricultural development of the State."

When huge losses threatened California fruit and vegetable growers because of the car shortage, Senator Phelan won his fight for priority purchase of refrigerator cars in expending the Nation's $75,000,000 appropriation for freight equipment. Thus, he curtailed heavy losses at home. He spoke and voted to raise the duty on lemons because he believed in protecting California growers against imported lemons.

Endorses Co-Operative Organizations.

Senator Phelan is a member of the Rice Growers' Association and the California Prune and Apricot Growers, Inc. He supervises the operation of his own properties and thus has first-hand knowledge of agricultural problems. He will continue to urge reforestation of the Sierra Nevadas so as to provide for greater forest protection and better water storage.

Wylie M. Giffen, President of the California Associated Raisin Company, commended Senator Phelan for his stand in behalf of the raisin growers, as follows:

"Thank you for the splendid telegram that you sent to the Attorney General. It is one of the finest things published since this agitation came up. It stated the exact truth. The raisin growers of California are immensely pleased with your action. When I express to you my own thanks, I can, also, speak for the 12,000 raisin growers in this State."

Keep California White

James D. Phelan is determined to keep California white. Here is his challenge against the silent invasion.
"On behalf of California I will invoke the right of eminent domain, if necessary; by winning an extension of the Durham Colonization Plan and thus restore the lands of California to white people."
You can't turn back Japanese immigration if you turn your back on James D. Phelan. Should you fail to re-elect him, the Nation will take it as a repudiation of California's demand for Japanese exclusion.

Re-elect—

James D. Phelan

U. S. Senator

Livestock Queries and Replies

Navicular Disease—A horse, 7 years old, weight 1175 lbs., has been lame for about one year. He stumbles after being driven for a few miles and wears the toe of his shoe. No indication of atrophy of shoulder muscles. He is used in ranch work and slowly on the road. Does not work more than half the time. What is the trouble and remedy?—W. H. H., Santa Fe Springs.

The horse has navicular disease and treatment outside of a surgical operation is almost useless. After the animal has become too lame to work a portion of the plantar nerve may be removed by a skilled veterinarian. Out of 267 operations performed by me there were but five cases resulting unfavorably. The operation is a last resort, however. Shoe the horse with a roller motion shoe shortening the toe as much as possible. Rub the following mixture over the coronet at night. Then apply a cloth bandage moistened in cold water. Remove bandage when working. Rx Soap linament, 7 ounces; sulphuric ether, 1 ounce; oil origamim, 2 ounces;; oil cedar, 2 ounces. Mix and apply over top of hoof once daily. Dr. E. J. Creely.

Wart on Goat's Udder—We have a Saanen doe in milk that has a large wart or tumor on her udder. It is about 1 inch in diameter and half an inch high. This is scratched by the animal at times until it bleeds. What treatment would you advise?—J. P. D., Placerville.

Apply Silver Nitrate (lunar caustic) once daily for a week, rest one week, and then apply Tincture of Iodine once daily for another week.—Dr. E. J. Creely.

Barley Straw for Sheep.—Please send me the names and addresses of dealers or manufacturers of feed choppers. I have plenty of barley straw that I wish to cut and sprinkle with dilute molasses for ewes. Will it make good feed for them? I also have barley hay that I could mix with the straw. Would that be equal to the molasses?—K. G., Concord.

Any of the implement dealers advertising in the Pacific Rural Press will quote you prices on a feed or ensilage cutter. We presume the ewes have been bred or will be. The barley straw with the addition of the molasses will not be a good ration for them. It lacks in the necessary protein to grow wool and lambs. The straw and hay will be about as bad and perhaps worse, as the molasses will make the straw more palatable. The beards on the barley are objectionable especially in feeding sheep. Alfalfa hay and barley straw, half and half, chopped and sprinkled with dilute molasses would produce excellent growth and strong healthy lambs. —Livestock Editor.

Failure to Breed—Cow 18 years old fails to breed. Can you tell me any medicine that will be of assistance in this case? What can be added to separator or skimmed milk to make it a better feed for young calves?—L. L. L., Orosi.

Medication is of very doubtful value in cases of this kind and practically useless in animals as old as the above. Nothing will take the place completely of some whole milk when the calf is very young. Some of the calf meals advertised by the milling companies regularly in the Pacific Rural Press are said to produce excellent results and make thrifty appearing, strong animals.—Livestock Editor.

Chronic Indigestion—A 6 months old calf has been running with his dam in a field of dry feed and brush. The calf bloated constantly for some time previous to weaning. After it was weaned it still continued to bloat on alfalfa and oat hay with a little grain daily. Can you suggest a remedy?—M. W., Cool.

Give a purge of salts, then the following: Rx Lime water, 8 ounces: Olive oil, 5 ounces, Spirits camphor, 3 ounces; Oil peppermint, 10 drops. Mix and give one-half ounce twice daily. Shake bottle before giving.—Dr. E. J. Creely.

Thoroughpin—Horse has a soft swelling on hind leg in hock joint underneath the tendon. Can be pushed through from one side to the other. Horse is not lame. I wish to buy the horse. Is it harmful?—W .R. I., Bangor.

Perfectly harmless except when first coming. Apply a stimulating liniment and raise the heel calks on shoe higher than toe.—Dr. E. J. Creely.

Hogs Wont Eat Alfalfa—We have quite an accumulation of alfalfa leaves and chaff picked up from the baler settings. So far all attempts to induce hogs to eat this material have failed. Can you suggest something to make it more palatable?—F. T. R., Vina.

Probably stock molasses diluted somewhat so that it can be distributed evenly over the chaff will make it taste good enough so that piggy will appreciate it. This will also tend to balance the ration. It should be fed in a rack if possible.—Livestock Editor.

Forage Poisoning of Goats.—A small flock of goats kept on home range that is mostly covered with scrub oak and pine. Some dry grass, plenty of water, salt, etc. Goats get weak in their hindquarters and gradually get worse until they can't walk and we have to kill them. What is the cause and remedy?—E. G. D., Garden Valley.

Poisonous feed due to moulds, smut or rust. Remove to new pastures and after cleansing the intestinal tract with Epsom salts, give a wineglassful of a 4 per cent solution of potassium permanganate twice daily.—Dr. E. J. Creely, San Francisco.

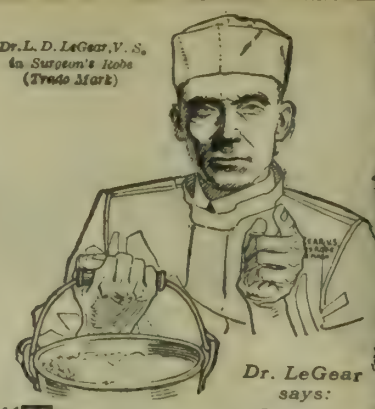
Injured Sow.—A fine brood sow got lame in her right front foot and the swelling continues to go up until it includes the shoulder. It is very tender and painful to touch. She has good appetite but lays down most of the time. What is the trouble and what can be done for her?—J. H. C., Angiola.

Sow has met with an injury. Wash the leg thoroughly and examine carefully for a puncture wound or a foreign body like a sliver, etc. The acute swelling involving the lymph glands indicate a severe infection. Paint the swollen parts with Lugol's iodine daily for a few days. One hour after painting apply the following solution: Goulard's Lead Solution, 8 oz; water, 1 gallon. The application is better made on bandages, which should be kept moist with the solution.—Dr. E. J. Creely.

BOTS.

There is no way of telling whether or not a living animal is injured by bots, since no typical symptoms are produced. Removal of bots from the stomach is a very unsatisfactory undertaking. Drugs do not affect the bot but may prove harmful to the stomach. Preventive measures, as recommended by the Division of Animal Industry of the State Department of Agriculture, are much to be preferred to internal doping. The first step in this direction is to see that the eggs do not gain entrance to the horse's mouth. The frequent use of the curry comb, card, or clippers is to be recommended and prevention may be furthered by an occasional application of kerosene to pastured animals. This destroys the larvae and kills the egg-laying flies. One part of kerosene to five parts of lard, with the addition of a little pine tar, makes an efficient mixture if applied about once a week during the egg-laying season. If you would use dope, use it externally, not internally.—State Dept. Agriculture.

Marin county is getting in line in the cow-testing work. Three testers will probably be at work by the end of October.



Dr. LeGear says:

"Turn more feed into pork".

"Hogs should produce one pound of pork for every five pounds of feed they eat that is equivalent to corn meal in fat, carbohydrates and albuminoid elements. If they do not, their digestive organs are not functioning properly and need regulating and help. And statistics prove that most hogs have ailments or worms in some degree."

Thousands of Hog raisers are making more money, raising bigger and fatter hogs by using Dr. LeGear's Hog Prescription. It helps to put and keep hogs in healthy, vigorous condition, sharpens the appetite, purifies the blood, tones up the system and aids in expelling worms. This is what Hugh Cox, Clifton Springs, N. Y., says:

"I bought a hog that was nothing but a shadow—weighed 90 lbs. After feeding Dr. LeGear's Hog Prescription for six weeks it weighed 275 lbs. Have used a great many of Dr. LeGear's Remedies and have always found them highly satisfactory."

Dr. LeGear's Hog Prescription

Get a pail or package from your dealer today.
Dr. L. D. LeGear Medicine Co., St. Louis.

Duroc-Jerseys Are Prolific and Profitable

They raise *big* families. Hardy, easy-feeding, quick maturing. That is why Duroc-Jerseys today outnumber any other breed in the United States. Out of *all* the hogs marketed in 1918, 51 per cent were Duroc-Jerseys.

WRITE FOR BOOKLET—"DUROC-JERSEY HOGS ARE PROFITABLE" published and mailed free by the largest swine record association in the world (over 10,000 members) for the benefit of hog raisers everywhere.

THE NATIONAL DUROC-JERSEY RECORD ASSOCIATION
Dept. 120—PEORIA, ILLINOIS

Duroc-Jersey Hogs for Sale

BOARS AND GILTS
BRED SOWS
SOWS WITH LITTERS

DIABLO STOCK FARM,
E. F. PETERSEN, Supt. Danville, Cal.
G. W. EMMONS, Owner, Oakland.

They are the large type and the best blood strains to be had anywhere.

HERD BOARS AND SOME OF THE SOWS

Lucy Orion's Model	Prize of Tulare Belle	Twin Oaks Attraction
California's Defender	Pathfinder's Queen	Lady Defendress 70th
Diablo Orion Model	Great Wonder I Am Gano	and 50 others.
Defender Colonel 70th	Lucy Orion's Mayflower	

WEANLINGS—$15.00 EACH AT RANCH — A large number always on hand to choose from. Crates $2.50 each, refunded when returned prepaid in good condition.
MAIL ORDERS SOLICITED. SATISFACTION OR MONEY BACK.

HAVE YOU SEEN THE
Grand Champion Duroc State Fair 1920
HERD SIRE
CHOICE WONDER III { Mahaska Wonder { Great Wonder / Grand Lady 20th
Grand Lady 72nd { Grand Model / Rose
Write for yours from the most select herd in California.
Littermate (gilt) topped Ed Kern's Last Sale at $5600
V. F. DOLCINI, JUNE ACRES STOCK FARM, DAVIS, CALIF.

GUASTI BERKSHIRES
Weaned pigs, both sexes, from sows that farrow large litters and raise them. Priced reasonable — they are money-makers.
ITALIAN VINEYARD COMPANY
ALEX. M. WILSON, Supt. Guasti, Calif.

DIGESTER TANKAGE
Send for Sensible Folder on Feeding Hogs
WESTERN MEAT COMPANY
Animal Food Dept. 704 Townsend St., San Francisco

BIG SHOWS IN NORTHWEST.

By Frank D. Tomson.

The fair season of 1920 has, in the main, shown a broader scope than in any other previous year. Here and there, livestock exhibits have not been of an extent that was hoped for, but on the whole, the shows mark another step of progress. The Northwest circuit now draws toward the close,—to the big event at Spokane, followed by the Western Livestock Show at Lewiston, and concluding finally, with the Pacific International Livestock Exposition at Portland.

Over half a million people were in attendance at the Minnesota State Fair. Nearly as many visited the Iowa Fair. It is significant that 12,000 people were encamped on the grounds of the Iowa State Fair during the entire show. At the Nebrasko, Dakota, Illinois, Indiana, Wisconsin, Ohio, Missouri and other state and district fairs, the attendance, wherever the weather permitted, passed previous records and displayed an interest in the real purpose of the fairs that is of far-reaching value in the betterment of agriculture and livestock husbandry. So, in the Northwest where these shows are of later origin, there is growing interest in the lessons they teach. Each year these shows become of greater fundamental value.

The Pacific International is the finest example of the broad conception of men in the building of a livestock show. In its relation to business expansion and further development, its influence in their activity and in the general advancement of agriculture and business lines, will expand with each successive year. It remains only for the management to keep pace with the trend of affairs in the Northwest to make it the most distinctive and most useful single institution throughout the territory known as the Pacific Northwest.

The breed associations, and I think I may say approximately, the Shorthorn Association especially, have shown a broad conception of the possibilities of the Pacific International in the extensive appropriations which have been made as an inducement to breeders to place their livestock on display. One may not recall the display at the Pacific International last November and the outcome of the public sales held in connection without acknowledging that a great and indispensable movement has been placed on a permanent and going basis and one's mind inclines to give consideration to the scope and possibilities of this movement which has taken form in the shape of the Pacific International.

POLAND CHINA SALE OCTOBER 27.

The Poland China show herds of Dr. E. Avery Newton of the Arenal Ranch, Lankershim and of H. Christiansen of Arlington are to be sold at public auction at Pomona, October 27. Among the stock Dr. Newton puts in the sale are the ten head on which he won six first prizes at the San Fernando Valley Fair, where fifty Poland Chinas were shown. Among the winnings of this stock at the Los Angeles Livestock show were first prize boar and three sows, all bred by exhibitor, fourth prize boar and three sows under a year old, fourth prize junior yearling boar, and third prize sow over two years old. Mr. Christiansen has entered the two-year-old boar, President's Model, which won reserve senior championship at Los Angeles. Four sows bred to this boar in 1919 raised 38 pigs. Other stock in the sale now owned by Mr. Christiansen are his second-prize boar and three sows over a year old bred by exhibitor, second prize sow over two years, and third prize junior yearling sow. He will sell his mature stock and keep the young hogs to build up another herd at a more suitable location.

The Ogden Livestock Show will hold its second annual exhibition at Ogden, Utah, on Jan. 6-8, 1921. This event draws from all the State of Utah, parts of Nevada, all of southern Idaho, western Wyoming and Colorado, a territory largely devoted to livestock raising.

DIAMOND BAR RANCH

Gateway
to the
HOME OF PRIZE WINNERS

Once more Diamond Bar Durocs have proved their supremacy by winning two-thirds of all blue ribbons, as well as many championships, at the State Fair and Los Angeles Livestock Show.

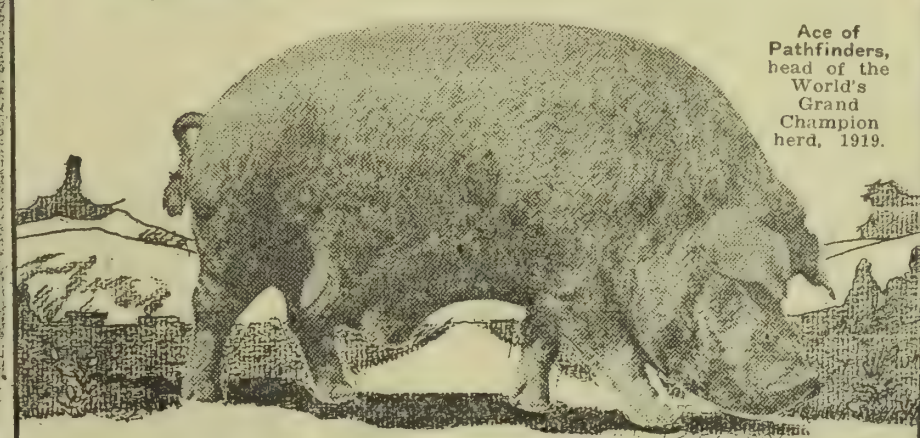
CALIFORNIA STATE FAIR

Diamond Bar Won:
10 out of the 15 first prize ribbons.
Grand Champion Sow.
Senior Champion Sow.
Reserve Grand Champion Sow.
Reserve Junior Champion Boar.
1st prize Futurity Litter on pigs sired by Ace of Pathfinders.

LOS ANGELES LIVESTOCK SHOW

Diamond Bar Won:
10 out of the 15 first prize ribbons.
Grand Champion Sow.
Senior Champion Sow.
Reserve Grand Champion Sow.
Reserve Senior Champion Sow.
Reserve Jnnior Champion Sow.
Reserve Junior Champion Boar.
1st Futurity Boar.
1st Futurity Sow.
1st Futurity Litter.

The winnings of Ace of Pathfinders and his pigs stamp him as the greatest show and breeding boar in the West.



Ace of Pathfinders, head of the World's Grand Champion herd, 1919.

DIAMOND BAR RANCH

F. E. Lewis, Owner and Manager R. K. Walker, Hog Department
SPADRA Los Angeles County California

Water Tanks
FOR SALE
Two new galvanized tanks, holding 4,600 and 2,600 gallons. Fine for farmer or stockman.
J. A. YOST
6th and Channel Sts., San Francisco, California

CLARK, HUNTER & CLARK
LIVESTOCK
AUCTIONEERS
915 I St., Modesto, Calif.
Registered Hog Sales a Specialty

Dealers in PAPER
Blake, Moffitt & Towne
37-45 First St., San Francisco
Blake, Moffitt & Towne, Los Angeles
Blake, McFall Co., Portland, Ore.

COMBINATION
Pre-Breeding Season Sale
Poland Chinas

Sale to be held on Wednesday, October 27th, at LOOKINGBILL & VELZY'S UNION STOCK AND SALES YARDS, POMONA.

40 head of useful breeding stock from the well-known herds of E. Avery Newton, Lankershim, and H. Christiansen, Arlington, will be catalogued for this occasion, and papers for every animal sold.

This sale is to be known distinctly as "a pre-breeding season sale." With three or four exceptions these sows and gilts are purposely sold open, that new owners may mate them in November to their own boars for March litters.

First Prize and Grand Champion Blood

Three crack herd boars, also a few young boars of early spring farrow, to be found in these offerings.

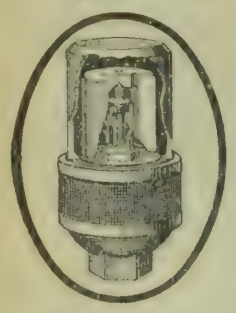
For catalogs address

E. AVERY NEWTON or H. CHRISTIANSEN
1026 Marsh-Strong Bldg., L. A. Arlington Station, Riverside

The DE LAVAL MILKER

Vacuum Controller

(The Vacuum Controller is not shown in the part of the Milker installation pictured here. It is placed in a convenient place in the installation)



The safety and success of a milking machine are largely dependent on the uniformity of the vacuum, and the De Laval Vacuum Controller is so constructed that correct and constant vacuum is maintained at all times.

The Vacuum Controller is scientifically designed for its purpose and fully covered by pending patents. No adjusting is necessary; the correctness of each Controller is determined and fixed at the factory and it cannot be adjusted, changed or tampered with. The Vacuum Controller is entirely automatic and can be depended on to maintain a uniform vacuum in the system at all times.

The De Laval Milker has many other exclusive features distinct both in design and operation, which make it positive and uniform in action from day to day; and faster, more economical and more reliable than any other method of milking.

Write to nearest De Laval office for Milker Catalogue, mentioning number of cows milked

DE LAVAL DAIRY SUPPLY CO.

THE LARGEST DAIRY SUPPLY HOUSE ON THE PACIFIC COAST
61 BEALE STREET, SAN FRANCISCO, CAL.

Livestock and Dairy Notes

SALE DATES.

Oct. 27—Newton and Christiansen, Poland Chinas, Clearwater.

Oct. 28—Geo. Kounias, Holsteins, Modesto.

Nov. 4th — Pacific Coast Hereford Breeders' Association, Herefords, Sacramento. Sacramento.

Nov. 5th—John H. Cazier & Co., Herefords, Sacramento.

Nov. 6th — H. M. Barngrover, Herefords, Sacramento

Nov. 6th—J. W. Benoit, Holsteins, Modesto.

Nov. 10-11—Toyon Farm Assn., Holsteins, Sacramento

Nov. 15th—W. Marshall & Son, Santa Rosa, Poland Chinas.

Dec. 1—H. E. Vogel, Holsteins, Fresno.

Nov. 18 — Finnell Ranch Company, Herefords, Sacramento.

Dec. 2—Consignment Sale, Holsteins, Tulare.

Dec. 16-17—Consignment Sale, Holsteins, Sacramento.

The Dairy.

Walter K. Adams, former Holstein breeder of Modesto, has sold his herd and has gone out of the dairy business, owing to ill health.

Toyon Farm Association's Holstein-Friesian Bull, Sir Pietertje Ormsby Mercedes 43rd, topped the sale at the National Dairy Show last week selling for $6600.

The dam of the calf that won the Junior Championship at the State Fair—the now famous calf club for whom its boy owner refused $2500.00—was bred by J. W. Benoit on Lone Oak Farm.

W. C. Saxton, Glenn, California, carried off the Holstein Junior and Grand Champion ribbons at the Orland Fair with a daughter of Madaline Camelia King—a cow bred by J. W. Benoit of Modesto.

A herd of six Holsteins including two cows that have been milking eight months and a three year old heifer, at their last test in a semi-official yearly run averaged 53 pounds of milk and 2.58 pounds of fat. They are Modesto purebreds. Dairymen with scrub cows, do some figuring.

On the H. E. Cornwell ranch at Modesto there is five acres of Pearl popcorn grown for silage and now ready to harvest. It is conservative enough to say the five acres will more than fill the 100-ton silo. The corn was planted July 3rd following a crop of barley that also almost filled the silo. 200 tons of good silage from five acres in one year. Next!

U. S. Webb, attorney general of the State of California, today filed formal notice here of appeal from the recent judgment of Judge J. C. Needham in the superior court of Stanislaus county in the quo warrant suit against the Milk Producers Association of Central California. The court dismissed the suit on a demurrer.

A recent rigid T. B. test of the Gotshall & Magruder herd of registered Holsteins at Ripon failed to find a single reactor among 114 head. The owners have built a new and modern milk house and are installing an ice machine. The milk from the herd will be sold in Oakland as Grade A raw milk and will bring a nice premium.

J. P. Murphy, who is said to be the originator of the co-operative creamery plan in California, has tendered his resignation as manager of the Dairymen's Co-operative Creamery at Tulare, according to an announcement of the board of directors. Murphy has been directing head of the creamery since it began operating 11 years ago and its success is ascribed primarily to his efforts.

The Dairy Division of the U. S. Department of Agriculture is working on the problem of the cost in the production of milk. They have organized community groups in seven states as a starter. Each group consists of about 20 representative dairy farms, with a supervisor in charge. One wise feature is that cost items are collected as far as possible in terms of quantity rather than price, so that results may be interpreted at any time using prevailing prices.

There is a very decided surplus of alfalfa hay in the dairy sections known as Dixieland and Dairyland near Chowchilla in Madera county. Some growers are holding for higher prices while others are offering to sell at $20 in the stack and find no buyers. Some stacks have been sold at $15 and $16. A number who sold off their cows intending to get rich selling hay are now looking for cows to eat the hay nobody wants to buy, but good cows are going to be hard to find, so many were sold off in the spring.

A silo-building demonstration was held on the Polhemus dairy at Elk Grove, Saturday, October 2nd. A number of interested dairymen met and, under direction of an expert from the University Farm, put up a Farm Bureau silo in a few hours. Two men, after this experience, can put up one of these silos in two or three days, at a cost of about $2.60 per ton capacity with prices of material as they are now. Several silos of this type in the Elk Grove district are proving satisfactory.

A fleet of brand new trucks, owned by the Northern California Milk Producers Association, is now busy gathering and hauling to the Sacramento plant milk that formerly went to the Utah Condensed Milk plant at Galt. Differences over collective bargaining caused the association to divert the milk of its members to its own plant. The result to the dairymen is a better price for milk, but Galt is worried lest a lack of milk to keep it going may cause the loss of the corporation owned condensery. The dairymen say they are not worrying.

Sheep and Goats.

The second Annual Livestock Show at Tulare was a financial success as the final balance shows a surplus of $2145.

The Texas Agricultural Experiment Station, College Station, has issued a bulletin covering experimental work extending over a series of years relative to the "Searing Iron vs. the Knife for Docking Lambs". Results favor the knife in all cases.

"Silent Alamo" Farm Light Plant
—furnishes electric light and power for the country home. Runs without vibration. Write for catalog.

"Duro" Water Systems
The all-round water system for the household. Furnishes water under pressure at small cost. Send for catalog.

"Universal" Milking Machines
—enable dairy farmers everywhere to add hours to the day for other duties. Write for catalog.

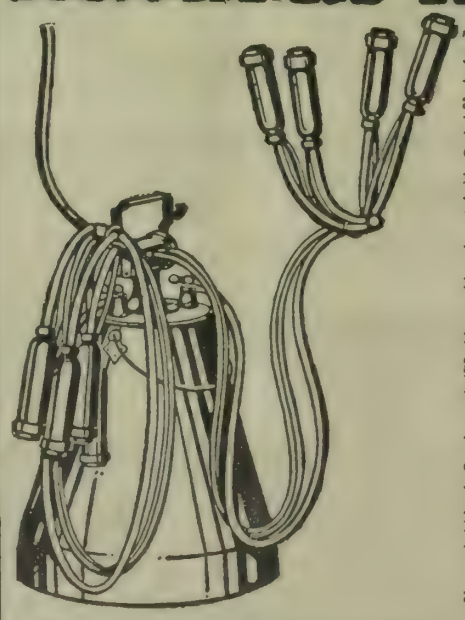
Pumps
Horizontal Centrifugal pumps, Vertical Centrifugal pumps, Direct-connected Centrifugal pumps. Write for catalog.

"Louden" Barn Equipment
Get 25 per cent more milk, save feed, and save labor, by making your cows comfortable with Louden Equipment. Write for catalog.

Gas & Oil Engines
We can furnish you with any kind of an engine in any size you require. Write for catalog.

Name_____
Address_____
Cut out this ad, sign your name, check the catalogs you want, and mail to us.

Universal natural milker



The Universal Natural Milker enables thousands of dairy farmers to add hours to the day for other duties—and to put extra profits into the bank. Why not you?

Two times a day, every day, Universal is on the job saving time.

Cows like its gentle alternating action and the farmer gets more milk. That means MORE PROFIT.

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A surplus of $35,000 is reported by the directors of the State Fair over and above all expenses. This is said to be the largest surplus ever obtained. The management will request an appropriation of $4,000,000 for improvements from the Legislature this winter.

At a sale of horses at Moscow, Idaho, on October 7, one three-year-old filly sold for $230, another for $240, and a four-year-old brought $275, while many of them went between $200 and $225. The people want good horses and are willing to pay for them.

Milk goats are becoming a factor in the dairy industry in Oregon. According to an exchange, over 3000 goats of the milk breeds are now owned in the "Web-foot" state, necessitating the formation of a corporation to handle the products with headquarters in Portland. More importations of purebreds are being made.

The "closing rule" which became effective June 1, 1920 in the registration of jacks and jennets in the Standard Jack and Jennet Registry of America, Inc., has been temporarily suspended to allow the registration of the final lot under the measurement rule. All those who have jacks or jennets that are qualified for registration under the latter rule should lose no time in attending to the matter.

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DUROC-JERSEY SOW for sale—Golden Aena, Registration No. 390586, King's Col. stock. Farrowed April 18, 1918. Average litters fine. Fine condition. Will farrow November. Bred to Pathfinder stock (El Dorado Boy). No. 1 brood sow. Will sell at a bargain. Worthy E. Marks, P. O. Box 332, Placerville, Cal.

DUROCS—BIG-TYPE—HIGHEST QUALITY—popular blood lines. Herd headed by Johnson's Defender, Jr., and Western Pathfinder. Bred sows and gilts and young boars for sale at moderate prices. Greenwood Farm, Witherow & Stafford, Live Oak, Cal.

DUROC-JERSEY BOAR for sale—El Dorado Boy. Registration, No. 167705. Pathfinder stock, No. 1 Breeding. Farrowed March 30, 1919. Average litters, 11½. Fine condition. Good points. Will sell at a bargain. Worthy E. Marks, P. O. Box 332, Placerville, Cal.

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JACK LONDON RANCH, Glen Ellen.—Exceptionally good weanlings. Bred sows and gilts. One good yearling boar and one fall boar. Prices reasonable.

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POLAND CHINAS — Service boars, brood sows. Young boars and gilts. Best quality at reasonable prices. Let me know your wants. Edward A. Hall, Rt. 1, Box 39, Watsonville, Cal.

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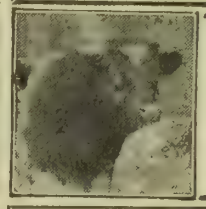

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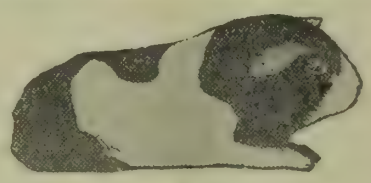

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A pair will breed; female cavies, and they have five litters a year, which is five hundred litters, and the Government figures three young to a litter, which is 1500 young, and figure that the first three litters from your original 100 breeders will have young during the same year that will be 300 litters, and at three to a litter, which amounts to 900 young. Add the above 1500 young to 900, makes the total of young from your original cavies 2400 for the year, and at our contract price of $1.20 per pair, for you can rest assured that about half will be males and half females, and your profits for the end of the year will be $1440.00 from your small investment, and you will still have your stock that you had to begin with.

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Successful Dairying--Breed, Weed, Feed

(Written for Pacific Rural Press by Ralph Newman.)

This week, fellow dairymen, meet Mr. J. R. Gallagher of Bodega. Mr. Gallagher would not admit it, but he is well worth meeting as you will agree, when you read what he told me at his dairy the other day.

Twenty-one years ago Mr. Gallagher went up near the coast in the hills of Sonoma county and bought a dairy ranch. It was stocked with 99 cows. The breed? They were not a breed—they were just cows, as nearly all female animals on dairies were at that time. That first year those 99 cows made just 13,665 lbs. of butterfat. How do I know? Well, I saw the original statements returned to Mr. Gallagher by the creamery that bought it. He has every statement received, from the day he began to the present hour. That's one peculiar thing about this dairyman; he makes a startling statement and then he pulls the cold figures on you to back it up. When he talks production he knows to a cent just what he is talking about, and sticks the irrefutable proof under your nose.

As I was saying, the first year 99 scrub cows made 13,665 lbs. of fat. That is an average of 138 lbs. per cow, which, by the way, is still just about the average for the 4,000 cows in that district—one of the oldest in the state. The district has stood still for 21 years. Not so, Mr. Gallagher.

Purebred Bull.

One hundred and thirty-eight pounds per cow did not look good to Gallagher and he began casting about to see what could be done about it. He came to the conclusion that the trouble was in the cows. No matter what was stuffed into them or what care he gave them, they would not make the milk—they were not that kind of cows. He bought a purebred Jersey bull and started breeding up, and, as best he could by "guess work," weeding out. For fifteen long years he kept at it, using purebred Jersey bulls, disposing of the cows he thought were the poorest, and saving the heifers he considered best. And after fifteen years of this work that took some courage and grit—he didn't say that, but I do—he found himself with a herd of pretty fair-looking grade Jersey cows with an animal average fat record of 185 lbs. That was an increase of 47 lbs. per cow in fifteen years.

Now listen—he talks rapidly and you mustn't miss this. At the end of the fifteenth year he heard of the cow-testing association and jumped at it. No more guess work for him! He went right on breeding up with the use of the best purebred bulls he could find, but he did his weeding out on the reports the cow tester turned in. The first year of testing showed him that he owned just one cow that had made 300 lbs. of fat in a year. At the end of the second year were eight cows with 300 or more pounds of fat to their credit. And now, after five years of testing, he has twenty cows that average 326 lbs. each and the entire herd average per cow is 262 lbs. In 15 years of breeding up without testing he made a gain of 47 lbs. per cow. In five years of the same breeding up with scientific testing added to his method he made a farther gain of 77 lbs. per cow. Do not these figures talk? Yea, verily, they should, from the Sonoma hill tops! 138 lbs. of fat from a scrub; 185 lbs. from a better herd grade, and 262 lbs. from a still better herd animal selected with a test scale and test bottle.

Figure It Out.

Now is that all of the story. In the beginning 99 cows gave him 13,665 lbs. of fat in a year. Now 75 cows make 19,650 lbs. of fat in a year. Twenty-four fewer cows to feed, one less man to pay, and 5,985 more pounds of fat in a year. Don't the figures talk? Not "naming any names," there is another herd in that district of 132 cows. The owner of this herd required three more men than Gallagher, had 57 more cows to feed, and produced 300 lbs. less of butterfat last year. Figure it out for yourself!

Speaking of figures. We might never have heard of Mr. Gallagher if he hadn't kept his records. When the draft began depleting our farms, it called for a young man working for Gallagher whom he could not spare. In an effort to keep this young man producing fat—a war necessity—his employer took his records and went before the Exemption Board. Those figures talked so persuasively that the young man stayed on the ranch and is there yet.

In presenting his case, Mr. Gallagher put the argumuent for cow testing in a new, and so far as I know, original way. He figured out the value of butterfat in terms of a man's labor, and in doing it evolved the most overwhelming argument in favor of higher producing cows that I have ever seen. The figures have been tabulated for him by University authorities, and that chart ought to be dropped from an airplane onto every dairy ranch in the country. But for fear the plane will not get around to it, here are some of the figures. He takes 25 cows, one month's proceeds and one man's labor. Herd No. 1 of 25 cows each prducing .75 of a pound of fat a day will produce 562.50 lbs. a month. No. 2 of 25 cows, each producing 1.10 lbs. fat a day will turn out 825 lbs. a month. No. 3 of 25 cows each producing 1.44 lbs. a day will make 1080 lbs. a month.

One Man's Labor.

Now with fat at 65c—the average in this district last year—see what one man's labor means when applied to these three herds. Herd No. 1 will bring you in $365.62 for one man's labor. Herd No. 2 will bring you $536.25 for this same man's work and herd No. 3 will return you $702.00 for the same man's labor.

Then the cost of labor to produce 100 lbs. of fat with these different herds is figured out. With labor at $100 a month, herd No. 1 will require a labor cost of $17.80 a month for every hundred lbs. of fat, herd No. 2 will do the trick for $12.12, while herd No. 3 will produce fat at a labor cost of $9.26 per 100 lbs.

Now if you will do a little figuring on your own account, you will discover that herd No. 1 will not give any dairyman one red cent of profit, while any herd poorer than that—and there are lots of them—will be maintained at an actual loss. There is a fair profit in handling herd No. 2, and, even with conditions as they are at this writing, a man with a herd measuring up to or running ahead of herd No. 3 stands a chance of really making money.

This is a rather long array of figures and will repay careful study. As I pulled out of the barn-yard, however, Mr. Gallagher seemed anxious not that I should emphasize his remarkable figures, but that I should help spread the message that any dairyman with a scrub herd may build it up into a profitable herd if he will use good, purebred sires, conscientiously test his cows, feed with judgment, and courageously weed from the bottom. This is his formula for success, and I hope he will pardon me if I add that he is living proof of its practicability.

The people who have achieved, who have become large, strong and vigorous, who have reduced infant mortality, who have the best trades in the world, who have an appreciation for art, literature and music, who are progressive in science and every activity of the human intellect, are the people who have used liberal amounts of milk and its products, according to Dr. E. V. McCullum of Johns Hopkins University.

On invitation the Stanislaus County Holstein Breeders' Association sent three delegates to Chowchilla to assist in organizing the Madera County Holstein Breeders.

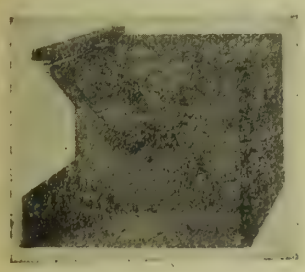
Poultry for Profit

THE UTILITY OF THE TRAPNEST.

[A reprint mainly from a University of California circular, now out of print, reproduced here by special request.]

Poultrymen are coming to realize more fully, year by year, the great value of the trapnest in breeding for egg production, just as dairymen have came to appreciate the enormous value of the scales and Babcock tester in improving the dairy herd. In order to know accurately just how many eggs a hen produces; in order to know which are the boarders and which are the profitable fowls, trapnests must be used. The purpose of a trapnest is not to increase the egg production of the present layers but to find out just how well the best of the present flock are laying, in order that the good layers may be identified and mated to males out of good layers, for use as breeding stock to produce offspring with better laying qualities than the average of the present flock. Trapnest the breeders for they are going to produce the future layers, but do not force them for egg production. The hen that naturally produces better than her sisters is more prolific and will make the best breeder. The ideal average egg production may be fixed at 180 eggs per year, which is considerably above the average production of commercial flocks of 500 or more hens. The present average may be raised toward this ideal by breeding from naturally strong layers, year after year, that lay well-shaped, nicely colored, good size (2 ounces), strong-shelled eggs; that have good type and abundant vigor, and by mating them to well-grown, sturdy males out of naturally prolific mothers.

This is a simple box nest, costing very little more to build than an ordinary wooden nest. The trapdoor is hinged at the top. To set nest the door is swung inward and held at the bottom by a wire hook (see figure 1) at just the right height so that when the hen enters the nest and walks under the door her back will raise it up just enough to release the hook and allow the door to quietly shut behind her. The door does not close with a bang but slips slowly down the fowl's back and over her tail after the hook is released, and as the hen goes farther into the nest. As the door swings shut against the outside door stop (a 3-inch straight screw hook), the inside door stop (a bent piece of No. 6 wire) drops down (see figure 1a) and locks it from the inside.



Lower figure, California Trapnest No. 1 (modified Connecticut Trapnest). The end views above show how the trapdoor is set and how the inside stop locks the door from the inside after it is tripped.

To release the hen, turn the outside door stop up, swing the door outward and catch her in the two extended hands as she comes out. Tuck her under the left arm, slide the left hand under her breast and seize the shanks at the hook joints. Hold the shanks up, read and note the legband, which should be placed with the figures upside down on the fowl's leg so that it may be easily read when the fowl is held as here described and then let her go. When saving eggs for hatching the hen number, pen number and date are usually marked on the large end of the egg, thus 268/27/2-10, after releasing the hen. At other times the egg is simply credited to the hen on the record sheet hanging in the pen. A blank form of record sheet may be secured on application to the Poultry Division of the University of California.

To reset the nest, insert a pencil between the door and the side of the nest raising the inside stop with the left hand; pust the door inward with the right hand and hook it in place. Then turn the outside door stop back to a horizontal position. Both hook and inside door stop should be on the left side of nest to facilitate of setting nest quickly.

Figure 1 shows the door covered with wire, but some operators prefer to use two boards instead. When boards are substituted for the wire, they should be nailed perpendicularly to a top and a bottom cleat leaving a 1-inch space between the two boards. When boards are used only a top and bottom cleat or rail are required, thus avoiding the work of making a door frame as shown in the illustration. This door is easier to make, keeps the nest dark, yet permits good ventilation, and the center opening enables the operator to readily see into the nest. The bottoms of these nests are made of ⅛-inch mesh hardware cloth. This permits all dirt and soiled nesting material to sift through as it is broken up and keeps the nest much more clean with less labor.

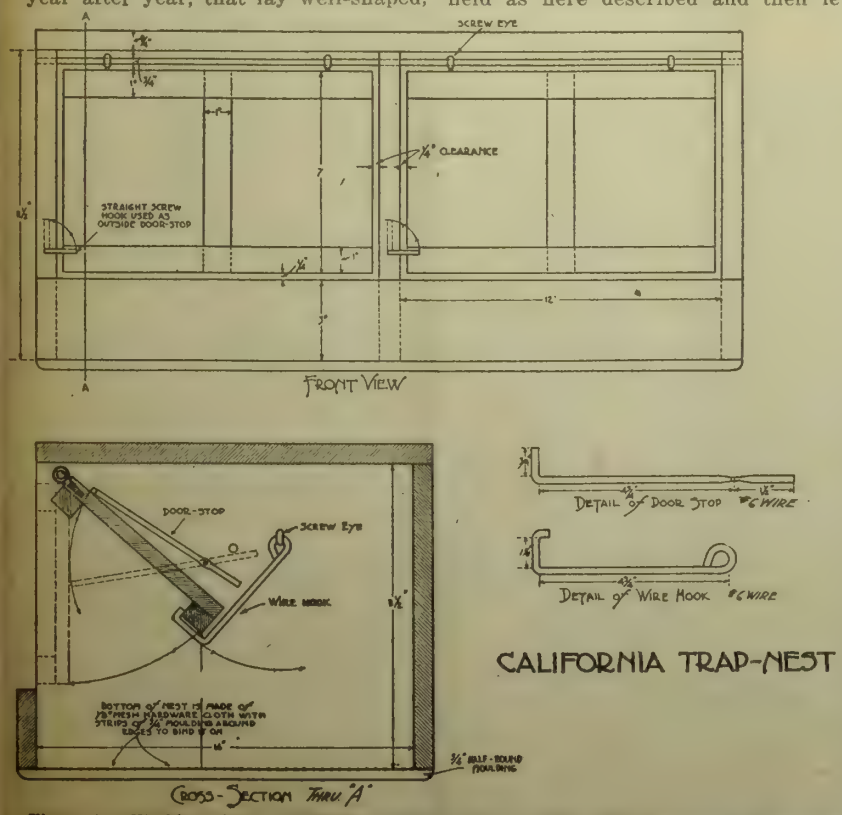


Figure 1a—Working plans of California Trapnest No. 1. This drawing shows a wooden door instead of the wire door. Either style may be used. Bottom of trap door is hung 5¾ inches above bottom of nest when set for Leghorns and other small breeds. For larger breeds, it will have to be set higher.

POOR EGGS IN EGG SHOW.

(Written for Pacific Rural Press by D. J. Whitney.)

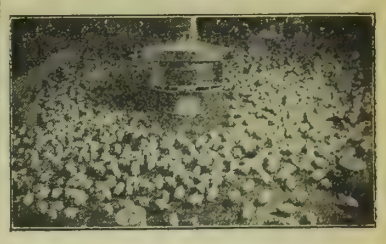
It is not hard to see how difficlt it is to select from a flock of fowls a few that will win blue ribbons at a poultry show, but eggs are simple things and with a good-sized flock of well-bred, well-housed hens, it would seem to be a simple enough affair to select a dozen eggs that were practically perfect. Yet in the egg show at the Tulare Fair the judges have no difficulty in going hurriedly through a number of plates of eggs and discovering enough offshaped esgs to indicate clearly which plate deserved the blue ribbon. A close examination, after an expert incubator man picked out the trouble, showed several eggs in the losing plates that were a little too pointed at one end, or with slightly roughened shells.

The practical value of the matter lies mostly in the selection of incubator eggs. If a person will put off-type eggs on display in competition, he is likely to make a mistake in seseltcing eggs for his incubator. The best hatches and the finest type chickens are likely to come from the best appearing eggs.

DYSENTERY IN TURKEYS.

To the Editor: I have some turkeys and they are dying. They seem to get a dysentery and linger for four or five days. I have lost four in about eighteen days. Could you tell me what would be good for them?—M. A. D., Eugene, Calif.

The death of the turkeys occurring only four or five days after the appearance of the dysentery indicates that they were poisoned, perhaps by arsenic or copper used in connection with spraying mixtures, or by some poisonous plant. At times the lack of opportunity to obtain charcoal, shell, and proper hard grit results in the development of a fermentation in the intestines that causes a fatal dysentery. Usually, however, the fowls do not die until ten days or two weeks after the first appearance of the discharge. Endeavor to discover the cause of the trouble, supply charcoal, shell, and grit if the fowls are not already supplied. Give Epsom salts at the rate of one tablespoonful for each large mature turkey, or a less quantity in proportion to size or age. For medical treatment give twice a day to each large turkey subnitrate of bismuth, 10 grains; powdered cinnamon or cloves, 3 grains; powdered charcoal, 3 grains. Mix with the feed, or make into pills with flour and water.



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RAISE FALL CHICKS—They are profitable. Write for circular. See why they pay. Chicks every week. R. I. Red. Barred Rock, White Leghorn. Also booking for spring delivery. Order now and get a desirable date. Safe arrival guaranteed. Stubbe Poultry Ranch and Hatchery, P. O. Box 67, Palo Alto.

PETALUMA HATCHERY — Established 1902. If you want good fall layers, get chicks in the fall. We guarantee satisfaction. There will be but few chicks hatched this fall. The wise ones are buying. Send for prices. L. W. Clark, 615 Main St., Petaluma, Cal.

WHITE LEGHORN BABY CHIX from heavy-laying Hoganized Stock. Safe arrival of full count, live, strong chix guaranteed. Price list and interesting literature on application. The Pioneer Hatchery, 408 Sixth St., Petaluma, Cal.

SPECIAL SALE—Barred Rocks, White Orpingtons, White Houdans. Old and young stock. Get your cockerel for spring breeding, $2.00 and up. R. P. Lutzi, 1217 20th Ave., San Francisco.

DOLLAR EGGS COMING!—A few hundred White Leghorn pullets from early spring hatch for sale. Priced at $2.00 and $2.50 each in dozen lots and up. No culls. Geo. L. Horine, Winton, Cal.

ATKINSON'S PEERLESS ANCONAS lay more and eat less than other breeds. 50 big husky cockerels, $5 and up; 200 pullets, trios, and pens for sale. Hatching eggs. Catalogue free. J. W. Atkinson, Box B, 130 Willard St., San Jose, Cal.

GOLDCROFT BUFF ORPINGTONS. Columbian Wyandottes and White Leghorns. Heavy laying strains. Breeders and young stock. Samuel Abrams, Box 13, Los Altos.

PULLETS, $2.00 Cockerels, $5.00 each and upward; White Leghorn, Brown Leghorn, White Rocks. Mahajo Farm, P. O. box 597, Sacramento, Calif.

HART'S MAMMOTH BRONZE TURKEYS—Large, well-marked, year-old hens. Thrifty young stock of both sexes. Albert M. Hart, Clements, Cal.

WHITE HOLLAND TURKEYS — A few seven-months-old breeding toms at $10.00 each. A. P. Ward & Son, Calistoga.

CHICKENS, DUCKS, GEESE, GUINEAS, Pea Fowl, Pigeons. Wm. A. French, 545 W. Park St., Stockton, California. Stamps.

EASTMAN'S "BRED-TO-LAY." Hoganized and trapnested. Barred Rocks. Fall Chicks. Fairmead Poultry Farm, Fairmead, Cal.

GUINEAS, MATED PIGEONS, CANARIES—Good stock. E. A. McKinley, R. F. D., Box 91, Ukiah, Cal.

SUPERIOR BLUE ANDALUSIAN cockerels for sale. Mrs. A. T. Ford, 347 Griffitt Ave., San Mateo, Calif.

BOURBON RED TURKEYS—Buff Orpingtons. The Ferris Ranch, R. 2-144D, Pomona Calif.

NEW YORK EGGS HIGHEST EVER KNOWN.

The latest report of the Bureau of Markets, U. S. Department of Agriculture, reports the egg market at New York thus: "Eggs steady to firm and unchanged, except "Extras," which are from ½c to 1c higher. The press dispatches state that the highest prices on record there prevailed last Monday when the price rose to $1.10 a dozen for Fancy Extras. The sustained high market in the East is the salvation of the California egg producer, as it furnishes a profitable outlet for all of California surplus stock of fancy grade, and prevents a glutting of the local market and consequent lowering of price.

Eggs of the Fancy Ertra grade declined 2c locally last Monday, due to a dull market, while inferior grades dropped a cent and Extra pullets held their own. There is little apprehension of a serious break, however, as the active demand in the East and the heavy excess of withdrawals over new storage, both East and West, preclude such a conclusion. Per contra, there is the prediction of Frank G. Heilman, chairman of the executive committee of the National Poultry and Egg Association, that the advent of cold, dry weather in the Mississippi Valleys will stimulate egg production in that section in a large way, and there is the menace of heavy shipments to this port of the Australian article.

Eggs in storage in San Francisco for this month to date of this writing (October 19):

Month	Into Storage	Out of Storage	Balance on hand
October 1	73	2,941	90,481
" 2	112	1,431	89,162
" 4	43	1,588	87,617
" 5	99	1,297	86,419
" 6	None	2,617	83,802
" 7	None	2,096	81,706
" 8	350	1,281	80,775
" 9	66	2,282	78,559
" 11	212	1,629	77,142
" 12	17	1,848	75,311
" 13	29	1,436	73,904
" 14	196	1,083	73,017
" 15	14	2,596	70,435
" 16	401	1,361	69,475
" 18	5	1,579	67,901

CO-OPERATION OF POULTRY PRODUCERS.

General Manager J. H. Barber of the Poultry Producers of Central California, in his fourth annual report, submitted to the stockholders at their annual meeting at San Francisco, October 4, furnishes the following interesting figures relative to the egg business in his territory. The report shows a healthy condition of the organization and a wonderful expansion of the egg business since the work was begun under its auspices.

During the eight months of 1920, ending August 31, the Poultry Producers of Central California received 352,948 cases of eggs valued at $4,723,945, according to the annual report of this corporation, issued by General Manager J. H. Barber. Using these figures as a basis for estimation of the balance of the year the annual business of the company will amount to $7,000,000, according to Barber.

The report shows that membership has grown since the last annual report to well over 2000 members, controlling considerably over 2,000,000 hens.

Business in 1917 (eleven months) totaled $2,049,484.23, according to Barber, and in 1918 the total was $3,731,524.55, an increase of 82 per cent in total sales; in 1919, $4,680,065.76, an increase of 128 per cent over 1917; in 1920, with three months to go, the total is already $4,723,945.15, a sharp increase over 1919.

Total authorized capital stock of $250,000, fully paid up, says the report.

Since January 1, 1920, 234 cars, containing 113,456 cases of fancy eggs, have been shipped to New York and other Eastern markets.

PIE MELONS.—AN IMPORTANT OMISSION.

In our issue of Octooer 9, in the reply to L. H. H., Ramona, regarding the feeding of pie melons, an important portion of the last sentence was inadvertently omitted. The complete sentence reads as follows: Laying fowls should be kept in good flesh but must not be allowed to become fat.

For Winter Eggs Use it NOW

RIGHT now—*today*—when your hens are building up after the molt—when your pullets are maturing and developing their laying organs—give them Pratts Poultry Regulator. It costs but a trifle—only about one cent a hen per month—but, as life-long users say, "*it does make hens lay.*"

Pratts Poultry Regulator

for nearly fifty years has been America's most popular poultry tonic and conditioner. It is a medicinal preparation, not a food—a natural tonic and health builder. Used daily at the rate of a rounded tablespoonful for each ten fowls, it strengthens the weakened molters—hastens the growth of the pullets—starts them laying early—helps keep them at it all winter. The *extra* eggs are *clear profit!*

Try this plan and get that extra profit. But be sure to use the genuine Pratts. Then we take the risk, because

"Your Money Back If YOU Are Not Satisfied"

There's a Pratt dealer near you. See him at once.

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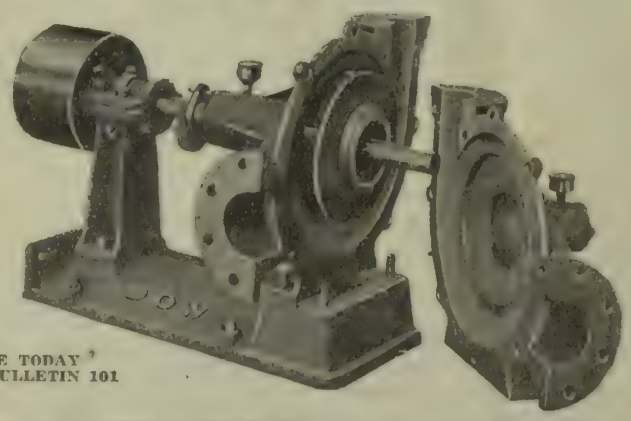

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Last Year's Income, $10,000
On high terrace, overlooking Pacific and beautiful mountain range; macadam road Los Angeles passes door; short drive big city; 5 acres, wonderful crops canteloupes, grapes, figs, vegetables, grain; ideal for poultry; water piped all over; apples, pears, plums, oranges, peaches, grapes; beautiful 2-story 10-room house, bath, concrete cellar, piped water; new garage, cattle shed, poultry house, brooder house; owner unable care for it, makes low price, $11,000, part cash, balance easy terms. Details this and other farms, groves, ranches, California and many states, page 91 Strout's Big New Illustrated Catalog Farm Bargins, just out. Copy free. Call or write for free copy. STROUT FARM AGENCY, 503FA Wright-Callender Bldg., Los Angeles, Calif.

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On good road, near city and town; all tillable, good grain land, except 10 acres in 8-year-old olive trees, easily brought heavy bearing; 7-room house, piped water supply, 2 reservoirs; barn, other buildings, delightful scenery; owner unable occupy, makes low price quick sale $3350, part cash, balance easy terms. Details this and other groves, farms, ranches California, many other states, page 91 Strout's Big New Illustrated Catalog Farm Bargains 33 States, just out. Call or write for free copy. STROUT FARM AGENCY, 503FA Wright-Callender Bldg., Los Angeles, Calif.

FOR SALE—Hollister Ranch on Battle Creek, Shasta county, Cal. 316 A—80 A. best bottom land; 50 A. upland. Gravity ditches, perfect sub-irrigation system. Riparian water rights since 1860, together with deed to 666 2-3 inches water additionally. All equipment, horses, mules, implements. Face value any issue. U. S. Liberty bonds accepted in full payment. W. W. Hollister, El Nido Rancho, Route A, Box 85, Anderson, Cal.

DAIRY PROPERTY for rent or sale, central location, in Ventura county, where no other dairy exists at present. Abundance of cheap water, about 100 acres producing alfalfa, other 150 acres to be planted, near railway station, alongside 2 miles of paved road, cement irrigation pipes all over the ranch. Water, both by gravity or pump. For details, inquire owners. G. Ferro & Co., Ventura, Cal.

MEXICAN LANDS—400 acres in American colony near Hermosillo and Southern Pacific Railway. Rich river bottom land; will grow anything; two crops each year. Investigate this opportunity to start big farming at small cost. Owner, 329 Ochsner Bldg., Sacramento, Cal.

FOR SALE—Ranch of about 1100 acres in San Benito county, Calif., 20 miles south of Hollister, 18 acres of apricots and walnuts, 8 acres of alfalfa, 10 acres more checked for alfalfa. Tractor, farm implements, horses; price, $80 an acre. For particulars, write Mrs. M. F. Stone, Paicines, Calif.

WANT TO HEAR from party having farm for sale; give particulars and lowest price. John J. Black, Press St., Chippewa Falls, Wisconsin.

FOR SALE—160 A. deep level loam, will grow anything. 70 miles from San Francisco. Reasonable terms. A. M., Box 2230, Pacific Rural Press.

MISCELLANEOUS.

WANTED—Man speaking Spanish with experience in propagation (avocado, citrus and vegetables to work with Mexican labor on ranch near La Habra. Write R. L. Reynolds, La Habra, Cal., giving particulars of qualifications and experience in truck growing, gardening, Nursery, or orchard. Permanent position.

FARM SUPERINTENDENT now open for engagement. Practical and scientific training in all branches, especially purebred stock. Will consider salary or shares. Excellent references. Box 2210, Pacific Rural Pres, San Francisco.
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All sizes standard pipe and wrought iron screw casing. All kinds of fittings. Guaranbaum Pipe Works, 160 Eleventh street, San Francisco.

BERRIES—We can furnish you with first-class plants of all leading varieties. Now is the time to order. Plants will be scarce later. Send for Price List. M. J. Moniz, Berry Specialist, Sebastopol, Cal

FIREMEN, BRAKEMEN—for railroads nearest their homes—Everywhere, $250-$300 monthly, experience unnecessary (which position). Railway Association, Desk W9, Brooklyn, N. Y.

WANTED—Expert experienced man for fruit ranch as working foreman; salary and percentage. Married man of university training preferred. Cling peaches and prunes mainly. Address C. W. Jenkins, Live Oak.

CITRUS EXPERT for South Africa. Must be familiar with all phases of the industry. Salary, £800 per annum, three years' contract. Fare both ways. Address F. T. Bioletti, Berkeley.

WANTED—Dairy to work on shares or salary and bonus, by experienced young married dairyman. One string or more. References. L. C. Miller, 211 E. Jefferson St., Stockton, Cal.

ALL SIZES OF PIPE and screw casing, both new and second-hand, dipped and undipped. Guaranteed. Prices right. Shecter Pipe Works, 304 Howard St., San Francisco.

RELIABLE CABBAGE SEEDS—I grow them. You want them. Let's get together. Write for special offer on what you need. Isaac F. Tillinghast, 32 Podel St., Santa Rosa.

APPLES FROM GROWERS—Bulk pack, Bellflowers, $1.50 per box; No. 2 grades, $1.10; Newtowns, $1.75; No. 2, $1.25. Edward A. Hall, Rt. 1, Box 39, Watsonville, Cal.

FOR SALE—Two Monitor Bean Separators, size 5-E; condition as good as new. Call or write, California Almond Growers' Exchange, 18th C Street, Sacramento, Calif.

EXPERT ON TROPICAL and Sub-tropical Horticulture for South Africa. Salary, £450 to £550 per annum and free quarters. Address F. T. Bioletti, Berkeley.

$30 A DAY selling Powerene. Equals gasoline at 5c. The equivalent of 20 gallons, express prepaid, $1. W. Porter Barnes, Box 421A33, Santa Rosa, Calif.

CORY THORNLESS Mammoth Blackberry. Write for descriptive price list. Get your plants from the grower. Wm. Mortenson, Rt. A, Box 209, Lodi, Calif.

WANTED—Man and wife—man working foreman for general farm work. Ranch three miles east of Lincoln. P. O. Box 104, Lincoln, Placer Co., Calif.

FOR SALE—Cletrac Tank Type Tractor. Ready to go right to work. Need a larger tractor. Quick sale, $800.00. Rt. 1, Box 365, Turlock.

PRACTICAL ORCHARDIST—University graduate and practical experience; married. Now open for engagement. Box 2220, Pacific Rural Press.

FOR LEASE—360 A. mountain ranch, Santa Cruz Co. Buildings, stock and tools. Share or cash. F. B. Plant, 178 Kempton Ave., Oakland.

CROLEY'S BALANCED HOG FEED—The cheapest feed to fatten hogs. Write Geo. H. Croley, Townsend St., San Francisco, Calif.

FOR SALE—Marmout Barley Seed—clean and good quality, weighing over 100 lbs. per sack. J. D. Rowe & Sons, Davis.

FOR SALE—Ranare Raspberry plants, $75 per 1000. Address Otto Burmeister, Box 304B, R. A. Mountain View, Cal.

TREES, PLANTS, ALFALFA SEED, Etc.—Full stock, best varieties now. Write, J. L. Lawson, San Jose, Cal.

WANTED—One ton Salway or Lovell peach pits. Quote price. R. H. Wilson, Carlsbad, Calif.

STRAWBERRY PLANTS—Improved stove oil burners. Cash Nursery, Sebastopol.

Home Circle Department

WHEN MARY WAS A LASSIE.

The maple trees are tinged with red,
The birch with golden yellow,
And high above the orchard walls
Hang apples rich and mellow;
And that's the way through yonder lane
That looks so still and grassy—
The way I took one Sunday eve,
When Marry was a lassie.

You'd hardly think that patient face,
That looks so thin and faded,
Was once the very sweetest one
That bonnet ever shaded;
But when I went through yonder lane,
That looks so still and grassy,
Those eyes were bright, those cheeks were fair,
When Mary was a lassie.

But many a tender sorrow since,
And many a patient care,
Have made those furrows on the face
That used to be so fair.
Four times to yonder churchyard,
Through the lane so still and grassy,
We've borne and laid away our dead,—
Since Mary was a lassie.

And so you see I've grown to love
The wrinkles more than rosies;
Earth's winter flowers are sweeter far
Than all spring's dewy posies;
They'll carry us through yonder lane
That looks so still and grassy,—
Adown the lane I used to go
When Mary was a lassie.

—Anonymous.

REBECCA'S SPONGE CAKE.

"Not a bit of cake in the house for supper!" mother lamented. "Oh, if I only hadn't sprained my wrist!"

"Let's open a box of bakers cakes," Peggy suggested, glancing up with a little scowl from her story-book.

"Oh, I hate to do that, with Miss Barton here. Its such a simple supper tonight, anyway, for a boarder!"

But Peggy was deep again in her book.

"Mother." Rebecca, ten years old, and two years younger than Peggy, laid down the doll's sweater she was knitting and went to sit beside her mother. "I can make my sponge cake; that's always rather nice."

"It's delicious," mother said, with a hug, "but I don't like to have you bother with it."

"Oh, I don't mind a bit, mother," said Rebecca. So she laid bisque Arabella carefully away in her cradle and went into the kitchen. It wasn't necessary for mother to know how anxious she had been to finish knitting her doll's sweater.

Miss Barton, passing through the hall a little later, paused a moment at the kitchen door to smile at Rebecca, enveloped in a big gingham apron and bravely whirring the egg-beater. "What are you doing, dearie?"

"I'm just making a sponge cake for supper," Rebecca smiled back. Mother sprained her wrist, you know. I can't cook very many things; Peggy makes beautiful cakes, but I only know how to make sponge cake."

"It's one of my favorite cakes," Miss Barton said, "and I know by experience it isn't a very easy one to make." Her eyes were very earnest and kind as they rested on Rebecca. Then she passed through the hall and into the sitting-room where Peggy lay on the lounge, still buried in her storybook. "Reading another book?" she asked.

"Yes, I'd rather read than do anything," Peggy said. Mother was in the dining-room, moving between table and sideboard, setting the table with her left hand. "I'll come and help you in a minute, mother," Peggy called out. But she read to the end of the story, Miss Barton noticed.

Rebecca's sponge cake proved delicious. Miss Barton praised it very highly, and delighted the younk cook by taking a second piece. "It's one of the finest sponge cakes I ever tasted," she said. Then, with a sudden, flashing smile, "Rebecca, would you be willing to make me a cake all for myself, a whole cake, and not cut it?"

"Why, yes, Miss Barton, I'd love to," Rebecca said, politely concealing any wonder she felt at the request.

"It's wonderful for a little girl of your age. Does it always turn out as well as this?" Miss Barton continued.

"Always," mother said, with loving pride. "She's going to be a fine cook, and she's always the sweetest little helper imaginable."

Rebecca took great pains with her sponge cake the very next morning, and it came from the oven beautiful and light and a lovely golden color. Miss Barton kissed her as she spoke her thanks and disappeared with the cake.

"Do you suppose she's going to take it to somebody who is sick?" Rebecca wondered, but mother shook her head. "I can't imagine, dear," she said.

Two days passed, with nothing further said about her cake. Then one bright morning Miss Barton asked if she might take both girls to the State Fair with her, and the three went off gayly together. Such an interesting morning as they had, going from one big building to another, admiring the wonderful displays of fruits and vegetables and flowers, the "pioneer exhibits" in the old log cabin, the horses and the trained-dog show. Finally they went into the "Woman's Building," where Miss Barton took them to a huge glass case filled with all kinds of cake. "Read that, dear," she said, pointing to a card leaning against a sponge cake which had a neat triangle cut from it.

"Made by Rebecca Olmstead, ten years old," Rebecca read, amazement in voice and eyes. "Why—why, that's the cake I made!" she said wonderingly.

"Surely it is; I entered it in the contest by children under sixteen, and look at this!" "This" was a blue card on which was printed, "First Prize."

"Oh!" Rebecca exclaimed, her face very rosy, her voice almost shaking.

"The first prize is $10," Miss Barton added, "and I can't tell you how proud I am that it is our little girl who won it."

It was a good thing that the other sights had been seen, for Rebecca after that walked on air, she was so amazed and so wonderfully, dazedly happy. "I never had so much money in all my life," she whispered. "Oh, Miss Barton, how perfectly lovely you were to do it for me!"

"Your sponge cake won its own honors, dear," said Miss Barton. "I merely had the honor of introducing it to the fair."

All the way home Peggy's eyes were very thoughtful. She was thinking how she might have won a prize for her angel cake if only she had made one that evening for Miss Barton's supper. But—she looked at her little sister, trudging so joyously beside her, and suddenly squeezed that little sister's hand.

"I'm so glad you did win," she whispered, and she meant it, too.—The Child's Hour.

An Early California Flourmill. Photo by Mr. V. W. Chestnut.

With Hallowe'en approaching, any lad, so fortunate as to live near an oak tree, may be found "playing at Indians." He will be seen making, from the acorns, tiny pipes of peace. He has read in Hiawatha of those of red pipe-clay. Acorns were more than playthings to the California Indian. They were their staff of life. They were, of course, also used for personal adornment, both acorns and hazel nuts being strung, like beads. There are several strings of hazelnut beads still to be seen at Mission San Juan Bautista. Those of acorns, said once to have been there, however, have disappeared.

Of California acorns, one variety at least, when roasted in a campfire, makes a desert for the roadside meal almost as tasty as roasted chestnuts. Most acorns, however, have rather a bitter flavor. The sweet acorn of Andalusia, land of the Alhambra, is gathered and sold regularly for human consumption. Its sales occur in those interesting markets, where, because of lingering Moorish influence, one feels only a few camels are needed to make them Oriental bazaars. Tracts of Andalusia's sweet acorn oaks are also fenced and let to owners of hogs. The porkers are weighed both on entering and on leaving. Rental is charged upon their net gain—surely a just method of computation.

The oak played an important part in the early history of England. Its groves were England's first temples, just as the Gothic arch was borrowed from intergrown forest trees and just as the concept of stained glass cathedral windows came, when men saw sunsets through leafless winter trees. The Druids who worshipped in these oak temples revered, as God-sent, the mistletoe of the oaks. It was gathered with a golden sickle by a white-robed priest while near the oak grove a white bull was sacrificed.

Any lad will enjoy competing with the squirrels in putting underground a few acorns. It is fascinating to watch them sprout and grow. A school might easily improve its environment by such shade giving plantations. Further notes on Indian use of acorns as food may be had by reading the National Geographic Magazine for August, 1918. Books such as Dr. Jepson's "Trees of California" may be had from any California County Library, by the lad who, while making his acorn pipe of peace, wants to know more about California oaks.—From California Nature Study League, care of C. M. Goethe, 720 Capital National Bank Bldg., Sacramento, Calif.

OCTOBER GARDENING.

Begin in October the pruning of deciduous shrubs and trees. In gardens they need constant training and trimming to preserve shape and increase vigor and to enable them to answer the requirements of the artificial life you must teach them to attain your purposes. You need not wait until the leaves fall; when they become limp and lose their natural pose, their work is practically done for the season.

Continue planting bulbs for winter and spring blooming. Dig up and replant singly such bulbs when they have become massed in too large clumps, else they will pinch each other into inferiority. Fertilize the borders where the rains will awaken the violets to new growth and keep the fall blooming roses and chrysanthemums well fed and watered, so that your garden will be glorious at Thanksgiving. Keep the lawns and walks clear of falling leaves, but do not burn anything which can be dug into the soils of the borders. Keep the old lawns well clipped and start new ones. Be active in garden effort; a little over-exertion is never so safe as during delicious October days, which have neither chill nor burning.

Scatter seeds of California poppy and the whole range of native wild flowers. The rains will start them—it is Nature's way.

Continue disbudding and care and watering of chrysanthemums if rains are slack.

Continue sowing sweet peas deeply in light soil and finish sowing of stocks and pansies for late winter blooming.

Cineraria seedlings should be set in shaded places, for winter and spring glory of long duration. Delphiniums, if they are dormant and not indulging in fall bloom, can be reset if more plants are desired.—California Garden Fowers.

A MESSAGE OF YESTERDAY FOR TODAY.

(Written for Pacific Rural Press.)

In glancing over some old files of the Pacific Rural Press I came across an article on the Home Circle page, written in 1871, in which the author deplored the fact that not enough pride was taken in the outward appearance of the farm house. It would be interesting to know how much effect the preaching done then, and that the paper has kept up since, has had. How much advance has been made? Are the premises in general more tidy than they were then? Are the buildings more tasty and better maintained? Have we a better array and grouping of flowers and shrubs than our fathers had? Wouldn't it be of interest if someone who has lived through the whole period would tell us?

Anyway, the criticism made in '71 has plenty of kick left in it, and, as the season for planting approaches again, we give it a voice once more. A lot more pride in the general appearance of the place will not hurt us a bit. We pass places almost daily where a few hours spent in picking up trash and general tidying up would pay large dividends. There are many farms left where the homestead, for want of a few trees and shrubs, is so bleak and uninviting as to give a passerby the "willies." We wonder if the occupants are not a lonely, discouraged lot instead of the contented and happy people pleasant surroundings help to make. We drive over roads where the road-bed is good enough, in many cases even paved, but where the roadside is lined with nothing but decrepit fences and melancholy weeds. We pass through villages that are a blot on the landscape when a little pride, backed by the judicious use of paint and ornamental trees and shrubs, would make of them veritable gems.

However far we may have gone since '71, we have not gone far enough. What's the trouble? Don't we care how things look? Are we too busy to put on the finishing touches? Don't we know how to make the place look neat and homelike? It certainly cannot be that we can't afford the financial outlay that need be involved. We are inclined to think the early Home Circle writer was right; it is that we don't care; we lack civic pride. How are we going to develop civic pride in people who do not care? Do you know how? Do yu know a whole rural community where it has been successfully done? If so, who did it, the preacher or the undertaker?

To clean discolored white enamelware, make a strong solution of baking soda and soft water; put utensils in it and boil hard. They will be as bright as when new.

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THE PACIFIC RURAL PRESS, 525 Market Street, San Francisco

LIKE BANQUO'S GHOST, THE GOAT WON'T DOWN.

(Written for Pacific Rural Press.)

A casual reference in these columns to certain peculiar characteristics of goat's milk, called out by some questionable utterances of a correspondent, has drawn down upon the head of the writer a vertitable storm of criticism—caustic and virulent out of all proportion to the occasion. We have been denounced as crassly ignorant, violently prejudiced, and have been accused even of being aligned with sinister "interests" harboring deep and dark designs to sweep the goat and his cohorts from the face of the planet. We hardly know whether to feel abused or amused at the ferocity of this attack. One correspondent adds contritely in a postscript that he hopes we will not "feel too bad," as he is not as peeved as the vitriolic broadside let loose at us in the text of his letter would lead us to believe. That was a healing balm, indeed, and made us feel better. Perhaps other of our correspondents feel less vindictive than they sound, and their bark may be worse than their bite.

However that may be, this storm, like others, has had the salutary effect of clearing the atmosphere to some extent, inasmuch as it has thrown some light, new to many of our readers, on the real issue at stake: the odor and taste of goat's milk—are they offensive or inoffensive? And the answer seems to be this, that, despite a widespread and popular belief to the contrary, goat's milk can be produced, under proper sanitary and dietetic conditions, devoid of the disagreeable properties popularly attributed to it. This is a decided gain for the devotees of the goat, whose lacteal secretion has peculiar virtues as well as other peculiarities.

That the popular prejudice here adverted to has some tangible and very respectable grounds for support is borne out by careful and conservative writers of the subject as well as by the hearsay testimony of some of those who have partaken of the milk and spewed it forth—so they allege. These attestants, however, must have partaken of samples drawn from what one of our lady correspondents called "common scrub goats, not well kept, and associating with odorous bucks," which samples have been all too common in towns and cities where the goat industry is carried on mainly in the back lots and commons of their suburbs by needy and thrifty amateurs.

It now appears that many enthusiastic Californians have taken up the goat industry in a scientific way, much as they have taken up other lines of constructive effort, and are producing a superior goat with a superior product of milk and other things.

That such milk is produced we can now cheerfully attest, for the most convincing of many arguments received on this point was a quart bottle of such milk sent in by Mrs. T. B. Dean of Oakdene Goat Farm, Walnut Creek. We approached the sampling test with fear and trepidation. We tasted, distasted the evidence of our senses, and tasted again. Well, we might as well make a full and open confession. It was the most delicious draught of milk that ever passed our lips.

So, at this stage of our "education" in the goat milk course, we would register our judgment and appraisal of its value by likening it to the little girl in the familiar rhyme:

"There was a little girl
And she had a little curl
That hung way down on her forehead;
When she was good
She was very, very good,
But when she was bad she was horrid."

Forgot Her Prejudice.

Editor Home Circle: I was amused at your article on goat's milk in issue of September 25th. When my sister comes visiting me she always brings along a can of condensed milk, as she could not go goat's milk on account of odor, etc. I was taken suddenly ill this summer, and sister was sent for. The matter of table fare was not thought of in the disturbed state of household affairs, and our regular milk was served up in the usual family way. Nobody thought of goat's milk until sister suddenly made the remark, "My, what nice milk you have!" A dead silence followed. If I had thought of it I would not have allowed the children to offer her goat's milk, as I knew she did not even like to try it—but the deed was done. She has never brought condensed milk to my house since.—Mrs. C. R. H., Sebastopol, Calif.

USES OF HONEY.

The simplest way of using honey is to serve it like jam or sirup with bread, breakfast cereals, boiled rice, pancakes and other mild-flavored foods. Honey or a mixture of honey and sugar sirup can be satisfactorily used for sweetening lemonade and other fruit drinks. Sirup of any kind is more convenient for this purpose than undissolved sugar, and some housekeepers keep a sirup on hand for this purpose.

The fact that honey consists principally of sugar and water and is slightly acid suggests it as a suitable substitute for molasses in cookery. It can be used in the place of molasses in all forms of bread, muffins and cakes and makes a more delicately flavored product.

When honey is to be substituted for common sugar, it is desirable to know not only how it compares in sweetness, but also how much allowance must be made for the water which it contains. By weight, it is estimated that a cupful of honey will correspond to a little more than a cupful of cane sugar. Besides the sugars, there is about one-fifth of a cupful of water in a cupful of honey. Therefore, in making cake one should substitute honey for sugar cupful for cupful, and for each cupful of honey, use one-fourth cupful less of milk or other liquid called for. This rule was found to hold good in tested recipes and should be kept in mind, as it would make special honey recipes unnecessary, and makes it possible for a cook to modify ordinary recipes so that honey can be used in place of sugar.

Besides slightly changing the flavor of the cake, honey used in the place of sugar makes it keep moist longer. A honey cake made with butter will keep its quality until the butter grows rancid, and one made without butter will keep fresh for months and even improve in flavor.

Granulation in honey is no sign of adulteration and can be overcome by heating the honey, which should be done in a double boiler or other kind of water bath. If the temperature does not go over 160 degrees F., there is little danger that either color or flavor will be affected.

Unless in a sealed package, honey should be kept in a dry place; otherwise it is likely to absorb moisture and spoil. Heat and dryness are usually found together in the household and ordinarily the safest places for honey are the warmest places.

OPPORTUNITY FOR YOUNG WOMEN

The Columbia Hospital of San Jose offers to young ladies a course leading to certification as Trained Attendants. This course is for one year and is open to young women between eighteen and thirty with grammar school education and acceptable references as to character. An allowance of $20 a month with room and board will be granted to those accepted. Further particulars on application to

SUPERINTENDENT OF NURSES, COLUMBIA HOSPITAL.

SHADY STUNTS WITH SHODDY. LET'S CALL A HALT.

(Written for Pacific Rural Press.)

While you are thinking about legislative matters, here is something worthy the attention of every farm woman.

When the last Congress adjourned, there was left in committees of both houses a proposed measure known as the French-Capper Truth in Fabrics bill. This is a pure cloth law. After twenty-six years of effort on the part of its friends and of opposition by the interests dealing in food stuffs, we got a pure food law compelling the makers of foods to brand them for just what they are. Nobody questions the benefits the public has derived from that law. I once saw several tons of worthless millet seed shipped to a fruit cannery. Inquiry developed the fact that is was used there in making "strawberry" jam. They can't get away with that any more.

Now the makers of cloth, especially "woolens," are doing just what unscrupulous food makers used to do. And they are able to do it because there is no law to prevent them from calling shoddy, wool. If you think they are not doing it, just listen to this from J. F. Walker, president of the Fleece Wool States Association:

"I doubt if the manufacturers are allowing the people of the United States three pounds of virgin wool per capita this year," he said. "I remember a short time ago visiting a certain woolen mill. There wasn't a pound of virgin wool on the permises. They were turning out woolen blankets of straight shoddy, which should not have retailed for more than $15.00 a pair. When I got back here to Chicago I found those blankets selling as "all wool" in the leading high class department stores and the price mark on them was $45.00 a pair. A competitor had a sale of these blankets for $39.50."

Rags from Europe.

The other day a press report stated that a steamer had arrived with 1700 tons of rags from Antwerp and 525 bales of rags and cuttings from Germany for American shoddy mills. How do you like it? Shoddy, which is mostly old rags gathered from the ends and alleys of the world and reworked, often as many as eight times, is largely "all wool" fabrics for which you are paying fabulous prices.

The result is two-fold. You ask for wool cloth and get reworked rags, from Germany. You pay for "all wool" cloth with the hope that it will give warmth and wear somewhere near commensurate with the price you pay, and get shoddy that isn't worth a whoop in a whirlwind. You are stung—bamboozled—bunked.

Meanwhile your husband, or your neighbor's husband, cannot sell his wool clip for enough even to buy shoddy clothes for the family. The president of the National Sheep and Wool Bureau, in his annual address, stated that there are more than four billion pounds of new wool in the world's warehouses, that American textile manufacturers used 113,000,000 fewer pounds in 1919 than in 1918, and that the drop will probably be greater this year. You women want real wool cloth, but you can't get it. The sheep men have the real raw material, but they can't sell it at a living profit. The textile manufacturers, to make greater profits, are letting the wool pile up while they make woolen goods out of reworked rags.

What is the answer? Well, one answer, the one at hand, is to force the manufacturers to stamp every yard of their cloth entering interstate commerce with its content of virgin wool and of wool substitutes. This the French-Capper Truth in Fabrics bill, will do. Make it law and enforce it, and the "old rag" man will experience a slump in his business while the fleece of the sheep will begin to move.

Get Behind Measure.

We farmer folk, and especially the women, should get behind the measure as Congress meets, and see that it is speedily made into the law of the land. It will not be unless we bring mighty pressure to bear. We can't wait 26 years for this law as we did for the pure food measure for, as the secretary of the Wyoming Wool Growers' Association has said:

"If the French-Capper Truth in Fabric bill is not passed quickly, so as to open the eyes of the public to the fact that the textile manufacturers are meeting their demand for virgin wool cloth with re-worked rags, there will soon be no wool grown in the United States to supply their demand and no sheep and mutton, either. Sheep men cannot continue to grow sheep if the textile manufacturers will not buy their wool at a living profit."

BUTTERED BEETS.

In preparing beets for cooking, leave the tap-root on, unless a part of it is wilted and dried. This part may be removed. Also leave on about an inch of the leaf stems. Be careful not to bruise the beets in washing them. If there should be a rough canal on the beet roots, filled with rootlets, it is best to drop the beets into boiling water for five minutes, then dip in cold water and drain before putting to cook in plenty of boiling salted water.

The flavor of beets is impaired by being cooked in gravel-flavored water. They should be immaculately clean, as they are not in too many cases. It is hard to spoil a beet, but there is a great difference between a perfectly cooked and a careless cooked one.

Young beets need to be boiled gently for about an hour. Extra large ones may be put in the kettle fifteen minutes before the others. When tender, pour off cooking water, cover with cold water, and rub off skins at once. They will remain hot at the core.

Chop quickly, butter to taste, press into cups, and pour out on a lettuce leaf, or leave till cold, and turn out on a lettuce leaf, and eat with French dressing, just a little for seasoning.

The butter will bind the hot chopped beets so that they will mould.

If it is desirable to have boiled beets on hand for garnishing salads, boil them in rather heavily salted water, with about two tablespoons of vinegar to a quart of water. When the beets are cooked skim them out into a pan of cold water, then put them into a jar, and strain the cooking liquid over them. The vinegar keeps the liquid from turning black. A little powdered sugar over the beets also helps to keep them in a cool place. In France, where cooked beets are so universally sold for salads, the skin is left on.

FRESH BLACKBERRIES.

Fresh blackberries for breakfast in the middle of October would be enjoyed by anyone and are a reality in one home where the writer recently spent a few days. These blackberry bushes bear almost continually from the middle of June until frost comes. They are used as a screen between the yard and barn and outbuildings, and are trained on a trellis of moderate height. They are watered regularly so the crop continues to come on instead of being exhausted with one effort.

They seem to require so little attention and are so satisfactory in the production of fruit that it is a pity that every farm does not have a row of them so placed that they can be picked in comfort.

FRUIT BASKETS.

Make a rich pie paste and bake over inverted patty tins. Roll remainder of paste one-eight inch thick and cut in strips one-fourth inch wide. Twist strips in pairs and bake over a small baking powder tin, thus making handles.

Fill cases with fruit, either fresh or cooked, sprinkle with sugar, insert handles, and garnish fruit with whipped cream. Serve on small plates. The amount of paste it requires for a two-crust pie will make six baskets.

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"Bargains," so-called, are constantly being offered in player pianos.

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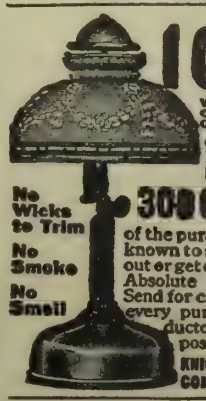

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Bran Bread.—One cup sour milk, 1 teaspoon soda, 1 teaspoon salt, ½ cup molasses, 1 cup whole wheat flour, 2 cups bran, ½ cup raisins, ½ cup chopped walnuts. Bake in a slow oven one hour.

THE MARKET REPORTS

SAN FRANCISCO.

San Francisco, October 20, 1920.

WHEAT.

A slight demand and few inquiries features the week's wheat market and continued dullness is expected. Very little trading of any description is reported in this market.

Wheat .....$3.75@3.90

OATS.

No let up is in evidence for relief of the long contested dull market in oats. Prices quoted are nominal and are merely nominal. Portions of the new crop of red feed are being sampled.

Red Feed, ctl. .....$2.35@2.40

BARLEY.

There is a much steadier demand for barley than had been in evidence during the previous week, and the offers and sales are hovering between the prices quoted below. Although fluctuatios are thought probable, uncertainty prevails as to a probable increase of decline.

Feed Barley, ctl. ..... $2.00@2.05

CORN.

Quotations are the same and the market is inactive. Few offerings have been made.

Egyptian, white ..... Nominal
do, brown ..... $2.80@2.90
California .....$3.00@3.10

FEEDSTUFFS.

Prices are all the same and all deals have been of a negligible quantity during last week.

Rolled Barley .....$44.00@45.00
Rolled Oats ..... $50.00@55.00
Alfalfa Products .....$39.00@40.00
Cracked Corn ..... $80.00@81.00

HAY.

Although the top price of alfalfa is quoted at $1.00 lower than last week, the hay market is considered much stronger than it has been for some time. Farmers are taking notice of the new situation, which has been helped by the stronger aspect of the wheat market. But few sales are being made and producers are holding on to their product. Only 941 tons of hay were received in San Francisco during the past week. The previous week's receipts were 1,549 tons.

Anticipatd further strengthening of the market has been confirmed to a certain extent by the placing of a goverment order for 4,000 tons for overseas shipment. A strong and steady market prevails for alfalfa and reports indicate that much of the crop has been destroyed by recent rains in the interior of the state. The large amounts in storage have, however, precluded any advance in present prices. Farmers seem to be hopeful for advances during the coming week. Prices quoted are f. o. b. cars San Francisco, less $1.00 for commission charges.

Wheat, hay new .....$26@28.00
Tame, oat new .....23@25.00
Wild oat new .....17@19.00
Barley .....17@20.00
Alfalfa, 2nd cutting .....$21@24.00

RICE.

Continued dullness prevails with price quotations unchanged.

California fancy $7.10
do, Choice, ...$6.75
Southern Honduras, long grain $11.50
China, No. 1, double mat..... $10.25
Blue Rose, fancy .....$ 9.75
Fancy Head (Philips & Co.), 10 lbs $12.40
California Japanese, No. 1 .....$7.10
do,No. 2 .....$6.75

FRESH FRUITS.

(Wholesale prices paid by commission houses.)

Apple receipts have been heavy with further increases in arrivals expected during the coming week. Although a large demand for all grades of apples continues, slight price declines are thought probable soon. Plums and peaches are scarce. Cantaloupes are still arriving, but there are no more flats. Casaba receipts have been heavy. There has been much trading in grapes, which held the most active place on the fruit market during the week.

Apples: Wagner's $2.00
do, Spitzenberg ..... $2.50@2.75
do, Jonathan ..... $2.00@2.50
do, Gravenstein, fancy .....$1.75@2.00
do, Bellflowers .....$1.35@1.75
do, Rhode Island Greenings ..$1.50@1.75
do, Virginia Greenings .....$2.00@2.25
Plums .....$1.25@2.00
Peaches, 4 baskets .....$1.50@1.75
Pears .....$2.00@4.00
Strawberries, 6 12-oz. boxes ....$1.15@1.25
do, Flats ..... Nominal
Casaba, crate $1.00
Blackberries, drawer, 12 oz. draw... 50@60c
Raspberries, drawer .....65@80c
do, 8-oz boxes ....30c@40c
do, 8-oz. boxes .....40@50c
Cantaloupes, Standard .....$1.50@2.00
do, Flats ..... 50@75c
Watermelon, lb. .....1@1¼c
Persian Melons, lb. .....2@3c
Grapes,, large box .....$2.00@3.50
do, crates ..... $1.50@3.00

POULTRY.

Only small broilers are scarce, with an advance on prices of that variety reported. Heavy receipts are noted in all other grades. Seven cars of Eastern poultry arrived during the past week. The market on the whole is firm in tone and prices are generally changed, an upward trend being noticeable.

Broilers, small .....55@60c
do, large .....47@50c
Hens, mixed color .....34@36c
do, Leghorns .....28@35c
Roosters, young .....32@35c
do, old .....20@22c
Fryers .....35@38c
Squabs .....70@80c
Geese .....25@30c
Ducks, ...28@32c
do, old .....28@30c
Belgian Hare, live .....18@22c
do, dressed .....22@25c
Jack Rabbits .....Nominal
Turkeys, young, large, lb. .....50@55c
do, old .....50@55c
do, dressed, lb. 60c

BUTTER.

The market on all grades has been fair throughout the week, with a gradual weakening which developed into a decided weakness at the close. Shipments to outside markets have practically ceased for the time being and heavy arrivals from the North are expected because of the closing of condenseries there.

	Thu.	Fri.	Sat.	Mon.	Tu.	Wed.
Extra	56	56½	..	56½	56½	55½
Prime 1sts	55½	55½	..	55½	55½	54½

CHEESE.

The cheese market has continued dull with little interest exhibited. Concessions have been made in many cases to move stocks. Accumulating stocks have forced prices down on California varieties.

California Flats, fancy 24½c
do, Firsts 19c
Oregon Triplets 26½c
Oregon Thirds 32½c
Triplets, fancy 32½c

EGGS.

The local market has been dull with large shipments to Eastern markets reported. Pullets are being used here while ranch eggs are being shippd East.

	Thu.	Fri.	Sat.	Mon.	Tu.	Wed.
Extra	.....81½	80½	..	78½	79	78½
Ex. Pullet	62½	62½	..	62½	63	63
Dirties	....65½	65½	..	65½	65½	66½
Undersized	55	55	..	54	55	55

HONEY.

The market is still very weak. With the slight strengthening of the sugar market, honey prices have been saved from further declines and are quoted at the same figure as last week. Dealers expect a firmer tone during the week.

POTATOES, ONIONS, ETC.

(Wholesale prices quoted by commission houses.)

Rhubarb is off the market. Receipts of vegetables have been light and are meeting with a very poor market. Most all varieties are dragging. Quotations on onions and cucumbers are higher because of the small quantities arriving. Celery arrivals have been heavy, and a decline in celery prices is expected during the week. Green corn is almost finished. Potatoes are stronger and are moving better, so far the same prices are quoted on the wharf. Large quantities are coming in.

Turnips .....$1.25@1.50
Peas, Halfmoon .... 12@13c
Beans, wax, lb. .....5@6c
do, green, lb. .....7@8c
Carrots, per sack .....$1.25@1.50
Green Corn, sack .....$2 50@3.00
Lettuce, local, doz. ....25@30c
Cucumbers, Alameda, lug box ..$1.00@1.25
Tomatoes, Alameda, large box.... 75c@1.50
Summer Squash, box 35-40 lbs. ..90@$1.15
Egg Plant box .....75@90c
Potatoes, New River, cwt. .....$2.00@2.25
Onions, yellow, sack .....85@1.00
do, Red .....75c@85c
Green Onions, box, 25 lbs. .....$1.50@1.75
Celery, crate ..... $3.00@3.25

BEANS.

A better market for beans is developing. There is an abnormal demand for blackeyes and prices have advanced nearly a cent a pound on that grade. This was due to shorts trying to cover their October shipments. Whether this condition will continue depends on shipmets. With the exception of blackeyes, however, most other grades are quoted at much lower figures than prevailed last week.

Pinkos .....$8.25@8.50
Blackeyes .....$5.65@5.90
Cranberries .....$6.00@6.25
Red Mexican .....$5.25@5.50
Pinks .....$5.40@5.65
Large Whites .....$4.25@4.50
Small Whites .....$4.25@4.50
Limas, S. F. prices .....$7.50@7.75
do, Baby, S. F. prices .....$7.00@7.25

DRIED FRUIT.

There are no changes in prices and the market continues exceedingly quiet. No intterest is evidenced on the part of either buyers or sellers.

Apricots.

Extra fancy Moorpark, lb. 30c
Fancy Moorpark, lb 23c

Growers Quality.

Growers' quality—Fancy, lb. 26½c
do, lb. 24½c
do, Choice lb..... 22½c
do, Slabs, lb.....20c
do, Standards, lb. 18c

Raisins—The following prices have been established as the opening prices of the California Associated Raisin Company for the 1920 crop of raisins.

Muscat, Sun Maid, seeded, pkg, 36-16s.. 21c
do, Fancy..... 36-16s 21c; 48-12s 16¼c
Bulk, seeded, Baker's Sun Maid, 25-lb. bx. 20c
do, Fancy Sun Maid, 25-lb. boxes 20½c
Loose, 1-crown, recleaned, lb.....20c
do, 4-crown, recleaned, lb. 24c
Layers, 3-crown, flat pack, 5-lb. box..$1.30
do, 3-crown, flat pack, 5-lb. box..$1.30
Clusters, 4-crown, flat pack, 20-lb. box $4.70
do, 4-crown, flat pack, 5-lb. box..$1.40
Sun Maid, 100-lb. boxes $21.00
Thompson Seedless, Sun Maid, recleaned, lb. 20½c
do, Sun Maid, bakers, lb.....21½c
Sultanas, Sun Maid, recleaned, lb.....20¼c
do,Sweat-box, layers, lb. 19c

..Figs—Following prices have been established as the opening prices for the 1920 crop of dried figs.

White Adriatic, 12-10 oz. $1.25; fancy, $1.30
do, 12-8 oz. .....$2.00; fancy, $2.05
do, 50-6 oz. .....$3.10; fancy, $3.20
do, 70-4 oz. .....$3.30; fancy, $3.40
Adriatic, bulk, Standard, 50-lb. boxes, lb. 9c
do, bulk, fancy, 50-lb. boxes, lb. 13c
Black Mission, Standard, 50-lb. boxes, lb. 7c
do, Fancy, 50-lb. boxes, lb. 12c

Prices f. o. b. Fresno.

Peaches.—Following prices have been established as the opening prices of the California Peach Growers for the crop of dried peaches.

Yellows, Standard, lb 15½c
do, Fancy, lb. 17½c
do, Extra fancy, lb. 18½c
do, Slabs, lb. 15¼c
Muirs, Standard, lb. 15¾c
do, Fancy, lb. 18¼c
do, Extra fancy, lb. 19½c

The above prices are bulk basis.

Shipment: September, October, November. Seller's option. The above prices are guaranteed against Association decline until January 1, 1921.

Prunes—Following prices have been established as the opening prices of the California Prune and Apricot Growers, Inc., for the 1920 crop of Prunes.

Sunsweet Brand, 20-30s, flat, lb. 25c
do, 30-40s, bulk, lb. 16c
do, 40-50s, bluk, lb. 15c
do, 50-60s, bulk, lb. 12c
do, 60-70s, bulk, lb. 11c
do, 70-80s, bulk, lb. 10c
do, 80-90s, bulk, lb. 9c
do, 90-100s, bulk, lb. 8½c

First half September shipment, ½c premium; last half September shipment, ¼c premium. The above prices apply only to contracts already issued

SPECIAL DECIDUOUS REPORT.

Sacramento, October 20, 1920.

Shipments of deciduous fruits have been reduced to vine production almost entirely, even the foot-hill districts have finished tree shipments and are now confining themselves to grapes.

Occasional cars of Fall pears and quinces are going from the Santa Clara Valley. The major portion of the pears are being stored in the eastern cities. In many instances we note the sale of Emperor grapes below that of Malaga and Cornechon varieties. However, that may be due to the fact that the best quality of Emperors are being shipped in drums to be sold later. Average prices from the various grape districts are about as follows: Tokays, $2.65@4.25; Malaga, $2.70@$3.12½; Cornechon, $2.65@2.85; Emperor, $2.40@2.45 per crate; Alicante Bouschet, $3.12½@$4.13. Cars selling from $2,000 to $4,149, price depending on variety and condition of fruit on arrival.

Special Livestock Market Report

San Francisco, October 20, 1920.

CATTLE—Concerted action apparently on the part of buyers representing both north and south to bear prices are the feature of the week's cattle market. Advices from all points announce uniform prices, namely 9½ cents for top. One thing noticeable is, Nevada is not sending in her quota for this season of the year.

Steers, No. 1, 1000-1200 lbs..... 9 @ 9½c
do, 1200-1400 ..... 8½@ 9c
do, 2nd quality ..... 7 @ 7½c
do, thin ..... 5½@ 6c
Cows and Heifers, No. 1..... 7½@ 8c
do, 2nd quality ..... 6 @ 7c
do, thin ..... 3 @ 4c
Bulls and Stags, good ..... 4½@ 5½c
do, fair ..... 3½@ 4c
Calves, lightweight .....10 @11c
do, medium ..... 8 @ 9c
do, heavy ..... 7 @ 8c

SHEEP—The local mutton sheep market is in a more or less unsettled condition. Last week the run was heavy and values went off fully 2 cents. While this week we note prices have recovered 1 cent with the tendency favoring the old high level.

Lambs, milk ..... 9 @10c
do, yearling ..... 7½@ 8c
Sheep, wethers ..... 7 @ 7½c
do, ewes .....4½@ 5c

HOGS—Receipts have been fairly liberal, but the demand easily absorbed all coming forward at full quotations. The market, however, closed with packers rather heavily stocked, making prices a shade weaker than at the opening of the week.

Hard, fat, grain-fd, 100-150 lbs.....15c
do, 150-225 lbs. 16c
do, 225-300 lbs. 15½c
do, 300-400 lbs. 14½c

Los Angeles, October 19, 1920.

CATTLE—This market remains much the same as a week ago. Offerings continue good and demand only fair. Choice steers are scarce and bringing a little more money, but there are plenty of medium steers and they are slow sale and weak. Cows continue plentiful and the market for them the past week was slow and weak. A fair demand was had for the best, but poor and medium, very dull.

Beef steers, 1000@1100 lbs. ..$9.50@10.50

Per cwt. f. o. b., Los Angeles:

Light .....$15.50@16.00
Prime cows and heifers .....$8.00@ 8.50
Good cows and heifers .....$7.00@ 7.50
Canners .....$4.00@ 4.50

HOGS—Coming in more freely and in sympathy with lower markets East the market the past week was slow and weak. Lights that have been commanding a premium are 50c lower. The dressed meat men continue main buyers and made fair purchasers of the best light. But few hogs are beieg taken for curing.

Per cwt. f. o. b. Los Angeles.

Heavy, averag'g 275@350 lbs. $12.00@12.50
do, 225@275 lbs .....$14.00@14.50
Light .....$15.50@16.00

Rough docked 20 lbs. piggy sows 40 lbs. and stags 40 per cent.

SHEEP—Offerings continue pretty good and wethers and ewes are as dull as ever. A fair demand was had the past week for fat yearlings and lambs were in good demand and higher.

Prime wethers .....$6.00@ 7.00
Yearlings .....$6.00@ 7.00
Prime ewes .....$5.00@ 6.00
Lambs .....$10.00@11.00

LOS ANGELES.

Los Angeles, October 19, 1920.

BUTTER.

There has been a sharp break in this market from a week ago. Pretty general rains north of us with prospects of grass starting early and Eastern markets showing declines and the increased demand for butter substitutes caused dealers on 'change to hault their upward movement, and the feeling soon gained ground that with most everything declining prices had been carried too high. The result was with the opening of our review week prices broke 3c and Friday another cent was taken off, making a decline of 4c for the week and no investment buying at this decline. A very good consumptive demand, however, was had for extras throughout the week. Medium and low grade, however, continue dull. We quote:

California extra creamery 59c
do, prime first 57c
do, first 56c

EGGS.

A steady and firm market was had the past week. Receipts were light, for the week, by rail only 418 cases. Not near enough to meet the demand which holds up well, despite the high prices. The Eastern markets showed little change during the week and the market here was controlled by scarcity. The result was cold storage stocks had to be drawn on freely to make up the shortage in fresh eggs. There being taken from cold storage houses for the week ending October 13, 5,857 cases. We quote:

Fresh ranch, extras 73c
do, cases count 73c
do, pullets 62c

POULTRY.

A steady market was had the past week and very good demand for most offerings. Broilers were in only moderate supply and very good demand to the extent of the supply. The same may be said of friers. Hens continue steady and with only fair receipts what coming in were sold without trouble. Ducks steady and selling very well. Not many turkeys being received and demand very good for what arriving at quotations. We quote from growers:

Broilers, 1 to 1½ lbs. 38c
do 1½ to 1¾ lbs. 42c
Friers, 2 to 3 lbs. 34c
Hens .....29@35c
Roosters (soft bone) 3 lbs. and up 34c
Ducks .....24@25c
Turkeys ..... 40@44c
Geese 25c

FRUITS.

Apples and grapes now make up most of the supply and both in very good demand. Grapes are higher as the receipts are falling off every day. Figs continue to come in freely and selling very well and bringing a little more money. Nectarines and freestone peaches out of the market. Pears steady and in fair demand. Quinces slow sale. We quote from growers.

Plums, Black Diamond, lb. .....9@10c
Peaches, Clings, lb. .....8@10c
Figs, lb. .....8@10c
Grapes, Malaga, lb. .....8@10c
do, Muscat, lb. .....8@10c
do, Cornichons, lb. .....9@10c
do, Tokays ,lb..... 9@10c
Apples: Bellflower 4 tier .....$1.50@1.65
do, Delicious, lb. .....5@6c
do, Jonathan, packed box.. $2.75@3.00
do, Newtown Pippins, 4 tier $1.75@2.00
Pears, lb. .....5@9c

VEGETABLES.

Offerings continue very ample and tone of the market weak. Potatoes go over steady and market dull and lower. The same may be said of onions. Green stuff generally steady and tone of the market firm under lighter offerings. Sweet potatoes dull and weak. Celery lower but moving a little more freely. Lettuce steady and in fair demand. Cabbage dull but unchanged. Cauliflower coming in quite freely and meeting with a very good demand. Tomatoes steady and so are green peppers, and both selling fairly well.

Potatoes, local, cwt. .....$1.75@2.00
do, Northern, cwt. .....$2.25@2.35
do, Idaho Russet, cwt. .....$2.25@2.50
Sweet Potatoes, lb. .....3@3½c
Cauliflower, large, crate .....$2.75@3.00
Onions, Stockton, white, cwt. ....$1.50@1.75
do, yellow, cwt. .....$1.05@1.15
do, Australian Brown, cwt. ..$1.15@1.25
do, local, crate .....50@60c
Lettuce, crate .....$1.15@1.25
Rhubarb, per 30-lb. box .....80@1.00
Peas, lb. .....12@14c
Carrots, bunches, ...30@35c
Summer Squash, local, lug .....50c@75c
String Beans, green, lb. .....8@9c
do, wax, lb. .....8@9c
do, Kentucky, lb. .....9@10c
Cucumbers, lug .....50@$1.00
Tomatoes, home-grown, No. 1 lug....60@70c
do, No. 2 .....25@35c
Bell Peppers, lb. .....3@4c
do, Chile, lb. .....3@4c
Celery, crate .....$4.50@5.00

WALNUTS.

The movement of walnuts to market is now fairly underway. The California Walnut Growers' Association, reporting the shipment the past week of over thirty cars. The trade taking hold quite freely at the prices below.

No. 1 ..... 22½c
No. 2 ..... 16½c
Fancy budded 25½c

Orchard run are selling from independent growers at 12@14c a pound.

BEANS.

This market the past week was again dull, though there was some little doing in mixed lots at the recent decline. No sales of straight cars of limas and whites were made however. The trade still being inclined to buy from hand to mouth. We quote from growers:

Limas, per cwt. $7.00
Large white, per cwt .....$5.25@5.50
Small white, per cwt .....$5.25@5.50
Pink, cwt. $7.00
Blackeyes, cwt. .....$5.00@5.25

HAY.

There is no change to note in this market from a week ago. Receipts continue light and so is the demand. Dairy people main buyers and they only taking such lots as needed

for immediate use. Prices held steady, but tone of the market weak. We quote f. o. b. Los Angeles.

Barley hay, ton	$21.00@24.00
Oat hay, ton	$24.00@27.00
Alfalfa, Northern, ton	$25.00@27.00
do, local, ton	$28.00@32.00
Straw, ton	$ 9.00@11.00

SPECIAL CITRUS REPORT.

Los Angeles, October 20, 1920.

Apparently the lemon is about to climb into the citrus bandwagon with the orange in the matter of price, which is now ruling in the Eastern cities: New York, $6.85 to $7.45; Boston, $6.90 to $7.10; Cleveland, $4.40 to $6.15; Pittsburg, $4.05 to $6.15. As best we are able to learn this rapid change in the market is due somewhat to a shutting off of foreign arrivals to a large extent. The orange market remains firm in all of the leading Eastern auction markets, ranging from $6.65 to $9.50. The California Fruit Growers' Exchange reports that the remaining Valencia crop is less than 1,000 cars.

CALIFORNIA FARM BUREAU MARKETING ASS'N.

REPORT OF SALE.

Tulare, October 12—91, 178, $14.65, Biddle; 83, 200, $14.50, Biddle; 44, 241, $14.50, Biddle; 95, 180, $14.20, Biddle; 102, 158, $14.10, Biddle; 21, 345, $12.00, Biddle. Five cars, 37 consignors.

Visalia, October 13—43, 256, 120, $15.00, Jno. D. Biddle; 89, 198, $14.95, Wilson & Co.; 60, 287, $14.30, Jno. D. Biddle; 26, 148, $14.00, Jno. D. Biddle; 3, 366, $13.00, Jno. D. Biddle. Three cars, 15 consignors

Hanford, October 14—72, 224, 100, $15.00, Biddle; 5, 174, $14.50, Biddle; 3, 176, $14.00, Biddle; 95, 200, $15.35, Donagho 35, ;199, $15.00, Biddle; 74, 149, $14.35, Biddle; 11, 109, $12.70, Patterson; 12, 318, $12.35, Biddle. Four cars, 23 consignors.

Corcoran, October 15—73, 189, $14.50, Bortrum Bros.; 8, 252, $14.00, Bortrum Bros.; 7, 150, $13.50, Bortrum Bros.; 5, 138, $13.00, Bortrum Bros.; 7, 334, $12.50, Bortrum Bros., 1, 440, $11.50, Bortrum Bros. One car, 10 consignors.

Bakersfield, October 16—77, 202, $14.80, F. D. Campbell; 76, 176, $14.50, F. D. Campbell; 8, 326, $13.50; F. D. Campbell; 11, 269, $11.75, Bakersfield Market; 21, 156, $11.75, Bakersfield Market; 70, 132, $11.75, Bakersfield Market; 1, 260, $9.75, Bakersfield Market. Three cars, 15 consignors.

MARKET COMMENT.

Price on Bleached Raisins Named.

Prices on bleached raisins have been named by the California Associated Raisin Company at Fresno. Announcing the price President Wylie M. Giffen pointed out they are relatively about the same increase as made on other goods, with the exception of extra fancy, and the increase of them is much larger as compared with last year than the old price because practically no extra fancy goods are on the market this year. One-fifth of the goods is to go to the California Packing Corporation. Following are prices named: Sulphur—Extra fancy, northern, extra fancy, southern, price 30 cents per pound; fancy northern, fancy southern, 26½ cents per pound; choice northern, choice southern, 23½ cents per pound. Soda: Northern, southern prime, 23¾ cents per pound. Oil Sultanas, 23 cents per pound; Oil Thompsons, 23½ cents per pound.

Prospect for Apple Export Trade.

According to trade opinion the general prospect seems good for export apple trade. Opening prices at Liverpool and London have been high. The English and continental apple crop is light and Canadian competition apparently is lighter than last season. Ocean freight charges are $1 lower this year. It is believed that a large quantity of shipments will be made this fall to Great Britain, Scandinavia and South America. A hopeful feeling prevails and the belief exists that prices will be comparatively good, depending of course on markets in this country and the price limits placed by the governments of the countries receiving the exports.

Wool Market Continues Dull.

The wool market is dull and irregular, although there have been some few sales within the past two weeks and some inquiry principally for the better grades of long staple wool. The opening of the Australian market on October 1st, and reports of stronger markets there have been an encouraging feature; however, their wool stocks were accumulated at low prices and can be sold at a profit while still selling at a figure that will permit Australian woolen goods to be sold in this market at less than cost of production here. Both U. S. and English governments have on hand large stocks of wool accumated during the war.

Canned Fruits Favored "Overthere."

That California canned fruits are popular in Europe is shown by a letter from Edgar A. Foley, Commissioner of the U. S. Department of Agriculture in London to E. G. Montgomery, in charge of the Foreign Market Service of the National Canners' Association. It says in part: "California canned fruits have earned an enviable reputation for themselves in Great Britain. In all the grocery and fruit shops one can see the well-known U. S. brands that have long since become staples in American households. So wide has been this distribution that in five stores within a radius of two blocks from Cross and Blackwell's factory I counted four stores carrying U. S. canned fruits and pickles. I maintain that it is some accomplishment to put California canned fruits and pickles on sale opposite the Cross and Blackwell works. California peaches, apricots, pears and plums have all had a good sale and wide distribution, and to within the last few months have brought top prices."

HOW DOES THE MARKET LOOK?

(Written for Pacific Rural Press by Ned Niccoll.)

The livestock market just now is unsettled. According to reports from the slaughterers and packers around the Bay cities, quotations are largely nominal and purchases in all lines are being confined to immediate needs.

Conditions in the beef cattle market are especially unsatisfactory. In the first place the market on dressed beef has declined about a cent a pound during the past week. There has been an oversupply of half-fat cattle. The coolers are full of steers that should have gone to the feed lot instead of the slaughter house. Buyers generally report that there are very few fat cattle for sale in California.

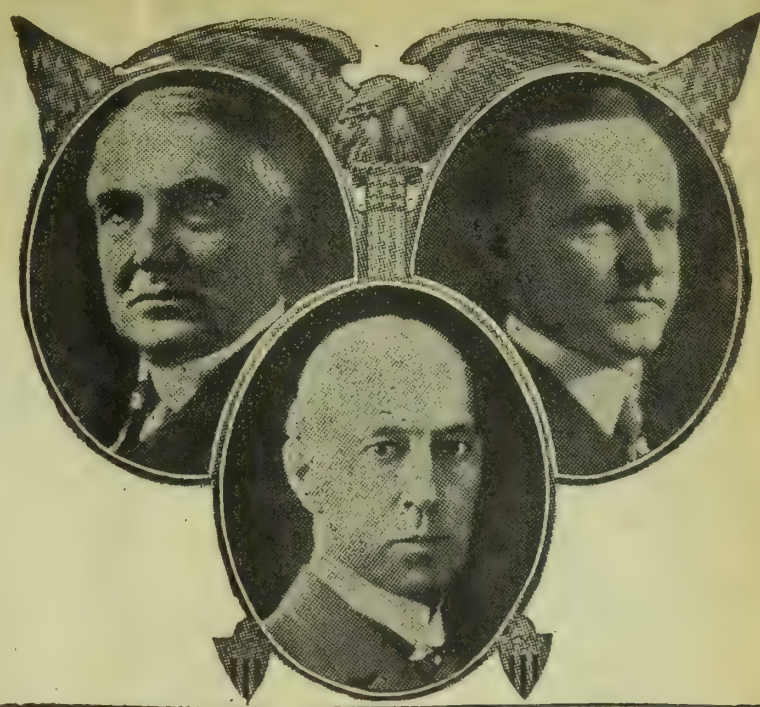
As usual at this time of the year there has been a large number of both cattle and sheep killed on commission. These cattle have ranged in quality from half-fat to very poor and have sold at prices that certainly could not have been satisfactory to the consignor. The wonder is that the grower continues to send in stock on consignment, but they do, and prices are slashed, and the business goes merrily on to the detriment of every stock-grower in the state.

The hide situation is another thing that adds to the feeling of uncertainty. Judging from all available reports there is no hide market. Quotations are purely nominal as no sales of any consequence are reported. A year ago local slaughterers sold hides at prices ranging upwards from thirty cents. Recently a man told the writer that he had in his cellar hides from three months' kill on which he could not get an offer. Hide dealers report that salt hides ought to be worth from ten to twelve cents but that they are not buying.

Regardless of hese unfavorable conditions which prevail, a chat with a number of large buyers left the impression that there was a slight undertone of strength to the cattle market. While very few purchasers for future delivery were reported, the feeling seems to prevail generally that future prices will be slightly higher, or at least that the market will steady itself and that trading will be done a little more freely.

The market on sheep and lambs a little stronger. The wool market is in about the same condition as the hide market. A short time ago the market on dressed lamb and mutton was considerably unsettled. Ewes were sold at prices that were ridiculously low, while lamb and wethers sold at very uneven prices. It might be noted that the worst offenders during this period of price demoralization were the sheep killed on consignment. Most of this stock now seems to be well out of the way, prices on dressed lambs and mutton are stiffening up, and a feeling of a little more optimism seems to prevail.

M. P. Boissevain has been appointed farm advisor for Marin county, and has assumed his duties.



HARDING---COOLIDGE---SHORTRIDGE

Samuel M.

Shortridge

Republican Nominee

FOR

United States Senator

1—SHORTRIDGE stands squarely on the Republican Party Platform and for the Republican National Ticket.

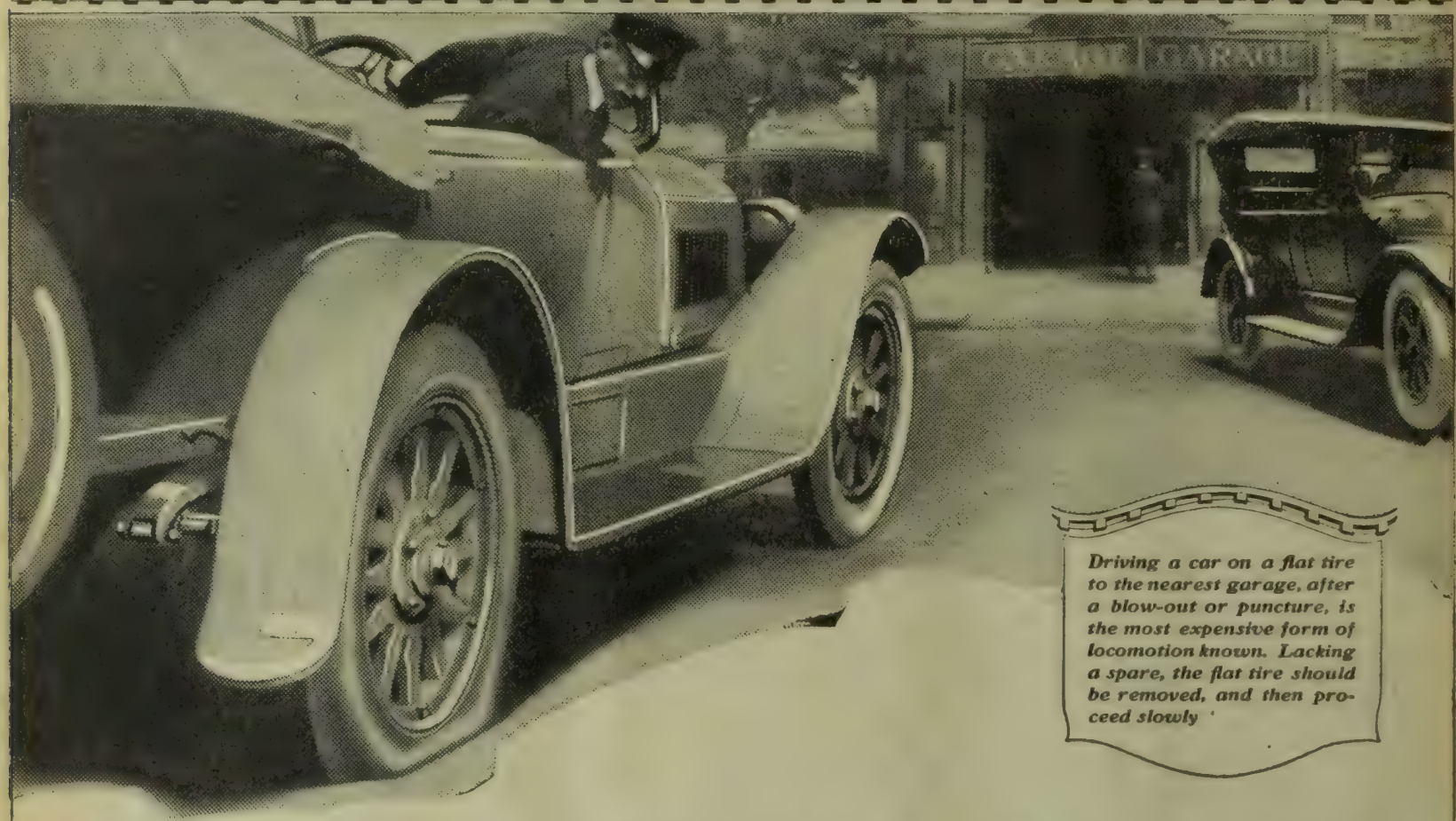
2—SHORTRIDGE is for tariff legislation which will foster California industries and protect California farmers, growers and labor.

3—SHORTRIDGE is pledged by the Republican Platform of California to aid in the extension of farm credits and foster the producers' cooperative market associations. His opponent, now representing this State, is part of the present Democratic administration, which is doing its utmost to destroy our farmers' organizations.

4—SHORTRIDGE is and has been for twenty years advocating Japanese exclusion.

5—SHORTRIDGE is against the Wilson League of Nations.

When will Tire Waste and Extravagant Tire Buying End



Driving a car on a flat tire to the nearest garage, after a blow-out or puncture, is the most expensive form of locomotion known. Lacking a spare, the flat tire should be removed, and then proceed slowly

THERE are signs that intelligent motorists are beginning to give more thought and care to the selection of their tires.

The trouble has been that the average car owner accepted his tire losses too *meekly*—as though nothing could be done about it.

As one new make of tire after another came on the market and old tires worked up new selling features and talking points, car owners no sooner got through buying *one make of tire* than they began to look around for a *different make.*

Ready to take advantage of all this shifting of trade was the irresponsible dealer, with his makeshifts, his compromises, his plausible tire experiments.

His whole attitude was one of *secrecy* and *evasion*. He believed in feeling out each individual motorist's weakness and playing to that, rather than in *helping every motorist to know more about tires.*

* * *

The motorists of this country have stood for a lot. They are beginning *to do something about it.*

Going to the good dealer—the man who is winning a greater measure of public confidence all the time—the man who believes in this principle—

That the best introduction any tire can have is the truth.

Quality is the basis on which his business is founded. And all his efforts are directed towards encouraging a wider *appreciation* of *quality.*

He is the man whom the United States Rubber Company is backing with all of its resources.

With all of its great and wide and long and varied experience. Longer and more varied than that of any other rubber manufacturer.

* * *

Go to the *good dealer* and get a *legitimate tire.*

For *you,* at least, tire waste will then end.

United States Tires

United States Rubber Company

Fifty-three Factories

The oldest and largest Rubber Organization in the World

Two hundred and thirty-five Branches

VOL. C—No. 18 Fiftieth Year

THE PACIFIC RURAL PRESS

SAN FRANCISCO OCTOBER 30, 1 LOS ANGELES

California State Lib 7-1-94

ONE OF THE LARGEST WALNUT TREES IN CALIFORNIA. GROWING ON THE T. O. GRAVES PLACE, NEAR CLAYTON, CONTRA COSTA COUNTY. THE TREE IS A PERSIAN GRAFT ON BLACK WALNUT AND IS A HEAVY BEARER. IT IS ABOUT 60 FEET HIGH WITH A SPREAD OF 55 FEET. THE NUT FROM WHICH THE TREE GREW WAS PLANTED BY MRS. STRANAHAN IN 1860.

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General Agricultural and Horticultural Review

AGRICULTURAL NOTES.

As a result of the corn and pig club contest in Napa county this past season, 24 boys and girls are eligible for the Davis Club Conference in October.

A club has been formed in Santa Cruz county for the purpose of growing purple vetch or seed was organized for work this coming year.

The Fruit Growers' Supply Company in connection with the California Fruit Growers' Exchange transacted a business of more than $8,500,000 last year.

The Farm Bureau of Sacramento county has been instrumental in having agriculture placed in the curriculum in most of the high schools in the county.

The sugar beets growers in experimental plots throughout Humboldt county have been harvested and showed favorable yields and satisfactory sugar content.

The Sperry Flour Company is erecting a $35,000 warehouse and office building along the Southern Pacific tracks at Santa Barbara. The structure is fireproof throughout.

Articles of incorporation of the Corcoran Cotton Growers' Association have been filed with the county clerk of Kings county, with a paid-up capital of $17,235 and a capital stock of $25,000.

Madera county cotton growers, representing 1,200 acres of cotton have selected a committee to organize a cotton pool. The growers will co-operate in the hiring of labor for cotton picking.

Forty-five sacks of Mariout barley per acre on eighteen acres is the yield reported by County Assessor J. W. Moore of San Joaquin county, while common barley, under similar conditions, yielded 32 sacks per acre.

The California Vegetable Union, handling the vegetable products of Staten Island, Sacramento county, have commenced the harvesting of the vegetables growing on 200 acres—the first commercial enterprise of its kind in the delta.

One hundred and sixty large crates of artichokes formed the first shipment from the great fields along the coastside of San Mateo county last week. This shipment was made by the Halfmoon Bay Artichoke Growers' Association.

The purple vetch seed grown in Humboldt county has been harvested with favorable yields. It is planned to distribute the seed in those counties in the state which have favorable soils and climate for the production of seed.

Of the total labor hired on farms of the United States 36.1 per cent is on the monthly basis with board, 15.5 on the monthly basis without board, 31 per cent by the day, excluding extra harvest help and 17.4 per cent in harvest time.

The San Benito Farm Bureau has inaugurated a project to introduce Mariout barley into San Benito county. Twenty-five or thirty demonstrations as to the desirability of Mariout barley will be run this coming season.

Some interesting results have been obtained by the farm advisor of Monterey county, with carbon bisulphide for the eradication of morning glory. This work has not gone far enough yet, however, to formulate a definite plan for this treatment, but it has proved effective where tried.

During the first quarter of the present season—from July 1 to October 1—the farmers of the United States marketed 321,000,000 bushels of wheat as compared with 450,000,000 bushels marketed in the corresponding period of 1919—a reduction of nearly 29 per cent.

Crop Production Manager Paul Riser of the California Vegetable Union announces that harvesting of the fall crop of potatoes in Sutter Basin will begin shortly. The spring crop this year averaged 107 sacks to the acre and ran as high as 200 sacks to the acre.

Members of the Santa Rosa Corn Club have personally agreed that that county is well adapted to raising a high quality of corn that produces a good yield even without irrigation. Matured yields of over 40 bushels per acre were obtained by club members without irrigation.

According to figures issued on October 16 the deciduous fruit shipments from the state duruing the last season will be 3,000 cars in excess of those of the previous season. Shipments to date total 26,504 carloads, as compared with 23,249 carloads at this time last year.

The harvesting of rice in Shasta county is now in full swing. Reed and Dench have threshed 2,000 sacks, Brouillard Brothers, 2,000 sack. Rains have done no damage to rice; however, cold weather has checked maturing, but it is the consensus of opinion that all will come out well.

The distance by highway from Sacramento to Orland would be short ened eleven miles by a highway proposed to be built under the Highway District act of 1917. It would follow the Natomas pavement out of Sacramento, thence across Sutter Basin, crossing the river at Meridian, thence north along the Sacramento to Hamilton City and Orland.

White teamsters are being paid $90 per month and found on the Chino ranch of the American Beet Sugar Co. A parcel's post box arrived in Los Angeles from Texas September 17 containing sweet potatoes infested with sweet potato weevil, a serious pest in the Southern States, but not yet established here. State Quarantine Inspector Mashmeyer returned the box and contents to Texas.

HORTICULTURAL JOTTINGS.

Total number of cars of fruit and farm products shipped from Atwater since January 1st are 623.

Two demonstration vineyards have been located in Stanislaus county, one at Fairview and one in the Waterford district.

The preserve and jam factory, the second unit of the Roscoe-Haegelin Pickle and Jam Factory at Santa Rosa, expect to be under way at once .

Miss Lillian D. Clark of the extension office at Berkeley recently conducted four demonstrations in Sutter county on the home-made fruit drier.

Orange shipments from Exeter will begin November 1. The fruit is not ripening fast but is beginning to show a little color.

Fresno county will ship about 350 cars of oranges this season, according to estimates made by the fruit shipping concerns of the district. The crop this year is normal.

The long pruning work done in Yolo county last winter and spring has been reported favorably in every instance at the follow-up visits after harvest.

Martain and Crane, Bakersfield, fruit and produce buyers, have purchased the Tehachapi apple crop at 5 cents a pound for No. 1 fruit and 2½ cents a pound for the culls.

A joint project is under way between farm bureau centers, the Chamber of Commerce and business men of Salinas to introduce deciduous fruit culture into that part of Monterey county.

More than 250 varieties of pears gathered from various parts of the United States and the Orient will be one of the features of a big horticultural show to be staged at Corvallis, Oregon, Navember 6.

Shipments of grapes in carload lots continue to go from Santa Rosa to eastern markets. The shipments are of the wine grape variety, and of course they are commanding splendid prices.

The Mount Pleasant, Gold Hill and Lincoln Farm Centers are endeavoring to secure the installation of community cold storage facilities at the Placer county fruit growers at Lincoln.

The warehouse of the Oxnard Walnut Association has been opened. R. B. Edmondson, in charge, states that he expects 90 per cent crop this season, and the quality is good.

The Sanitary Fruit Company of Red Bluff have contracted for the erection of a new building, where their building was recently destroyed by fire. The new structure will be of concrete, 80x740 feet. It will be completed in 90 days.

The great apple crop of New York state, comprising as it does not far from one-third of the commercial apple crop of the whole country, it is expected to dominate the markets for barreled stock of many leading vareities.

The Sutter County Farm Bureau Labor Office has been closed after completing a successful season. Fifty-five per cent of the cost of the office was born by five leading fruit growers, the remainder of the expense being borne from general farm bureau funds.

The El Dorado County Farm Bureau fruit evaporator has been operated successfully during the month and began handling prunes before the season for pears was closed. The dried pears turned out by the evaporator are of excellent quality.

County Horticultural Commissioner Rutherford has advised Director Hecke that on November 6 a meeting of Stanislaus grape growers will be held at Modesto to consider ways and means of combatting the grape mealy bug, which has appeared in certain localities in Stanislaus county.

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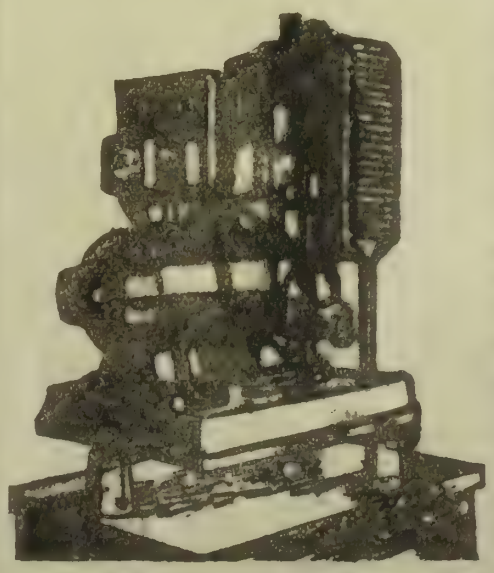

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EDITORIAL

A MORE EVEN BREAK!

We are somewhat chagrined to perceive, in taking a last, fond look at last week's Rural, that we have not been quite fair in subdividing the acreage on this page between our volunteer subscriber-editors and ourselves. We offered them an even split of the typographical territory, and it aches us to find that in the actual allotment we have fixed it so that we had the turkey and they the crow. Such treatment is shameful and we repent it in burlaps and alkali—but still cling to the idea of justification, even though it must cause our repentance to be appraised at one German mark. Our justification is that the idea of an editor without a justifying excuse would be more shocking to the public mind than a picture of the devil without a tail. And our excuse is that, having preached so long, whenever a subscriber-editor puts up a text we have irresistibly carried a sermon to thirteenly—with the result that, instead of giving the reader-writer good and sufficient space for the statement of his views, we have made his contribution look like a hole in the wind, into which the tornado of our tiresome doctrines could rush and eddy with increased speed and force. We are very sorry for this transgression; we are covered with shame as with overalls; we shall do better in the future—at least in this issue!

REALLY THOUGHT US YELLOW!

To the Editor: Somehow I got it into my head that the Press was pro-Japanese. Your supposed attitude was getting to be a sore question with me, as I could not understand how you could do this. I feel that I owe you some kind of an apology for this wrong thought of you. Your answer to Col. Irish I must say, tickled me to death to read. There has been nothing written in this entire controversy that comes up to some parts of your answer to Col. Irish, namely: "There is no need to apprehend that the popular will will not be carried out with due consideration for all rights which have been honestly and legitimately acquired." Then again: "This country does not confiscate anything which is fairly owned." These quotations sound to me like they had come out of the Declaration of Independence.

Too many people are overlooking the main issue in the initiative measure, which is coming upon the people on November 2. We of this state are trying to stop Japanese immigration. From Washington and Tokio, what do we get but talk, talk—nothing but talk, which gets us nowhere. In the meantime the Japanese are coming and keep coming—and will come as far as the Eastern States and Washington are concerned. We must impress Washington and the East so they will sit up and take notice before we have another Hawaiian Islands in California.

As to the Japanese already here we have only to look backward as a people to know we will do them full justice when we get around to it. And they know this to be a fact, yet are not satisfied with it. They do not seem to be satisfied with anything short of free immigration. To stop this we have to put through a measure that many of us are ashamed of. We have got to make the rest of the United States understand or be smothered by this flood. And so, whether you give all parts of the initiative measures your approval you must vote for it anyway to make the whole country appreciate our menace.—W. T. J., Stent, Tuolumne County.

The foregoing appeals to us as the exact truth about this matter and we can make no better statement—although our reader does credit us with Jeffersonian power of declaration. It strikes us that what we need to do is to tell each other and the whole country just what we believe and will stand for, to secure for ourselves and our children an American state to live in and develop. It occurs to us that that is the essential thing in the Amendment No. 1 to be voted for on November 2. Whatever there may be in it which is un-American will be thrown out by the courts and avoided in legislation. That is what the courts are for. What needs to be declared to the world at this moment is that we shall have California for ourselves and our children and for those whom we desire to admit to American citizenship. If this initiative measure involves details which are impracticable it does not matter; impracticable details will perish. That which will live is the principle embodied in it and that is our right to self-determination in the matter of American citizenship, association and environment. It is unfortunate that this single question, which is the soul of the whole matter, should be obscured in political controversy—white and yellow. Our correspondent is correct; aliens who have fairly obtained rights under the laws need have no fear—if they can be protected from the politicians who are now both opposing and supporting them. Both are doing their best to scare the people: one side into inhumanity, the other side into greed and avarice to retain their landlordism over aliens which they are willing to practice at the cost of patriotism and posterity. In this plague of the two political houses, which are contending for their own advantages, lies the discord in the matter. The principle should, however, be so strongly affirmed that the world will recognize it as inviolable.

BUREAU FEDERATION WILL BE BUSY!

To the Editor: Your editorial on "Farm Bureaus and Politics" in the October 16 issue of the Pacific Rural Press interests me as our own Farm Bureau in San Joaquin county is successfully solving the problem of informing its members upon legislative matters. All of the farm center meetings during the month of October are being devoted to an impartial study of the twenty measures that are to appear on the November ballot. Every meeting is in the nature of an open forum. The members, both men and women, are not only urged to attend, but to bring their neighbors, so that the gathering may be fully representative.

The method of studying the ballot is very simple. Previous to a meeting, the center director and the center chairman of the Farm Home Department confer upon the matter, selecting measures known to be of especial interest to the people of that locality. They arrange with members to speak and with the Farm Advisor and Home Demonstration Agent to secure others, who are well qualified to explain legislative matters. Ample opportunity is given for questions and arguments. Besides measures upon which there are special speakers, the director of the center reads each measure, and explains it briefly or asks some members of the standing legislative committee to do so. It met recently and carefully considered each measure, announceing an opinion merely as individual members of the Farm Bureau. In a few cases, they could not come to a decision and announced that further study was needed.

So you see, you were right when you said you had reason to believe the Farm Bureau members are not idle in securing farmers' rights by intelligent voting. Can you conceive of a more thoroughly democratic, progressive, and truly Amerinan method of studying the live issues of the day than by meeting in open forum as farmers and as citizens of the United States—S. A. Shearer, President San Joaquin County Farm Bureau.

It is our belief that you are doing it in exactly the right way—a way which should be followed in all farmers' organizations whenever elections are pending. Such organizations should always have standing committees on legislation, just as you do, because it means that the organization always has watchmen scanning the sky of public affairs and that means that farmers' influence will be in continuous action in all parties and farmers' associations cannot then be corralled or stampeded according as party committees or candidates may conceive it to be for their advantage at any particular time. This last purpose is more likely to be served when farmers follow interested leaders into sporadic, class activity, because they are farmers and not because they are contending for views and measures which are everlastingly fair and right to them as sustaining members of the body politic. Farmers' views and interests are indispensable to the public welfare, but not because they belong to a class, but because they are essential to the successful funtioning of a producing class in its relations to a general public. But no farmers' organization is sufficient by itself. Special organizations must serve special branches of production because no general organization can expertly understand the needs and problems of special producers, but it is quite possible to affiliate and secure mass action upon general propositions affecting the relations of farmers to each other and the relation of all farmers to other vocations and to the welfare of the state. As we understand it, this is the current effort of the Committee of Seventeen under the chairmanship of C. C. Teague of Ventura county, and it will promote what it determines to be for the general interests of California agriculture, along all channels of legislative and executive influence.

FARMING MUST BE AMPLY CAPITALIZED.

To the Editor: In your issue of October 2d you quote Mr. R. C. Milliken, Monetary Statist, regarding more land mortgage credit. He says, "Credit or gold used to purchase any permanent investment—lands, stocks or bonds—invariably leads to inflation. That is, it increases the price without increasing the productivity, and that is an unearned increment the public must pay for without any benefits received, etc."

I differ from this writer. I believe that long credit increases productivity. The Farm Loan Bank lends only a comparatively small amount. The limit is $10,000. I live in a neighborhood of small farmers; the average holding is 25 acres. Several years ago, a number made government loans. In almost every instance these loans have increased production. Not being obliged to pay over their surplus above living expenses on a short term mortgage; their available working capital has greatly increased, with the result that they have often put down two or three pumping plants on a tract, have built better barns, bought better cows and horses and even tractors, and have bought more land, which they farm intensively. Previously the land was not farmed intensively, so the production, both per man and per acre, has increased.

There seems to be an almost universal feeling among our rulers in the cities that the way to get a city Utopia is to keep the farmer down as much as possible like the Irishman's horse, which died when he got to eating only one straw a day. The farmer knows that it is the well-fed and cared-for animal, man or beast, which produces the most at the least cost. The farmer with a sufficient available working capital, which he has accumulated himself and doesn't have to pay interest on, is the one who can afford to keep and does keep the best stock and tools which make his production per hour, per man and per acre greater than the one who is starving for working capital.—R. D. K., Richland.

Yes; it also looks that way to us; it is the agricultural point of view of what is just and right to the farmer as a producer. Mr. Milliken's view seems to be that if the government, by fostering loans on long time and at low interest, helps people to buy land and equipment, to get enough ahead so that they can hold their crops until they get ready to sell and to surround themselves with fine farming properties, they will be wanting better pay for their own time, interest on the increased value of their properties, etc., and when they sell their unearned increments the producers will have to get more profit to recompense their large investments and so on and the consumer will have to pay for it all in the price he pays for his food. And that may all be true if nothing goes to smash on the road. The agricultural view is that all that constitutes progress—Mr. Milliken calls it inflation—which it probably technically is. We have previously stated our belief that farming needs that kind of inflation and farmers deserve it. Mr. Milliken is now contending with all his might to get the idle money of insurance companies into the hands of farmers on "short-term credit," which is also a good thing, for it will enable a farmer to get a few hundred or thousand dollars for a few months on his own good name among his neighbors without paying so much interest as local banks now charge. Such a loan will help him to make a crop, but need not increase his equipment or property valuation. It may only help to keep him going and

thus give consumers more to buy without having to match their pennies against the dollars of the unearned increment of the improved farm of the man who is getting ahead with more land and equipment and better producing agencies and conditions. Such a view is an idle dream. A farmer must have money enough to go ahead or he will be likely to slip back. The consumer has no right to expect the farmer to content himself with less outlook than he himself would probably insist upon in any activity in which he may be engaged.

"FAINT—YET PURSUING!"

To the Editor: I have your books and they are a great help—but for the bugs on my kale they do not help much. Also they do not keep the bluejays from stealing my entire prune crop, nor the squirrels on the next ranch from stealing my nuts, and the blight or something from taking the entire pear crop, in spite of spraying three times. Oh, it's a great life—this farming life—if you do not weaken! I am thinking of hiring out as a milker to get enough money to run this place next year! Only I'm a woman and have to keep house and raise the kids as well as the farm!—S. C. M., Antioch.

Look aloft, sister. Sing with Thomson:

In ancient times, the sacred plow employed
The kings and awful fathers of mankind:
And some, with whom compared your insect tribes
Are but the beings of a summer day,
Have held the scale of empire, ruled the storm
Of mighty war; then, with unwearied hand,
Disdaining little delicacies, seized
The plow and greatly independent lived!

QUERIES AND REPLIES

By the Editor.

Inquirers Must Give Full Name and Address
Answered Questions also on other pages.

Red Pepper for Corn Worms.

To the Editor: I have had good success in the prevention of worms in sweet corn by the following method. I dust red pepper on the silk as soon as it comes out, and the mother moth will not deposit eggs in corn silk so treated. One application on each silk is enough, and a nickel's worth of pepper is ample for average family sweet corn patch, but pepper must be applied day silk comes out.—R. P., Campbell.

That is surely easy to do on a garden patch of corn and should please those who do not like to handle poisons.

Late Irrigation of Vines.

To the Editor: Is it advantageous to irrigate a Malaga vineyard at this time of the year, when the crop is off and the leaves are turning yellow? Will this assist the formation of buds for next year's fruiting wood? Is there danger of starting a growth of shoots that will be killed by the winter frosts, with a consequent loss in next season's crop? The ground is very dry.—E. C. M., Orosi.

It is important that the vine should not be weakened by too severe drying of the soil after the crop is gathered. It is too late to do much for the fruit buds of any plant after the leaves lose their color. To do that, the vine should be irrigated earlier, while the leaves are still active, so that their functions can be continued later in the autumn. But there are many troubles of the vine, probably traceable to drying during early dormancy and consequent destruction of vigor. Such late irrigation as may be needed to save the vigor of the vine is not likely to start new growth.

Sulphur and Gypsum for Alfalfa.

To the Editor: I have ten acres of alfalfa I wish to fertilize. I have noticed in the dry yards, where the trays are taken out of the sulphur houses and spread on the yard, the alfalfa is much better. Would you advise drilling in sulphur or gypsum.—S. S., Finley, Lake Co.

Yes, we would be just perverse enough to follow our nose on such a lead as that, and put on 100 lbs. of sulphur per acre in the fall—for that is the time the soil got it from the trays, and that gives it time enough to operate the following season. As for gypsum that has the sulphurousness of a sulphate, but it also has lime for which alfalfa is hungry. We should put that on in spring after growth starts and some showers still comnig. We should sulphur a part and gypsum a part and let part of it alone. Then you will have something to keep a score on.

Fertilizers or Inoculation?

To the Editor: Why do the farm papers advise using Manure and commercial fertilizer when it is claimed that inoculation is so much better and cheaper?—G. E. W., Tulare.

Because the use of manure is a direct route to the needs of the soil, and because commercial fertilizers in connection with manures extend the effects of manure by additional supplies of some kinds of plant food. Inoculation is no substitute for manuring; it is, when needed in a particular soil, simply a help in getting more cover crop growth and thus increasing the amount of green manure. Barnyard manure and commercial fertilizers are also an agency toward getting more cover crop to plow under. Inoculation is medicine; manuring is food. If the soil has no appetite, it may need medicine. Inoculation is an agency; manure is the real thing.

What Fertilizer?

To the Editor: Which would be the better fertilizer to use in an orchard—commercial or cow manure? If commercial fertilizer, what kind would you advise using for all around purpose, and how much per acre? The soil varies from sandy loam to clay and to gravel.—C. F., Los Gatos.

Animal manure is best because it contains all that a "complete" commercial fertilizer does, and, besides, the organic material, which is indispensable. But unless you have an ample supply of animal manure commercial fertilizers should be added to it, or applied later in the season. Spread the animal manure now, plow it under, and add 500 lbs of "complete fertilizer" to the acre when you plow in the manure and the green stuff which has grown up to the time when you find it best to do your winter plowing.

Picking Peanuts

To the Editor: I have a patch of peanuts in fine condition; planted them last May. Some peanuts are ready and some are just growing. The tops are green and large and have plenty of peanuts. If I pick the large ones I will lose the small ones. What shall I do and when shall I pick them?—F. A., Concord.

The ground should be loosened by plowing or digging along side the rows and then the vines pulled out of the ground with the nuts clinging to them. They are piled loosely so that the nuts can be dried without burning in the sun, and they are then picked or combed from the vines and dried under cover until safe for sacking. You have to take what nuts you can get without waiting too long, or else the ground may get so wet that the nuts will be stained and the gathering become too messy and difficult. We should get what we could while the ground is in good condition.

Melilotus Hay?

To the Editor: Is Melilotus alba reasonably reliable for a hay crop? Is now a proper time to sow it? How much seed per acre? Is it better to sow it alone, or with barley or wheat?—E. F. B., Corning.

It is not comparable as a hay crop with alfalfa, either for home use or for sale. It is apt to be more coarse and stemmy, and its strong flavor makes it unwelcome to stock until they learn to like it. Every one should try it out before putting in much of it for hay or pasturage. It is best sown early in the fall, not with grain, but alone, and ten pounds per acre of seed is usually prescribed.

Home-Made Cotton Seed Oil?

To the Editor: Have you any information on making cotton seed oil? If so, please inform me as to how a farmer could make his own cotton seed oil for home use.—D. D. V., Shafter.

We are not aware that it is practicable because of the treatments the seed has to go through before the pressing; the refining needs of the oil afterwards and the machinery necessary to do these needful things. If any reader believes otherwise we would like to know it. Oil mills usually follow cotton gins and the grower can sell his seed or exchange it for its equivalent in oil.

CALIFORNIA WEATHER RECORD

The following rainfall and temperature record is furnished the Pacific Rural Press by the United States Department of Agriculture Weather Bureau at San Francisco for the week ending October 25, 1920.

Station—	Rainfall Past Week	Rainfall Seasonal To Date	Rainfall Normal To Date	Temperature Highest	Temperature Lowest
Eureka	.10	7.49	3.41	72	40
Red Bluff	.00	2.01	2.09	82	40
Sacramento	.00	1.27	1.23	80	42
San Francisco	.02	1.96	1.30	78	50
San Jose	.08	1.72	1.09	82	42
Fresno	.02	.95	.86	80	40
San Luis Obispo	.26	1.20	1.53	82	40
Los Angeles	.24	.48	.67	76	48
San Diego	.17	.19	.45	76	46
Winnemucca	.03	.55	1.08	62	22
Reno	.06	.57	.99	66	26
Tonopah	.04	.16	1.78	62	24

Red Crown gasoline is an all-refinery gasoline with a continuous chain of boiling points.

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(California)

The Gasoline of Quality

SEED WHEATS AND BARLEYS
From Farmer to Farmer
BUNYIP, BAYAH and DART IMPERIAL SEED WHEATS
Hard White Australians; California acclimated; best milling; higher price for products.
MARIOUT and BELDI SEED BARLEYS
Large yields; quick growth; early maturity; more drouth resistant than other varieties known to us.

There is in California a very limited quantity of choice wheat and barley seed of these varieties. All our seed grown on new soils, one irrigation only. All water from deep wells; no Bermuda, Johnson or Morning Glory. Orders booked as received, shipments following consecutively.

We also have limited quantities Early Baart, Sonora, Diener's Hybrid-Baart and Diener's Hybrid Sonora Seed Wheats. This is our first year with last two varieties and data not yet sufficient to permit our making definite conclusions or recommendations. Both tiller well, permitting light planting, and neither shatters so badly as Sonora.

In our judgment Bunyip, Bayah and Dart Imperial wheats and Mariout and Beldi barleys yield more on less soil moisture and shatter less in wind than any grains we have grown.

We are also now booking cotton seed orders for late fall and winter delivery. Pure strains, Durango and Mebane, grown by us in selected, hand-rogued fields. We do our own ginning, carefully avoiding seed mixing.

We invite trial of our seeds for results with less moisture.

Write for prices, stating quantity desired.

BOSTON LAND COMPANY
Post-office, Telegraph, Express and Freight Address:
WESTHAVEN, FRESNO COUNTY, CALIFORNIA.

Mariout Seed Barley
PURE UNIVERSITY FARM STOCK.
Clean, heavy, free from noxious weeds and smut.
Carload lots or less. Sample on request.
F. P. WRAY Davis, California

Plan Now The Season's Spraying Campaign

(Written for Pacific Rural Press by W. S. Killingsworth.)

FOR months past our efforts have been directed to two important features of the fruit industry of California—production and marketing. While these component parts of the industry are interesting and profitable, there are others of equal importance to the orchardists who would succeed. The harvesting of tree fruits for the season of 1920 is practically a thing of the past, and naturally attention will now be drawn to the matter of preparation for its successor. When an orchard has arrived at the age of production its value as a producer depends greatly upon the treatment of its insect enemies and fungous troubles, the control of which is largely affected by spraying. While spraying in any of its forms is one of the most expensive of the many orchard operations, it is not considered as such by the successful orchardist who goes upon the principle of "safety first," and they tell us that in the end it is the cheapest insurance placed on the ranch.

While the California Fruit Standardization Act has worked wonders in the matter of condemnation of fruits infested with insects and fungous troubles, by greatly increasing the use of spray materials there is yet room for much improvement. Not at all times are spraying operations successful; however careful the application, it does not always hit the spot. A concrete example of which was brought to our attention last spring when the "drive" was on against thrips in Vaca Valley, Solano county. We were told by F. B. McKevitt, Jr., that he sprayed a few Bartlett pear trees near his mixing station six times, and still the pears on those trees were as badly marked by thrips as the pears on trees sprayed but three times. It just happened that the thrips were immune to the deadly fumes of black leaf "40" at the time of each application. While of all orchard work spraying is less sought after by the hired help, therefore more than likely to be neglected, we know that in this particular case the greatest care was exercised.

Time for Effective Spraying.

Within a very short time the leaves will have fallen which will make it more accessible in reaching all parts of the tree with the spray. As in the case of the thrips, only those insects and fungus actually hit by the spray are killed. One, if not, the most destructive fungous diseases that the peach growers of the state have to deal with is the California peach blight. This fungous disease lays its deadly hand on the buds and twigs of stone fruits, more particular peaches and apricots. It begins to function during the winter months, shortly after the rains begin. It makes itself known by the appearance of purplish dead spots on the new growth, destroying the fruit buds along with much of the young growth of fruiting wood. It has been our privilege to witness its destructive work in many peach and apricot orchards in the state. In 1916-17 the apricot orchards in many sections of Solano county were badly infested with this blight. Over night in some instances it would greatly damage the tender growth of an entire apricot orchard giving the foliage the appearance of having been scorched by excessive heat, and eventually the twig would die back to the old wood leaving it black and covered with a jelly-like white gum which exuded from the dead spots. It also produced pink spots on the apricots and caused the leaves to be affected by shot-hole.

Keeping Infection Down to Minimum Injury.

Knowing that the infections would begin shortly after the rains began, the growers beat them to it by spraying before the rain started. The weather was ideal for spraying. The ground was dry, enabling the team to draw a full tank of spray material with ease. Some orchardists used the Bordeaux mixture, others the lime-sulphur solution, and where these well-known insecticides were used in accordance with instructions the evils were materially lessened. Where the infection had been very bad, thinking that there might be a possibility of the fall spraying not totally destroying it, a second application of the lime-sulphur was made in the spring as the fruit buds were swelling, using it at the rate of 9 to 10 gallons for 100 gallons of spray. While there was not a complete removal of the cause it was so greatly lessened that the growers had but little difficulty thereafter in keeping it down to a minimum degree of injury. From years of actual experience in combatting insects and pests of every kind known to exist in the orchards of California we became convinced that it was absolutely imperative that every deciduous tree grown, whether it was to supply fruit for family use or commercial purposes, should be systematically sprayed whenever it was deemed necessary. It was our custom for years to spray every tree on the ranches under our supervision with lime-sulphur solution. It is the greatest tonic for a tree that was ever forced through a spray nozzle. It dsetroys pests, cleans and enlivens the bark and strengthens the buds. Not until comparatively recent years was the matter of spraying, other than for codling moth, taken very seriously.

Immunity from Pests Now a Memory.

We remember when there was no thrips, brown rot, or peach and apricot blight, but as improvements in the fruit industry have constantly taken place, so have diseases and insects of every nature kept pace with them, making it necessary to be as well equipped for the purpose of heading them off, as it is to guard against contagious diseases so prevalent about the orchard, corral and shelter for stock. The day of the spray outfit acting in the capacity of an ornament about the ranch, used so seldom that the wheels contracted "bunions" from standing in one place so long, has passed. It is now conceded by every up-to-date orchardist that it is a matter of economy to keep the sprayer going all that is necessary to give all trees their proper spraying as near the proper time as possible. Thus a long-spraying season is decidedly helpful to the orchardist. As a matter of fact, the season for possible spraying is much longer than many orchardists suppose. However, there is not a sharply defined season for any spray and they may all merge or lap, better than when wholly neglected. There are but two occasions during the year when the sprayer must be idle; during the actual blooming season and just before and during the picking season. The recent hullabaloo kicked up by some disgruntled individuals in one of the large eastern cities relative to pears and apples showing signs of poisonous spray still adhering to the fruit when opened for inspection in the auction rooms, will necessarily cause some change in the spray program; in other words—

The Last Application of Spray

Should not be made within, say, a month before the fruit is picked for shipment, which would allow time for this "excessive" poison to pass off. The dormant spray season merges into the "pink bud" period completely, and the first and second codling moth spray periods may overlap, and this may extend into the second brood codling moth spray. In other words there is absolutely no period when the spray machine may be idle, as far as concerns efficiency of results and freedom of injury to tree, fruit and foliage, from the winter season until mid-summer, excepting during the periods of bloom and picking. There is, of course, objection, and it is well founded, to spraying trees while in blossom; but in relating a little personal experience it would seem that objection might be tempered, but we are not advising that our experiment be followed. A number of years ago late rains delayed us in finishing our spraying before blooming time.

Spraying Trees in Blossom.

In a certain orchard, which consisted of Tragedy, California Red, Ogon, Red June and Wickson plums, we began spraying with lime-sulphur solution after the Wickson's were in full bloom, which consisted of two rows running east and west across the entire length of the orchard. Our spray machine was working north and south. The foreman, knowing his business, on reaching the trees in full bloom, instructed the help to pass them without applying the spray. About that time we happened around on a tour of inspection. Consulting with the foremen we decided to spray one-half of the Wickson plums that were in full bloom and watch results. When thinning time arrived, had it not been that we had carefully marked the trees that were sprayed, we would never have told where the spraying of those Wicksons, while in full bloom, began and where it ceased, as there were just as many plums on the trees that were sprayed as were on those that were not. It might possibly have been that the spray was not applied with sufficient force to penetrate the mass of bloom that so completely encases the limb of a Wickson tree. However, we got by with it that time, but our nerve failed us there after. Should any grower wish to experiment he has our permission, but if he loses his crop he must not say that it was the fault of the Pacific Rural Press.

Now, in this continuous spraying, as was mentioned in the foregoing, it is necessary that there be some changes as you are not dealing with dormant wood all the time; you now have tender fruit and foliage to contend with, so there must be a reduction in the strength of whichever material is used. The old style two-kettle outfit used in the preparation of the lime-sulphur solution is a thing of the past. The growers are now being supplied with concentrated commercial lime-sulphur solution of the best quality. It is easily obtained and can be prepared for immediate use. Growers wishing to use this concentrated solution, or as a matter of fact, any of the spray materials, will find it to their advantage to consult the advertising columns of the Pacific Rural Press, as practically all manufacturers of spray materials use them as a medium of advertising. Whatever spray material is purchased from any of these manufacturers, there will be found directions as to how each spray shall be mixed and how it shall be applied, all of which has been carefully determined by their own experts.

Have You Sprayed?

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New Grasses to Supplement Range Forage

(Written for Pacific Rural Press by R. E. Hodges.)

"I stood this summer on 800 acres of fenced cattle range whose season's growth of grass was barely enough to carry 23 cattle 45 days," said Prof. P. B. Kennedy at the cattlemen's meeting recently held in Los Angeles. The range everywhere in California is doing all it possibly can; but this is far less than it could do with some assistance from cattlemen. Relief can come in one or more of three ways: (1) reduce the number of head carried and endure the temporary loss; (2) seed the ranges with better grasses; (3) supplement the ranges by growing feed on cultivated ground. It has been Prof. Kennedy's chief investigational work the past several years to discover and try out various probable kinds of grasses. Several people have also been working along this line in a local experimental way watching results from joints, roots and seed planted by ranchers in various parts of the state and keeping experimental plots of their own.

Prof. Kennedy's experimental work has recently been greatly curtailed, both by lack of University finances for this work and by the overloading of University classes with students, many of whom he has to teach. He urged the cattlemen themselves to carry on his experimental work with grasses recommended by himself; and he urged cattlemen to report their experiences with the new grasses, telling their methods and conditions. He is as anxious as all rangemen should be to find and spread various grasses that will replace the miserable range weeds under all conditions in California.

Smilo for Hill Ranges.

Judging by his remarks, we should judge that for dry hills, Prof. Kennedy's first recommendation would be smilo grass. He pointed out one case of a cattleman who carried a pocketful of smilo seed and scattered it last fall as he rode horseback up a canyon in San Diego county to look at his cattle. This season it has made a beautiful growth on high and low places, in the brush and on the open. This variety has proved very drouth resistant and it has a spiny base which cattle do not browse so close as to kill the plants. H. L. Musser of Los Angeles called attention to the fact that the smilo seed needs loose soil—it fails on adobe. But once established, it produces fleshy dormant buds at the base which act somewhat like bulbs in maintaining the life of the plant over discouraging periods. It is well to sow smilo early in the fall so it may benefit by the rains. It stools and seeds freely and stands a considerable amount of frost.

African Millet a New Forage.

Another drouth-resistant grass, seemingly most suitable for southwestern ranges, but not yet recommended for heavy planting because of its newness in California, is African millet. Its seed have been used for a century at least by the natives of Africa for flour and mush. Herein lies its great value on a dry range. If it makes four inches growth on seven inches of rainfall, it will make a lot of nutritious seeds also.

Rhodes for Seepage Spots.

For seepage places and alkali spots, Rhodes grass was most highly recommended at the cattlemen's meeting by both men. "Rhodes grass has a broader range of usefulness than any other grass in wet spots," said Mr. Musser. He had prepared a splendid display of various new grasses for the cattlemen to inspect. In this display was a bunch of Rhodes grass of numberless fine stems three feet tall three months from a single joint planted on bad alkali soil. Prof. Kennedy said that while Rhodes grass had lived through a temperature of 18 degrees above zero, it is not hardy through the winter at Davis or in colder countries. The seed needs warmth and seepage and is difficult to keep alive for the first three weeks, but after that, it makes a heavy thick growth and roots from joints of stems which run along the surface of the ground so that the only way to get rid of it is to plow it up.

Harding Grass for Better Soils.

For grass to supplement ranges by sowing on fenced areas of good soil unirrigated, Harding grass is most highly recommended for seeding until mid-November. If planted dry it waits safely until rain falls; then it comes up thick and fine, and stools through the winter but does not grow very tall. It lies rather dormant through the dry season but after fall rains come, it grows 2½ feet tall by April before formation of seed stems, which are harder and contain less nutriment. It grows five or six feet tall and "animals are crazy for it." It is of as much feed value before seed stems form as alfalfa. Harding grass is not easy to get rid of, but has no running root-stocks and is not objectionable from this standpoint. Under irrigation, it is most highly recommended.

Napier Not Very Hardy North.

Napier grass is better known to our readers. A clump of 50 or 60 canes standing ten to twelve feet tall was on exhibit at the meeting—all grown from one joint in five months. But Prof. Kennedy stated that it dies in winter at Davis and sometimes at Berkeley, but not in Los Angeles county. Tall canes like those shown are too tough for feed, though the leaves are first-class browsing. For most real feed, they should be cut two or three times a season, while the canes are five to seven feet tall and still soft.

Melilotus Alba for Cattle.

Melilotus alba, white sweet clover, gained the highest commendation from Fred H. Bixby. He planted eight tons of seed at 26 cents per pound on about 1200 acres. "Cut it every month or it will get away from you," cried Mr. Bixby; and later he said that as a feed it equals alfalfa if cut every month. But if allowed to grow, a man on horseback can't see the cattle in it during the second season and you can't mow it or plow it or do anything but wait and burn it, which you don't want to do. Steers pastured on such sweet clover made heavy gains. Some of the 1200 acres was land that had decreased its sugar-beet yield down to six tons per acre. This season Mr. Bixby is getting 20 tons per acre from one 40 which was part of the 1200 acres of clover. A perfect stand of melilotus alba is four plants per square foot, said Mr. Bixby. He secured a heavy stand by planting about fifteen or twenty pounds of barley per acre, harrowing twice, scattering the clover seed twelve or fifteen pounds per acre, and rolling it.

Plans are being completed for the Oroville orange and olive Exposition to be held at Oroville, November 15th to 20th.

My Experience with Various New Grasses

(Written for Pacific Rural Press by A. Laforge, Newcastle, Calif.)

Many farmers in the foothills have in the past few years tried the new grasses and have been more or less discouraged with the results. It is the general opinion that nothing but fruit will grow in granite soil, yet every season brings up some new plant claimed so promising that many want to try again.

I myself experimented for four years with Sudan, Paspalum, Smilo, Napier, and lastly, with Harding grass; and I believe the relation of my experience will be of interest to readers of this paper.

Napier requires lots of water and a rich soil; therefore it does not grow on granite which is not irrigated. It is very sensitive to frost. My Napier plants died one by one, some in the winter and some during summer.

Paspalum made little growth and it won't do on dry hilly land. It grows in wet places only and the seed did not germinate readily.

Smilo is hardy, but did not make good here, and I believe it will never be really profitable on this soil where the land has any value for fruit growing.

Sudan went up three feet with a good deal of moisture; and like Napier did not endure much cold. It made a poor showing wherever tried in this district. Many have planted gyp corn with equally poor results.

Harding Grass Grows in Winter.

Now comes Harding grass (Phalaris stenoptera). Having received a little of the seed from Professor P. B. Kennedy, in charge of Foreign Plants Investigation. I planted it on November 12, two years ago. Then followed heavy cold rains for a week and then heavy frosts for five days. Yet the seed germinated readily, and the young, needle-like plants came out and through all right and kept growing all winter, not being injured in the least. The lowest temperature was 18 plus and evidently the plant can endure more severe colds.

This grass is a winter-growing plant, but it will grow all summer if given a little water, and what is more, it will remain green through the summer with a rainfall of 14 inches or more.

The last two seasons were dry, especially the last. No good rain came down here before the end of January, yet my plants had grown up a foot high by Christmas with only the first shower that had come in November.

This season, the old clump did not even wait for the rain, having sent out leaves over six inches long before the first drop of rain came down, having no other moisture supply than what was in the air.

The plot is on a hill with a south exposure. The ground was dry by May first, and all roots sure dead by the first of July.

The fact that all the roots die where no irrigation is practiced should dispel all fear as to difficulty of eradication. The crown alone is alive right on top of the ground, and if the ground is loosened all dry up and die. I believe that this granite soil may be improved physically by the dense mass of roots that will decay every winter and make a good amount of humus.

How Phalaris grass multiplies may be seen by the fact that from a row 70 feet long in 1918, I now have several acres with plants so close together that if transplanted 2x2 as recommended by Prof. Kennedy, more than 2,000 acres could be planted this fall and with the early rains we have this season every plant could make a very large clump if given enough space.

Each clump sends out a dense mass of bluish green leaves 20 to 30 inches long. Early in April the flower stems shoot up from below and attain 4 feet or more in three to four weeks' time.

I expect 2½ tons of good hay to the acre on this poor soil, 3½ tons or more on good soil, with but one cutting.

Now that plants are on the market, I suggest that readers who keep the Pacific Rural Press look back to issue of October 26, 1918, and read again what Prof. Kennedy wrote about Harding grass and its behavior on the University Farm at Davis. The heading of that very interesting article was: "Will This Grass Restore the Pristine Pasturage of California?"; and though I have experimented but two years I can say I think it will.

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Timely Work in the Orchard

(Written for Pacific Rural Press by W. S. Killingsworth.)

Prepare Land for Tree Planting.

In many sections of the state there has been sufficient rainfall to enable the orchardist to plow with ease; threfore, where it is the intention to plant trees or vines on land that has been farmed for any period of time, it would be well to plow the land as early as possible, and in doing so a different method of plowing must be resorted to. If possible, the soil should be broken for at least twelve inches deep, in order that the "plow pan" that has been increasing in thickness for years may be thoroughly disturbed. A concrete example of how this should be done was witnessed by the writer last spring, while visiting the "Del Monte Farm" of the California Packing Corporation at Merced. This 4,000 acres was turned topsyturvy with a subsoiler that penetrated the soil to the depth of 36 inches. The soil had been farmed and grazed since the days when it was nobody's land, and just below grass roots there was a stratum of earth practically impervious to moisture and a detriment to horticultural progress; hence this deep cultivation. While admitting that such procedure was practical on such vast properties, the same should be practiced on smaller holdings, where an orchard or vineyard is intended to perform the duties for which it is intended.

Resurrect the Saw and Pruning Shear.

The time has arrived for the orchardist to turn his attention to shaping his trees—not vines—for another season's engagement. In practically all sections where irrigation has not been practiced the trees are defoliated, which will enable the orchardist to commence the operation of pruning. Where pruning is done early the brush may be picked up and burned before the winter rains set in, which always make it disagreeable to prune as well as pick up and burn the brush. The vineyards are not in readiness for the pruning shear as the vines must be dormant before being pruned.

Protect Bearing Trees from Sunscald.

It is a long time from spring to autumn, and during that time there is some very warm weather, and where fruit trees are exposed to the continual heat the bark will feel the effects. There is a remedy that will greatly reduce injury from sunscald, in the form of whitewash. The following is a good preparation: First, slake 62 pounds (one bushel) of quicklime in 12 gallons of hot water. Second, dissolve two pounds of common table salt and one pound of zinc sulphate in two gallons of boiling water. Pour the salt and zinc mixture into the lime and then add two gallons of skim milk, and mix thoroughly. If skim milk is not handy, four pounds of flour boiled in four gallons of water may be substituted. For use thin with cold water to flow well. If used with a spray pump, it will be necessary to strain through burlap or a fine wire screen.

Don't Burn Brush in the Orchard.

What a mistake the orchardist makes in allowing his hired help or tenants to burn the light brush prunings in the orchard or along the edges in close proximity to the trees. In most instances this gross carelessness is practiced by tenants, who have leased the orchards or vineyards from non-residents. These tenants care nothing for injury to the trees, and by burning the brush in the orchard saves them the trouble and expense of trucking it to some vacant spot on the ranch, where it may be burned with ease and no danger of injury to vegetation. It is a lazy, trifling, injurious method of disposing of prunings that should be prevented, as it is a crime to scorch and burn to the point of distruction trees that are of value, simply to relieve a disinterested tenant of a little extra time and expense in carting the brush from the orchard or vineyard.

Drag for Cultivator.

It is a usual thing to drag a chain or piece of old pipe behind an orchard cultivator, for the sake of smoothing down the surface of the mulch. Something better than this is a 2x6 or other stick of proper size and length through which spikes are driven at frequent intervals. They only need to project a couple of inches through the bottom. This appendage to the cultivator does all the good that a pipe does. In addition it acts like a pigmy harrow and leaves the ground with the finest kind of a surface, provided the cultivation is not done too dry.

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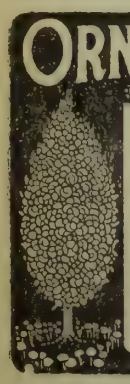

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START A GOPHER CRUSADE AT ONCE

(Written for Pacific Rural Press.)

For the next few months let it be understood that it should be "open season" on gophers. The recent rains have made it possible for the gopher to travel and work with ease, consequently we may expect him to be as busy in the orchards as the proverbial village fireman chasing a false alarm. The suggestion that the orchardist get busy is directed primarily at the cherry grower, for the gopher is strictly at home in a cherry orchard, and what they can't and won't do to a tree worth a hundred dollars or more in a very short time remains to be seen. The writer has had years of experience with the wily gopher, especially in cherry orchards. We used all means known to either capture with mechanical appliances or destroy with poison. While both methods had a telling effect, it was much greater degree of satisfaction that we might see the most destructive "animal" known to horticulture, dangling between the prongs of a spring wire trap. When in that predicament we knew we had him and that his day and generation was at an end. These wire spring traps may be obtained at any hardware store. They should be purchased in quantities, to be in readiness at a critical time. Tie a stout cord two feet long to the trap the other end to a sharpened stick; to the top end should be tied a strip of cloth that the trap may be easily located.

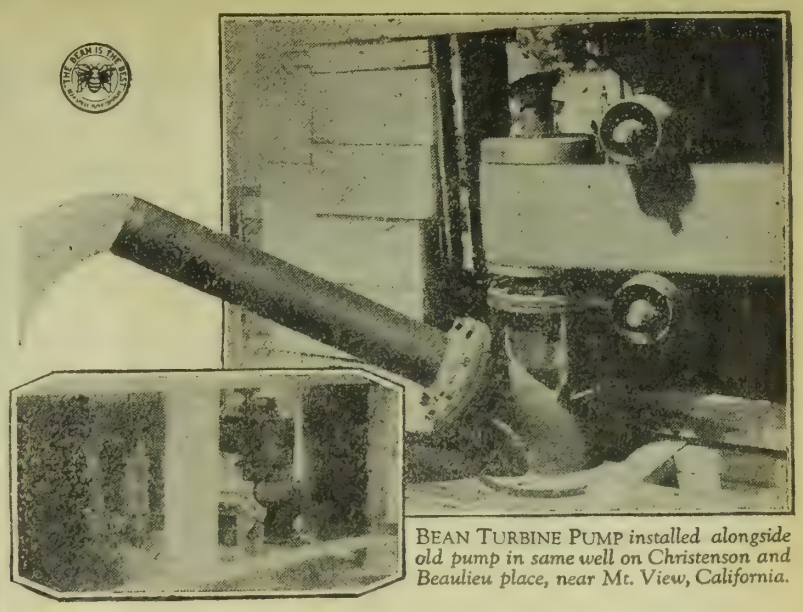
A daily trip should be made to the traps, as the gopher may spring them by forcing the earth against the triger, which will throw the trap preventing results, but doesn't prevent the gopher from continuing his course. No time should be lost in getting after these pests. During the past week we have noticed where gophers are now at work in the orchards.

FRUIT GROWERS TO MEET AT FRESNO.

Director of Agriculture G. H. Hecke of the State Department of Agriculture has announced the program for the 53rd State Fruit Growers' Convention at Fresno, Cal., November 9 to 12. The program, from the opening to the close, is replete with matters of great importance to the horticultural interests of California, and Director Hecke has shown keen judgment in the selection of representative men, who are closely allied to the subjects they are to discuss, the most important of which are "Our Present and Future Problems," "Standardization, Transportation, Freight Rates, and Protective Tariff," "Shipping Point and Terminal Market Inspection Service," "Commercial Value of Standardization," "Interesting Factors in Vegetable Marketing," "Problems Confronting Canning Industry," "The State Government's Responsibility to Agriculture," "Marketing California Deciduous Fruits Under Increased Freight Rates," "Prospective Freight Service for California Perishables," "The Farmer and the Fair," "Transportation Suggestions to the Railroads," "Important Phases of Crop Statistics," "Freight Rates and a Protective Tariff," "Advertising as a Stimulus in Marketing of California Products," "Sun Drying vs. Evaporation," "Rain Damage Insurance," "Prevention and Control of Insects in Dried Fruits," "A Successful Co-operative Evaporator," "Relation of Fruit By-Products to Horticulture," "Evaporator Efficiency," and "Drying of Prunes in Oregon." The Potato Growers' Convention to be held simultaneously with the Dehydrating convention.

Gets Better All the Time.

To the Editor: Enclosed please find $1 to renew my subscription. I would not be without the Press for anything. I have been a subscriber for 40 years, with one or two short interruptions, and will say that it gets better and better all the time. I consider it indispensable to a California farmer.—L. T. Tinkham, Laton.



BEAN TURBINE PUMP *installed alongside old pump in same well on Christenson and Beaulieu place, near Mt. View, California.*

Back to Life Again!

(Clip Out and Mail)

BEAN SPRAY PUMP CO.
111 W. Julian Street
San Jose, Calif.

Distance to water below surface of ground
Probable distance to water when pumping
If water is to be raised above surface of ground, how high? (Length and size of pipe line)
Volume of water desired (Gals. per min.)
(Inches)
If you have pit, give width ____ *length* ____
depth
H.P. of motor or engine if you have that equipment
Give total depth of well
Inside Diameter of well
Is well straight and true?
Is electric power available?
Name
Address
Rural Route No.
(50-P3) *Box*

Christensen & Beaulieu of Mt. View, California, were up against the problem that is now facing ranchers all over the state. The water level in their well had fallen so low that their old vertical pump wouldn't get more than half of a supply.

They might have dug the old pit deeper, and worried along a while with the old pump—but they weren't going to be satisfied with temporary makeshifts. They *wanted permanent results!* So they installed a Bean Turbine in the same well where the old pump worked—and *they got permanent results*—

—they have a good supply now.
—a good supply insured for the future.
—pit dangers eliminated.
—money saved.
—time saved.

If your water levels are lowering, your problem is the same—*solve it with a Bean Turbine.*

BEAN SPRAY PUMP CO.
111 W. JULIAN ST., SAN JOSE, CALIF.
Branches: Fresno Los Angeles

Bean
Turbine Pumps

FRUIT TREES
We can still supply a limited number of trees.
Write for our price list
The Fresno Nursery Co.
Fresno, California

Your Soil Needs Humus and Nitrogen Bacteria
Melilotus Indica Supplies Both
Now is the time to plant it. Buy only seed that has a quality test tag on every sack. It protects you against seed of low germination.
Buy from your local dealer or from
Aggeler & Musser Seed Co.
Look for the Tag LOS ANGELES, CAL.

NURSERY STOCK
PLACENTIA AND EUREKA SPECIALISTS
NURSERIES—VENTURA and LOS ANGELES COUNTIES
R. E. Pierce OXNARD, CAL. A. G. Snow

Mariout Barley
COMPENTENTLY TESTED FOR PURITY. GOOD, CLEAN SEED OF HIGHEST QUALITY FROM HEAVY-YIELDING STOCK.
H. G. STEVENSON, JR. Winters, Cal.

STATE-WIDE WATER CONSERVATION PLAN DEMANDS ATTENTION.

Greatly enlarged offices for the California State Irrigation Association were authorized at a meeting of its executive committee in Sacramento, October 19. This association has been formed for the purpose of securing "a statewide water policy, which will eventually provide scientific storage and distribution of all the waters of the San Joaquin and Sacramento Valleys" along the lines proposed by Robert Bradford Marshall. C. A. Barlow of Bakersfield is president, J. F. Mallon of Colusa, vice-president and secretary; Alden Anderson of Sacramento, treasurer; E. O. McCormick of San Francisco and L. L. Dennett of Modesto, additional members of executive committee; R. B. Marshall, consulting engineer, and L. C. Davidson, manager. Mr. Marshall's plan, which he proposes after 25 years of Government and State survey work in California, is to divert Klamath river into the Sacramento near Mt. Shasta, divert the Sacramento at the Iron Canyon above Red Bluff to run along a contour line, down both sides of the Valley to San Francisco, Santa Clara and Livermore Valleys and to Dos Palos on the west side and nearly to Fresno on the east side; divert the Stanislaus east of Stockton, along a higher contour line than the Sacramento canal would have there, to a point south of Tulare Lake; divert the San Joaquin from a point northeast of Fresno on contour around the San Joaquin Valley to Dos Palos; divert Kern river to southern California; store or intercept all water along the canal courses; develop electric power to do the work and to sell so interest on proposed bonds would be paid this way. The cost is estimated not over $750,000,000 to be prorated to lands benefited, always assuring present water users their full rights.

The new Sacramento office is a two-story brick building on L street. A general assembly room for meetings of water users is to be provided and topographic maps illustrating the well developed engineering facts of the project will be on exhibition. Mr. Marshall's plan has been almost heresy in engineering circles, but after all it cannot longer be ignored. Certainly, if it is put over, it will be the most magnificent accomplishment of its kind. Present efforts seem to be directed toward getting official recommendation for the plan before the Legislature shall meet so that body may authorize more definite action.

Significant Agricultural Pointers

Ten-Horse Land Leveling.

It sounds well to talk of doing scraper work on a large scale with tractors, but J. H. Belo of Tulare county has that beaten by a mile. He has taken the contract to level 80 acres of rough land in five months and is tackling the job single-handed, with the help of ten horses and a specially built horse leveler. With this outfit he can do more work than three men with four-horse Fresnos and he has no doubt of completing the job in good order provided unfavorable weather does not prevent it. The scraper is 12 feet long, 18 inches deep and wide with wooden sides on steel runners, frame, and braces. It cost $115, made to order, but Belo says next time he will have one built of boiler plate on the order of a Fresno, as it will not be so clumsy and hard to drag, though the design otherwise is satisfactory. A platform runs out behind on which the operator stands, moving back toward the end of it in loading and dumping. Not as smooth a job of finishing can be done as with four-horse Fresnos and when the dirt is dumped in a hole it is dumped all at once. However, when the land is nearly smooth the scraper drags the dirt well and makes quite a nice finish. Its width helps a good deal in this particular. Tractor work has its advantages, but in rough land a tractor is likely to be racked, while it also will get stuck in holes if the ground is a little too soft. A horse outfit can work nicely where a tractor is helpless in some leveling work. A four-horse Fresno outfit costs about $12 a day. This outfit will at that basis do $50 worth of work a day and a man can contract at a normal price and make that money. His only expense will be his board and the feed of horses and upkeep of the outfit. It is cheap, efficient leveling. Two or three similar outfits are at work in the county and all are doing well.

Shall We Hold Grain Sorghums?

Grain sorghums compete with Indian corn and barley in California. Whatever affects prices of one affects the prices of the others. All are affected to some extent by world demand and crops, but primarily by the crops of all of them produced in the United States in any given year. We use U. S. Bureau of Crop Estimate figures below. Only seven states produce large commercial quantities of grain sorghums. California is next to the lowest of these in production. Our crop this year is estimated at 4,966,000 bushels, which is about 13 per cent increase over final estimates of 1919 crop. The Kansas forecast for 1920 is 24,606,000 bushels, the Oklahoma forecast is 32,388,000 bushels, and the Texas forecast is 64,804,000 bushels. The U. S. commercial crop is forecasted at 139,503,000 bushels, a ten per cent increase over 1919. In barley production, California leads all other states with an estimated production of 29,468,000 bushels in 1920. This is half a million bushels less than in 1919, but the U. S. barley crop is estimated at 194,858,000 bushels, an increase of more than 17 per cent. Most of our California barley will compete with grain sorghums for feed, because very little except the small acreage irrigated is fit for brewing this year. The corn crop is estimated to be a ten per cent increase in the United States over that of 1919. While the percentage increase is not so great, the actual increase of 208,742,000 bushels will have a heavy influence on prices, as the surplus generally has a predominant effect. A promised revival of livestock production and reported lower ocean freight rates are the greatest hopes.

Mature Corn for Silage.

Corn on the hillside fields of the Dibblee Estate in Santa Barbara county was apparently dry, though [illegible] still contained considerable moisture, while corn on the lower [illegible] still held [illegible] when the writer visited their Rancho San Julian early in October. The drier corn was [illegible] be cut up for silage to feed the registered and pureblood Shorthorns on the rancho. Foreman George Gauld did not object to the extra ripeness of the hillside corn, though he figured that the greener corn might make better silage. His neighbor, O. A. Collier, of the Hollister Estate Co., tells us that in 1918 their corn blew down so it had to be cut by hand for silage. This took so long that the last of it would shell easily when it was cut into the silo. The cattle seemed to do notably better on this than on corn siloed in a greener condition. Henry's "Feeds and Feeding" quotes analyses of corn at the glazed or dented silage stage and again a week later. These analyses show that the mature corn contains 483 pounds per acre more of dry matter, of which 14 pounds is mineral ash, 31 pounds crude protein, 135 pounds fiber, 252 pounds carbohydrates, and 50 pounds fat—a very considerable gain in nutriment and the silage from this superior more mature corn is readily cleaned up by the beef stock on both California ranches mentioned.

Auto cars are fitted with a gravel-body built to be dumped and re-set by means of an arm on a rotating gear operated from the transmission while the engine idles.

To the Farmers of California:

We most emphatically and unreservedly urge you to vote "NO", November 2nd on the Initiative Amendment No. 4 on the ballot for the following reasons:

It raises the percentage of required signatures from 8 to 25 per cent on any initiative measure concerning the assessment or collection of taxes.

This number is absolutely prohibitive—calling for a quarter of a million signatures—and would kill the Initiative in its most important function of government—Taxation.

It is not necessary to adopt this measure and kill the Initiative in order to defeat single tax as the record of the votes shows that the people of California are overwhelmingly opposed to single tax.

If this amendment should carry, no basic taxation measure could hereafter be initiated by the people but all such measures would have to emanate from the legislature, and as all such measures require a constitutional amendment and as constitutional amendments require a two-thirds vote of both houses of the Legislature, and as 14 members are a little more than 1/3 of the Senate, it thus follows that 14 members of the Senate of California could prevent the submission of any measure concerning the assessment or collection of taxes, even though all the members of the Assembly, 80 in number, the 26 remaining members of the Senate, the Governor, and all of the rest of the voters of the state, wanted it.

Save democracy by voting "NO" on Amendment Number Four.

C. C. Young, Lieutenant Governor
Chester H. Rowell, Regent of the University of California.
Irving Martin, Editor of the Stockton Record.
E. A. Dickson, Regent of the University of California.
Rudolph Spreckles, Capitalist.
S. C. Evans, State Senator from Riverside.
E. P. Clark, Pres. State Board of Education, and Editor Riverside Press.
Mrs. Frank A. Gibson, Member Immigration and Housing Commission.
Mrs. J. O. Colwell, Director Los Angeles Co. Farm Bureau.
Mrs. H. H. Koons, Member Board of Directors, Orange Co. Walnut Ass'n., and California Walnut Ass'n.
E. O. Edgerton, President State Railroad Commission.
Will C. Wood, State Superintendent of Schools.
Ben Allen, Editor The Sacramento Union.

Amendment No. 4 on the ballot is opposed by Governor William D. Stephens, Senator Hiram W. Johnson, Senator James D. Phelan, President Barrows of the University of California, President Wilbur of Stanford University, and the other progressive citizens of California, who are laboring in the cause of Democracy.

VOTE "NO" ON NUMBER 4

His fight is Your fight

Powerful interests threaten the agricultural associations of California. **Your** fight against this persecution demands the return to Congress of Senator Phelan. His voice and vote have consistently challenged all such attacks.

Senator Phelan advocates a protective tariff on California rice and beans. He voted for an increased tariff on lemons. He fought an increase of freight rates on cantaloupes and vegetables. To save the California fruit crop in 1919, he secured priority orders for tin plate shipments to California canneries in the face of country-wide competition. California cotton was saved by his action in securing an appropriation to fight the boll weevil in Imperial Valley. He secured for California a big share in the benefits of the Farm Loan Law.

Always a progressive in thought and action, Senator Phelan, himself a member of the Rice Growers' Association and the California Prune and Apricot Growers, Inc., has worked and voted for farmers' co-operative associations. He fought for the California Associated Raisin Company. Its president, Wyllie M. Giffen, commended him thus: "The raisin growers of California are immensely pleased with your action."

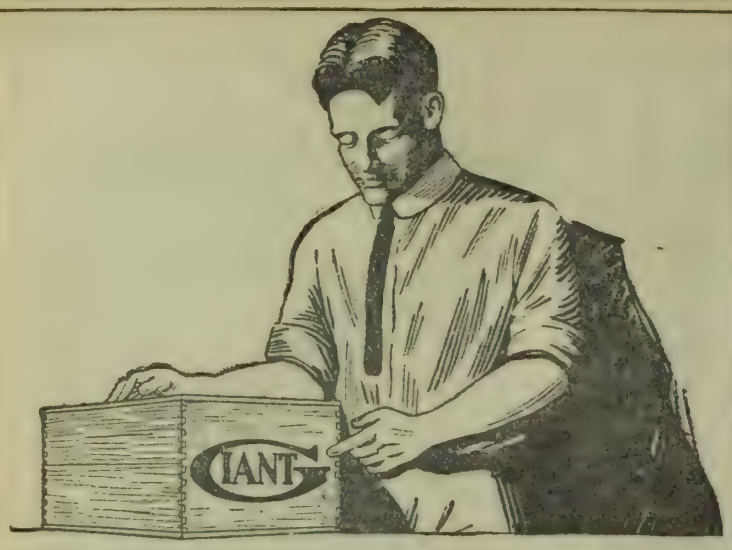
Above all, Senator Phelan knows how best to meet the menace of the "silent invasion." His fight to save California from the Jap is your fight.

Senator Phelan has no need for idle promises or platform patter. His fighting record for California's rights speaks for itself.

Keep California White

You "scratch" the SOIL to grow good crops! Make your BALLOT count for California.

Re-elect JAMES D. PHELAN U.S. Senator



The DEALER says=
"the GIANT mark protects you from imitations"

"It pays me to give my customers what they ask for," says the retailer who knows what's what. "When they ask for 'Giant Powders' I give them GIANT Powders—the real Giant, made by The Giant Powder Co., Con. I don't tell them that 'I have the same thing, only under another brand name,' because it is not true.

"The name 'Giant' on a case or a stick of powder is evidence that the powder is made by the company that originated Giant Powders. Remember this: You can't get Giant results when you use ordinary dynamites that look like Giant but aren't marked Giant."

Look into the new, money-saving methods of clearing land, blasting tree beds, ditches, boulders, etc. They are all described in our up-to-the-minute book, "Better Farming with Giant Farm Powders." A post card will bring it by the first mail.

THE GIANT POWDER CO., CON.
"Everything for Blasting"

216 First National Bank Bldg., San Francisco. Branch Offices: Butte, Denver, Los Angeles, Portland, Salt Lake City, Seattle, Spokane.

GIANT FARM POWDERS

STUMPING EUREKA

DE LAVAL
IRRIGATION PUMPS

High Efficiency Saves Power

Above is shown the rotating element of the DeLaval 24-inch Irrigation Pump.

This illustration shows the impeller, labyrinth rings, flexible coupling flange, packing and oil rings complete, ready for assembly.

This shaft is of hammer-forged steel and is ground and polished to a high finish and perfect alignment. It is protected from the wear and contact of water by removable protecting sleeves.

This is one of a series of advertisements explaining the different parts of the De Laval Irrigation Pump.

Write us and learn what can be saved with High Efficiency Pumps.

HERZOG ELECTRIC & ENGINEERING CO.

179 STEUART STREET, SAN FRANCISCO

MOTOR TRUCKS HAUL HAY

Motor trucks in most cases prove more economical in hauling alfalfa in Southern California than the railroads. This is indicated by the statement of Manager A. F. Thornton of the Sales Department, Alfalfa Growers of California, Inc., that probably about 90 per cent of the alfalfa brought into Los Angeles and Orange counties from the Chino, Perris, and San Jacinto of San Bernardino and Riverside counties is hauled by motor trucks. They pick it up at the ranches and in many cases deliver to the consumers with only one handling on and off. Alfalfa hay is hauled loose by truck and trailer up to fifteen or twenty miles in Fresno and Imperial counties.

REVOLVING PISTON AND NO VALVES.

A valveless gas engine built on a new principle is being exhibited in action this fall. The piston skirts extend well above the piston head to furnish ports by which gas is let in and out at proper times regulated by the ports in the piston coming opposite ports in the cylinder. This is not the sleeve valve system, as the piston itself is revolved regularly by a worm gear and a sliding key. Instead of a wrist-pin, a ball and socket joint is necessarily used.

LOADER FOR SHOCKED CORN.

One man and two ponies can pitch the shocked corn or grain or hay from approximately 25 acres onto wagons in one day with a simple contrivance on which W. C. Hill of Los Angeles county has recently received patents. A three-wheeled frame supports a swinging derrick arm at whose extreme end are curved grippers which encircle a shock of corn or grain, is closed together by a rope running to a drum on the frame worked by hand levers, and lifted to the wagon without breaking the shock. Hay is handled in the same way by replacing the curved grippers with buck-rake fingers. The ponies push their machine along the row or winrow somewhat as a wheel buck-rake is pushed. It saves several men and avoids considerable shattering of grain, corn leaves, alfalfa leaves, etc., and can be used to load manure, cleaning up the pile to the ground as it proceeds.

NATIONAL TRACTOR SHOW IN OHIO.

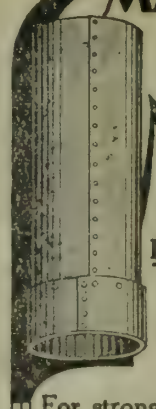
The Sixth National Tractor Show, which is to be held February 7 to 12, 1921, at Columbus, Ohio, will have about 110,000 square feet of exhibit space besides the Coliseum, which is 202x320 feet in extent. The Coliseum will be used for general exhibits and for mass meetings, where leaders, such as the President-elect and the Secretary of Agriculture are expected to address exhibitors and visitors. All exhibits are under roof, enclosed and comfortable. National Tractor Shows were started by the Kansas City Tractor Club about six years ago under management of Guy Hall, who managed the First National Tractor and Implement Show of the West at Glendale, Cal., September 20 to 26, 1920.

TRACTOR HITCH FOR FRESNO SCRAPER.

Many new land levelers have been invented for use with tractors, but it has remained for J. S. Reynolds of Santa Barbara county to invent a hitch by which the ordinary Fresno scraper may be used with a tractor as a one-man outfit. Pulling a rope loads the scraper or holds it for a smoothing job. A lever beside the driver's seat dumps the scraper suddenly or slowly as desired.

The Emerson-Brantingham tractor-mower is the heaviest of its kind we have seen. It cuts about nine feet wide. The driver sits just ahead and to the left of the sicklebar.

MADEWELL WELL CASING



Noted for It's Smoothness and Evenness of Fit

For strong, smooth, perfect-fitting well casing, specify Madewell.
—Made from Hard Red or Galvanized sheet metal.
—Joints fit perfectly, because they're built to an exact standard.
—Made in all sizes, single or double.

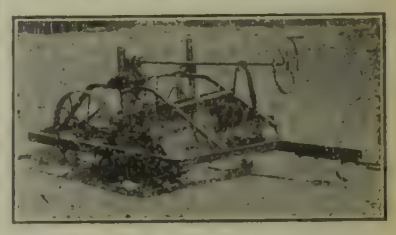
Write for Catalogue A

It describes Madewell Well Casing and other Madewell Sheet Metal Products in detail.

MADEWELL PIPE AND CULVERT WORKS
Dept. 1.
E. 12th St. and 25th Ave. Oakland, Cal.

MADEWELL

THROOP
Land Leveler
"The Leveler Supreme."



"There's a Throop Leveler for every Tractor."

FEATURES
—Mfg. in six, eight, ten and twelve-foot sizes.
—Exceptionally well built.
—Operates as easily as an auto.
—Enormous capacity.
—Positive action under all conditions.

CONLEY MACHINERY AGENCY
17 S. Aurora St., Stockton, California
Dealers Wanted.

Big Money Boring Wells

Have water on your own farm. In spare time make wells for your neighbors. It means $1000 extra in ordinary years, double that in dry years. No risk—no experience needed.

Outfits for Getting Water Anywhere

Earth augers, rock drills and combined machines. Engine or horse power. *Write for easy terms and free catalog.*

LISTER MFG. COMPANY
Box 712 Clarinda, Iowa

Dealers in PAPER | Blake, Moffitt & Towne
37-45 First St., San Francisco
Blake, Moffitt & Towne, Los Angeles
Blake, McFall Co., Portland, Ore.

MUCH USED TRACTOR IN IMPERIAL COUNTY.

C. W. Brockman of Imperial county kills Bermuda grass with his 30-18 track-type tractor. This is accomplished by dry-plowing after the grain is off and letting the ground stand dry the rest of the season. He uses the tractor between irrigations to pull a V scraper through the canals to clean out silt. They usually get dry enough for this, but if they do not, he runs the tractor along their banks pulling the ditcher by a cable about 100 feet long. A good deal of the ranch is sandy soil, including some soft, sandy hummocks. The hired man drives the tractor over these hummocks rather than to go around them. Mr. Brockman says it is "the finest sand climber I ever saw." Many roads in the valley are divided lengthwise by a small levee on one side of which water is run while the other half of the road is used for travel. Frequently water has to be pumped off the road to enable it to dry up before the other side gets too dusty. A pump mounted on a wagon for this purpose is hauled to the job and operated by the tractor.

At harvest time the weather is generally too hot for horses so Mr. Brockman feels that he has to use the tractor to replace the eight horses that would otherwise be required on the small combine. This requires an extra man, because the horse driver would also attend to the header while the tractor driver cannot; but the tractor keeps going regardless of heat. And a great joy it is to Mr. Brockman that with the tractor it takes only one-fourth as much time to make a beautiful square corner with this tractor as it takes with horses. Such square and quick turning at corners is considered essential in harvesting and plowing. The tractor frequently hauls a stationary thresher over any kind of roads encountered here and threshes milo for neighbors at 30 to 35 cents per bag. Sudan seed, etc., are also threshed for neighbors by the tractor's belt power. Filling silos and sawing wood are also other jobs done by this much-used power plant. When hay or grain are to be hauled the tractor takes twelve tons on two wagons direct from field to ranch headquarters or to market over all kinds of soils and roads, and is preferred over horses for this job. It is liked best for ditching and throwing up borders for irrigated crops; is used some for subsoiling; and it plows ten to twelve inches deep for corn and cotton, and five to six inches deep for grain. Two years of such usefulness leaves Mr. Brockman in an enthusiastic frame of mind.

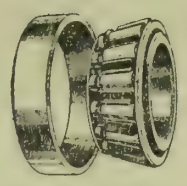
UNIVERSITY TRACTOR COURSE AT LODI.

A gas tractor short course on similar lines to those heretofore held at the University Farm and the Citrus Experiment Station will be held November 15 to 20, 1920, at the Lodi Union High School under direction of the Agricultural Engineering Division of the State College of Agriculture. Five instuctors from University Farm and a number representing various tractors will teach tractor care and repairing, including practice work on magnetos, carbureters, valves, bearings, etc. Enrollment is limited to 100 people over 18 years old, the owners or operators of tractors or those directly interested in them. Enrollment costs $3 and will have to be done early in order to get in. H. W. Shepherd, Lodi Union High School, has charge of details.

BIG ONE-MAN LAND LEVELERS.

The third twelve-foot one-man Schmeiser tractor scraper has recently been ordered for the sugar companies represented by Geo. E. Springer of San Francisco. One has been used on the ranches of the Union Sugar Co. in Santa Barbara county, another on the Sutter County ranch of the Alameda Sugar Co. These people figure that they can spend $25 to $30 per acre for leveling profitably.

Do You Know—



STANDARD PRACTICE

The use of Timken Tapered Roller Bearings at points of hard service in the great majority of automotive vehicles is proof of leadership established on the tapered principle of design, quality of manufacture, performance on the road, and service to the automotive industry.

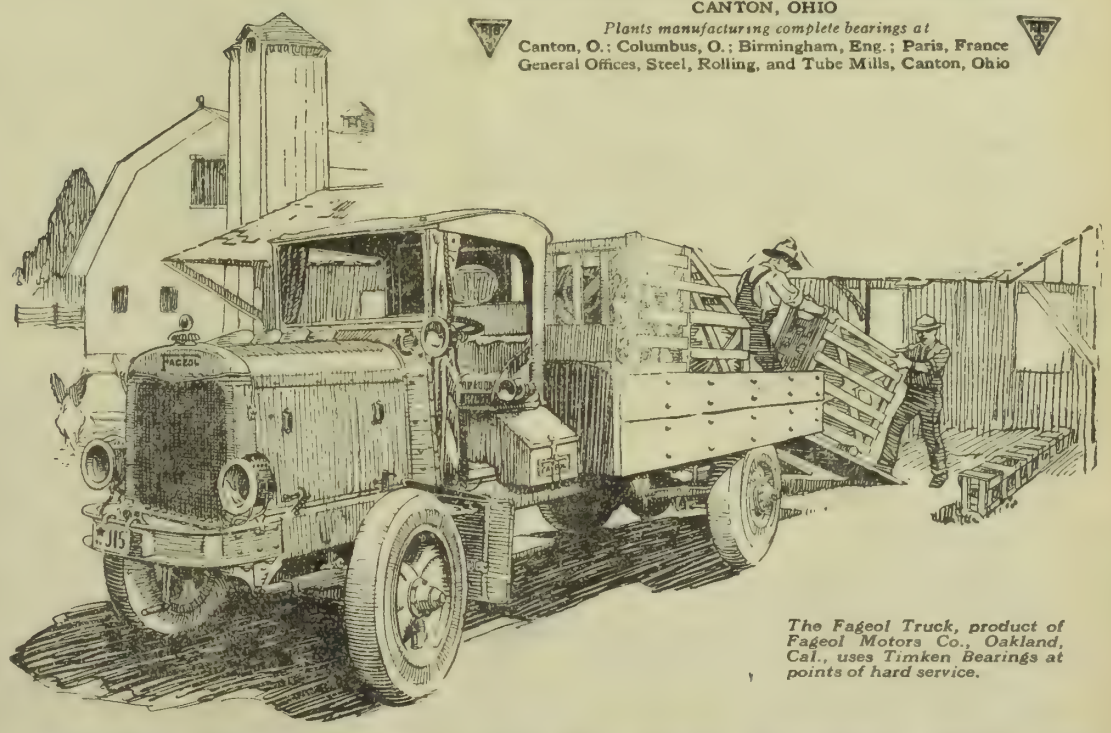
that over ninety per cent of the farmers who own trucks report that their greatest advantage is that they save *time?*

that the overwhelming majority of truck-owning farmers run their trucks from one year's end to another without losing a single day for repairs?

that Timken Tapered Roller Bearings are engineered into trucks for the purpose of making such performances possible?

that the *adjustability* of Timkens' is one of exclusive features that make sure that the Timkenized truck can be kept constantly at work, season after season?

THE TIMKEN ROLLER BEARING COMPANY
CANTON, OHIO
Plants manufacturing complete bearings at
Canton, O.; Columbus, O.; Birmingham, Eng.; Paris, France
General Offices, Steel, Rolling, and Tube Mills, Canton, Ohio



The Fageol Truck, product of Fageol Motors Co., Oakland, Cal., uses Timken Bearings at points of hard service.

TIMKEN
TAPERED ROLLER BEARINGS

BEES PAY

Bee-keepers can obtain from the Apiary Department of the Diamond Match Co. the finest quality of Bee-keeper's Supplies at fair prices.

The Apiary Department, which is in charge of experienced Bee-keepers, is one of the largest of its kind in the United States, and maintains a constant excellence of product and unsurpassed service.

Write for catalogue and if a beginner for Cottage Bee-Keeping, which will be promptly mailed free.

THE DIAMOND MATCH CO.
APIARY DEPARTMENT
CHICO, CALIFORNIA, U. S. A.

SAVE MONEY—BUY PIPE FROM US

Farmers, Miners, Builders—people in every kind of business are saving money buying used or renewed pipe from us. We sell every kind of pipe. Send in a list of your requirements today and get our prices. We have saved hundreds of people 33 1-3 to 50 per cent on their pipe bills. Here's a partial list of some of the miles of pipe we have in stock for immediate delivery.

8,000 ft.	6 in.	Riveted	16	gauge
700 ft.	8 in.	"	16	"
5,000 ft.	12 in.	"	12	"
1,000 ft.	18 in.	"	12	"
800 ft.	22 in.	"	14	"
300 ft.	24 in.	"	14	"
500 ft.	36 in.	"	12	"

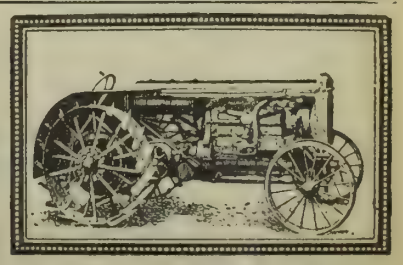
10,000 feet light wrought iron 8-inch pipe with cast-iron collars.

All above pipe thoroughly overhauled and inspected and ready for immediate use.

We also have large quantity standard pipe and screw casing, pressure tested and guaranteed.

Don't delay—write for our prices on your pipe requirements today.

PACIFIC PIPE COMPANY
229 Howard Street, San Francisco, Cal.



Allis-Chalmers
Farm Tractors

The 1830

A four plow tractor with 20% surplus power for ANY unusual load.

H. V. CARTER MOTOR COMPANY • *Distributors*
52 Beale St., San Francisco, Cal.

150--Registered Holsteins--150

Federal Tested—Guaranteed Breeders

AT PUBLIC AUCTION

STATE FAIR GROUNDS, SACRAMENTO, CALIF.

NOVEMBER 10-11, 1920

100 COWS OF MILKING AGE!

30 HIGHLY BRED HEIFERS!

25 BULLS, MOSTLY READY FOR SERVICE.

Choice Breeding! Excellent Type!

REMEMBER—That this is the first entire offering of Federal tested and inspected Holsteins ever made in California; most of them originally came from Federal accredited herds.

FEMALES BRED TO OUTSTANDING BULLS!

Three great yearly record bulls, a 30-pound bull, and a 33-pound bull are the five reference sires in this sale. Their calves should add attractiveness to any herd.

A detailed announcement of the offering will appear in next week's Press. Look for it, but write for catalog now.

Owners:

TOYON FARM ASSOCIATION

Farms: Los Altos and Brentwood. Offices: Mills Bldg., San Francisco

Auctioneers:
COL. BEN A RHOADES, Los Angeles
COL. JOHN A. DAVIS, Manteca

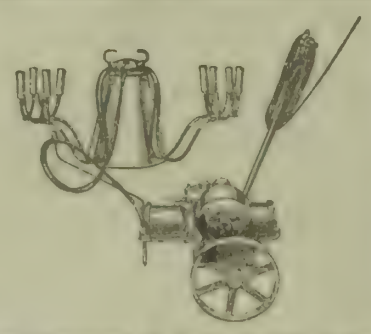
Management
Calif. Breeders' Sales and Pedigree Co.,
C. L. Hughes, Sales Mgr., Sacramento, Calif.

Sharples Moto Milker

A COMPLETE MILKING MACHINE
For $385.00 San Francisco

A plant in itself, including power, at a greatly reduced price. Will handle from 8 to 50 cows, milking two cows at one time at an average of 20 cows an hour.

No Installation—No Pipes
No Pulsators—No Extra Charges



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Investigate this before buying a milking machine.

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Western Distributors.
Corner Main and Market, San Francisco, Cal.

NOW READY TO SHIP

DRIED BEET PULP

Palatable succulent vegetable feed for dairy cows, beef cattle, sheep and hogs

We can take care of orders from any part of the country

The Larrowe Milling Company
Detroit, Mich. Los Angeles, Calif.

CLARK, HUNTER & CLARK
LIVESTOCK AUCTIONEERS
915 I St., Modesto, Calif.
Registered Hog Sales a Specialty

Milking Shorthorns
Herd Headed by
FOOTHILLS PIONEER
Grand Champion at Sacramento, 1919
Leon F. Douglas, Geyserville, Cal.

Livestock and Dairy Notes

The Dairy.

A. M. Bibens of Modesto will start a number of his Holsteins on official yearly test in the near future.

Nearly every herd in the Stanislaus County Holstein Breeders' Association will be entered in the State Dairy Cow Competition.

Registered Holstein triplet calves were shown at the Los Angeles Livestock Show by Anita M. Baldwin. Two were heifers.

Vina Pietertje Hengerveld De Kol 2d, owned by Freeman & Edwards, has completed ten months of her yearly test with better than 1000 lbs. butter and 26,000 lbs. milk and she is still going strong.

Orr & Lang of San Felipe district are developing a fine herd of Holsteins, numbering now about fifty and have purchased a high class young bull, Baywood Sir Portious Rag Apple, from the Lewis Company of San Jose.

That the dairy tide is turning is evidenced by the increasing prices for grade cows and the demand for them. Last week Col. Cy. Clark of Modesto sold 165 head in one bunch at the Hird ranch near Sheldon, some of them bringing $200.

H. M. Cross of Merced has shipped his entire herd of Holsteins, headed by his herd bull, King Morco Alcartra II, to Gotshall-Magruder Co. of Ripon, on a 5-year contract. He will continue to raise Poland Chinas on his ranch at Merced.

The dry milk plant of the Milk Producers' Association of Central California is nearing completion. The machinery is being installed and the dried product will soon be in evidence. The building is so arranged that the capacity of the plant can be doubled very easily.

Col. George A. Gue reported at the Petersoster sale that alfalfa hay in the Yakima district of Washington is offered at $15 on the car and finds few buyers at that price. He also stated that stock is going into Idaho to eat the alfalfa at $6 a ton in the stack.

Romie C. Jacks of San Francisco, owner of Chowlar Ranch and the Imperial Herd of Herefords, purchased the Stalder Ranch at Chino, which was sold at auction last week at the same time the herd of Holsteins and all other farming equipment passed under the hammer. The Holsteins averaged $533 per head, which is an especially good one, reflecting credit both on the quality of the offering and ability of the management. The sale was conducted by the California Breeders' Sales and Pedigree Company.

E. R. Stalder of Wineville recently sold four "just good quality" registered Holstein cows, averaging $471, to Geo. Kelly of Santa Ana, who is just starting a registered herd. All of the cows have A. R. O. records of sixteen to twenty pounds butter in seven days. Mr. Stalder started his registered herd three years ago with eight cows and a bull, which cost a total of $5 more than the four were recently sold for. After selling the four head, he had sixteen females left, including three of the original. He has bought a very few head meanwhile, but most of his stock is of his own breeding. This is inspiration for others who are just starting.

Beef Cattle.

Purebred Shorthorn bulls were recently sold by the Ranch San Julian of Lompoc to ranchers in San Diego and San Luis Obispo counties.

Recent rains have started feed in the range sections in many parts of California and the outlook for the cattle business for the coming season is excellent from the feed standpoint.

Corn silage, sprinkled with cottonseed meal just before it was fed, fattened about 250 steers on the Rancho San Julian in Santa Barbara county last year. One to two pounds of the meal was used per head daily.

A MODESTO HOLSTEIN BREEDER TO TAKE A REST.

Written for the P. R. P. by Ralph Newman

In 1908 J. W. Benoit bought forty acres near Modesto "on time". After the first payment was made he turned around and put every remaining dollar he had into five aged Holstein cows and went to work digging out. He has dug out and more. Now, feeling that he has earned a rest, he is about to disperse his entire herd.

Any man who can do this stunt in 13 years, with the ups and downs the dairy business has experienced, is worthy of note just as an inspiration to others. How did he do it?

Well, anybody who knows "Johnnie" will admit that he is not lazy. All these years he has done the bulk of the work on his forty acres. This includes milking the cows, even those on test when he had to show up with the pail four times every 24 hours. He told me that the year before we went to war his bill for hired help was just $87. It isn't every man who could stand a grind like that, but he stood it and is a young man yet.

Then he started with the right kind of cows. They were not young but young enough to breed and old enough to have demonstrated there were none better. They were from the herd of L. A. Hall, the first California breeder, I believe, to do official testing. One of them had won the gold medal at the 1907 State Fair. One of them had a record of 1000 pounds of butter from 22,000 pounds of milk. Another one of them, when sixteen years old, made 26.1 pounds of butter in July. The daughter of another made an 800 pound record in the Morris herd. And still another made over 700 pounds in 305 days.

On this foundation he has builded—always with the milk pail in view. The sires he has used and the heifers he has saved have been selected for production as well as type—for production first. And this herd has produced. Fifteen cows and seven heifers have rolled out 13 ten gallon cans of milk a day. There have been five butterfat contests pulled off in Modesto—the last one having seventeen entries. Lone Oak cows won every one of them. Blood will tell.

Just Like Milk

[illegible] AN-FO [illegible] NO SUBSTITUTES

At Feed Dealers, or
ANIMAL FOOD CO., OAKLAND

AN-FO CALF MEAL

HOLMES STOCK FARM
MODESTO.
Registered Holstein Friesians
Prize winners at all the Shows. Inspection invited and satisfaction guaranteed. Write for prices.
R. L. HOLMES, Prop.

REGISTERED HOLSTEINS
Creamcup Herd offers service bulls and bull calves of 34-lb. breeding. Females offered for foundation stock.
Tuberculin tested.
M. M. Holdridge, San Jose, Cal.
R. D. "A," Box 437,
Two miles out North First Street.

and there is the blood of splendid dams and three generations of 30 pound bulls in this herd.

Lone Oak Farm has been "lucky" in two respects. The herd books show that from start to finish the cows have thrown better than 50 per cent heifer calves. If this isn't "luck" what is it? Then this herd has always been and still is entirely free from abortion. And this isn't just luck. It is an achievement won by a wholesome dread of the disease and untireing vigilance in keeping it out.

Asked what he considered the most vital element for success in dairying, Benoit answered: "The right kind of cows for a start and kept right all the way along." But don't forget that he has worked. The dairy game is no place for a lazy man unless he has unlimited money to risk.

LIVESTOCK DIRECTORY.

Rate, 4c. per word. Cash must accompany all orders.

SWINE.

Duroc-Jerseys

DUROCS—BIG-TYPE—HIGHEST QUALITY—popular blood lines. Herd headed by Johnson's Defender, Jr., and Western Pathfinder. Bred sows and gilts and young boars for sale at moderate prices. Greenwood Farm, Witherow & Stafford, Live Oak, Cal.

BRED SOWS AND GILTS and young stock. Pathfinder and Great Wonder I Am breeding. Monthly payments, if you wish. Derryfield Farm, Capital National Bank Bldg., Sacramento.

REGISTERED DUROC yearling boar and seven August weanling pigs for sale. H. I. Wilson, Route K, Box 163 A, Fresno. Ten miles west between Belmont and McKinley avenues.

BOYANNA BIG-TYPE DUROCS—Breeding stock; priced right for sale. Inquiries invited. Satisfaction guaranteed. J. Boyd Harrold, Dixon, Cal

BIG-TYPE DUROCS—Herd headed by California Orion King. Am offering excellent young boars at right prices. Inquiries invited. Harvey M. Berglund, Dixon, Calif.

LAMB'S DUROCS—Seven good sows with litters, weaned pigs and choice open gilts ready to breed. Priced right to close out the herd. Elmer Lamb, Ceres, Calif.

GOOD SPRING AND FALL GILTS—Strong in Pathfinder blood, sired by Pathfinder Wonder. Hamlin Farm, Box 697, Sacramento.

WINSOR RANCH DUROCS—Young boars and some top gilts bred to WINSOR'S GIANT ORION—Morris C. Allen, Mgr., Bonita, Cal.

REGISTERED DUROCS — Choice gilts and weanlings, either sex. Breeding and satisfaction guaranteed. H. E. Boudier, Napa.

BIG-TYPE DUROCS — Gilts and boars of Great Orion Sensation breeding. Fairdale Farm, Perris, Cal.

FOR THE BEST in Durocs, write June Acres Stock Farm, Davis, Cal.

JACK LONDON RANCH, Glen Ellen—Exceptionally good weanlings. Bred sows and gilts. One good yearling boar and one fall boar. Prices reasonable.

Poland-Chinas.

AN OCTOBER YEARLING BOAR out of the 1920 Grand Champion Sow. Two March boars, one by Long Big Bone, Jr., out of the 1919 Reserve Grand Champion Son. He sired the 3rd prize litter Sacramento this year. One by The Westerner, out of the 3rd prize Junior Yearling Sow this year. These are tops, priced low, to move them. Alex D. McCarty, Modesto, Cal.

POLAND CHINAS—Some promising yearling boars; also 2 yearling boars, 300 lbs. Big-bone type, excellent breeding and 2 bred sows, farrow in November. Pedigree on application. Edward A. Hall, Rt. 1, Box 39, Watsonville, Cal.

ELDERSLEY AND SHADY BROOK Farms big-type Poland-Chinas that make money for the Feeder, the Farmer and the Breeder. Prices reasonable. J. H. Ware, Brown's Valley, Calif.

THE PACIFIC HERD of Polands—I Am King, herd sire. Weanlings for sale. Satisfaction guaranteed. Nettie E. Andrews, Modesto, Cal.

TOHOQUA POLAND-CHINAS—A good tried boar and some choice young breeding stock for sale. Ferguson & McKaig, Orland, Cal.

WAUKEEN HERD POLAND-CHINAS — Home of King's Big Bone Leader. A few service boars for sale. Les McCracken, Ripon.

LAKESIDE STOCK FARM—Large, smooth and big-boned Poland-Chinas. Geo. V. Beckman & Sons, Lodi, California.

POLAND-CHINAS—Strictly large type. J. F. Lehman, Lodi, Cal.

REGISTERED POLAND-CHINA SWINE — Prize-winners. Finest stock in the State. Bassett Bros., Hanford, California.

REG. BIG-TYPE POLAND-CHINAS—Service boars; weanling pigs. J. H. Cook, R. 4, Chico.

Berkshires.

ANCHORAGE FARM BERKSHIRES
Orland, Calif.

HERD BOARS—STAR LEADER, Junior and Reserve Grand Champion of the World. The Grand Champion carload of barrows, over all breeds, at the San Francisco Live Stock Show, was sired by a son of Star Leader, NATOMAS BARON DUKE, grand champion of California. For sale, bred gilts, open gilts, young boars and weanling pigs. Write for booklet, prices and list of sows.

BRED GILTS.
Sired by Mayfield Rookwood 2d, a Grand Champion Boar, out of 600-700 lb. sows, and actually bred to "ACHIEVER," our English Blood Boar, the Sire that puts more bone and pork-making qualities into his pigs. Priced reasonably and absolutely guaranteed. Castleview Ranch, Santa Rosa, Calif.

The only herd of English Berkshires in the West. Bigger, better, stronger litters. More pounds of meat for less feed. Weanling pig, $35. Satisfaction guaranteed or money refunded at once. Sandercock Land Co., 703 Market St., S. F. In charge Natomas Land Sales.

GRAPE WILD FARMS—Berkshires—Guernseys. Big-type Berkshire Boars of serviceable age, sired by Big Leader—greatest son of Grand Leader 2nd. Panama-Pacific Grand Champion. A. B. Humphrey, Prop., Escalon.

QUALITY BERKSHIRES — Young stock, both sexes. Geo. P. Upham, Martinez.

BERKSHIRE BOARS—Real herd sires. We are offering these at sacrifice prices to move them quickly. Write for description and price. R. J. Merrill & Son, Morgan Hill, Cal.

REAL GOOD BERKSHIRES — Cholera immune. Frank B. Anderson, Sacramento, Cal.

Miscellaneous Swine.

YORKSHIRE SWINE — Registered Boars, Sows. Young stock. Mahajo Farm, P. O. Box 597, Sacramento, Calif.

DAIRY CATTLE

Holsteins.

REGISTERED HOLSTEIN-FRIESIANS — Both sexes choice stock; tuberculin tested. Sunnybrook Ranch, H. H. Sisson, Mgr., Willits.

HOLSTEINS

THE LEWIS COMPANY

Registered Holstein Cattle
Bulls, Heifers and Calves
of Ormsby breeding
Tuberculin tested
Lewis Building, San Jose

ASEVEDO BROS. CO.
Patterson, Cal.
Breeders of
REGISTERED HOLSTEINS
For Sale
Young bull, sired by King Abbekirk Johanna 24th, and out of a dam making 24 lbs. as a 4-year-old

CREAMCUP HERD — Registered Holsteins. Pontiac bull calves. M. Holdridge, Rt. A, Box 437, San Jose.

REG. HOLSTEINS, both sexes. World's record backing. Kounias Reg. Stock Farms, Modesto, Cal.

REG. HOLSTEINS—A. W. Morris & Sons Corp., Importers and Breeders, Woodland, Cal.

F. H. STENZEL, SAN LORENZO—Breeder of Registered Holsteins. High test producers.

REGISTERED HOLSTEINS — Best blood lines of the breed. R. L. Holmes, Modesto, Cal.

CHOICE HOLSTEIN bulls for sale. No females. Millbrae Dairy, Millbrae, California.

GOTSHALL & MAGRUDER — Breeders of registered Holstein-Friesians. Ripon, Calif.

EL DORADO HERD OF REG. HOLSTEINS—Alex. Whaley, Tulare, California.

Milking Shorthorns

REGISTERED MILK AND BEEF SHORTHORNS, bulls and heifers for sale; catalogue free. Thomas Harrison, Santa Rosa Stock Farm, Santa Rosa, California.

INNISFAIL HERD MILKING SHORTHORNS—Young stock for sale; both sexes. Owned by Alexander & Kellogg. Leased by J. D. Rowe & Son, Davis, Cal.

BREEDERS OF REGISTERED SHORTHORNS—Milk strain; choice young stock for sale. John Lynch Ranch, Box 321, Petaluma.

Jerseys.

SERVICE JERSEY BULL, bull calves Financial King blood, Chester White boars, prize winners. Best blood, type, production. N. H. Locke Co., Lockeford, Cal.

FOR SALE—Pure-bred Jersey bull, 16 mos. old. Prize winner at two fairs this fall. $250.00, if taken now. W. H. Alfred, Loleta, Humboldt Co., Calif.

JACK LONDON RANCH, Glen Ellen—Two fine Jersey bulls, one ready for service.

SUNSHINE FARM JERSEYS—"Production counts." E. E. Greenough, Merced, Cal.

Ayrshires.

PENOBSCOT FARM REGISTERED AYRSHIRES—Some good young "mothers." High butterfat producers. Choice individuals; all ages; reasonable prices. Cool, El Dorado Co., 9 miles from Auburn, Cal.

STEYBRAE AYRSHIRES — Registered; all ages. E. B. McFarland, 414 Claus Spreckels Building, San Francisco.

NORABEL FARM AYRSHIRES — Le Baron Estate Co., Valley Ford, Cal.

Guernseys.

PUREBRED GUERNSEY HEIFERS—Heifer calves and bull calves for sale at reasonable prices and on terms, if necessary. The mothers are wonderfully bred, and with high milk and butterfat yields. The sires have made Guernsey history. Also a few purebred Holstein cows, heifers and a herd sire for sale. Prices and terms on application. If you desire to start with purebreds, now is your opportunity. S. J. Strauss, P. O. Box 62, Modesto, Cal.

BEEF CATTLE.

RANCHO SAN JULIAN SHORTHORNS—Purebred range bulls, unregistered, for sale. Estate Thos. B. Dibblee, Santa Barbara, or Lompoc, Calif. John Troup, Supt.

WM. BRIGGS & SON, Dixon, Cal. Breeders of Hereford cattle and Rambouillet sheep.

DISPERSAL SALE
64 Holstein Friesians 64

One of the Pioneer Herds of Registered Holsteins in Stanislaus County. Especially High-Producing Cattle Will Be Sold at Auction at
MODESTO, SATURDAY, NOVEMBER 6TH
COWS WITH CONSTITUTION, CONFORMATION, PRODUCTION

WALHALLA PRINCESS 2D
706 lbs. butter, 17,328 lbs. milk in one year.

49 females of equal merit in the sale, including a 29.75 pound and 574.97 pound 3-year-old and 22 daughters of **EL PRADO WAYNE, COLANTHA,** a 30-lb. grandson of **COLANTHA JOHANNA LAD.**

HERD SIRES

LONE OAK TERZOOL KORNDYKE

With a 959 lbs. butter, 21,550 lbs. milk dam.

LONE OAK VALDESSA FINDERNE

With a 790 lbs. butter, 18,377 lbs. milk dam.

A GREAT OPPORTUNITY FOR FOUNDATION STOCK

Every animal goes to the highest bid on sale day—nothing is reserved.
Every animal offered in this sale is guaranteed to be a breeder.
Certificate of registration, transfer furnished free of cost to buyer.

TERMS OF SALE—One-half cash and one year's time on the balance on approved notes. Sale begins at 10 a. m., November 6, 1920, at the Benoit's Lone Oak Stock Farm, four miles west of Modesto, Calif. A square deal to buyers insured by the management.

STANISLAUS COUNTY HOLSTEIN BREEDERS' ASSOCIATION

For catalogs and further information, write,
E. M. MORROW, Sec'y, Modesto, Calif.

Auctioneers

COL. GEO. A. GUE, Yakima, Wash. **COL. CY. N. CLARK, Modesto, Cal.**

SHORTHORNS—The foremost beef breed—Have a limited number of stock for sale, both sexes. If you wish to start a small herd I can probably supply your needs. T. T. Miller, Hollister, Cal.

ALAMO HERD REGISTERED HEREFORDS (founded by Governor Sparks). Herd and range bulls. Reasonable prices. W. D. Duke, Gazelle, Siskiyou county, California.

THE NEVADA HEREFORD RANCH—Jno. H. Cazier & Son Co., Prop., Wells, Nevada. Reg. Hereford cattle. Breeding stock for sale.

CARRUTHERS FARMS, Live Oak, California. Shorthorn cattle and Berkshire swine of quality and select breeding.

JACK LONDON RANCH, Glen Ellen—Shorthorn bull ready for service, and some good bull calves.

ABERDEEN-ANGUS cattle of quality and breeding. Lilac Ranch, Escondido, Cal.

SIMON NEWMAN CO., Breeders of Registered Herefords, Newman, California.

HEREFORDS — Mission Hereford Farm, J. A. Bunting, Prop., Mission, San Jose, Cal.

REGISTERED HEREFORDS—H. H. Gable, Diamond G Ranch, Esparto, California.

GEORGE WATTERSON — Breeder Registered Herefords. Bishop, California.

REGISTERED SHORTHORNS — Fair Oaks Ranch, Willits, Calif.

SHEEP AND GOATS.

FOR SALE—Naturally hornless pure Toggenburg bucks—no better blood in the state. Scottwood Walike, No. 9425, color dark chocolate; Scottwood Gilead, No. 9429, light fawn. Address Ira Young, R. F. D., No. 1, Box 49, Lankershim, Cal.

F. A. MECHAM ESTATE, Petaluma, Cal.—Breeders and importers of Shropshire, Rambouillets and American Merinos, both sexes. Also Red Polled cattle. Take electric car at Petaluma or Santa Rosa for Live Oak Ranch.

FOR SALE—Rambouillet rams and ewes—purebred; the very highest grade of large smooth body; heavy shearers; the wool and mutton type. Immediate delivery of individual or carload lots. You can find none better or of higher grade. Address Glenn, Cal. Location, 8 miles south Hamilton City, 1 mile west Ordbend. Windell Orchards Co.

FOR SALE—850 one, two and three-year-old Merino ewes. J. A. Swall, Box 742, Bishop, Cal.

J. E. BLOOM, Dixon, Calif.—Twenty-five years breeder of purebred Shropshire sheep. Rams for sale. Single or carload lots.

AUCTION SALE

WEDNESDAY, NOV. 3
220 HEAD
80 Milch Cows, 80 Spring Heifers
60 1-year to 2-year-old Heifers
(This herd is all Holstein)
This herd is owned by R. E. Rahilly of near Lonetree
SALE AT ALFARATA RANCH
On State Highway, three miles south of Merced on account of Los Banos road being closed.
Sale at 10:30 a. m. Lunch at Noon
Rain or Shine
R. E. RAHILLY, Owner
M. V. MANCEBO, Sales Mgr.
Telephone, Merced 33F23
OAKES & CATEN, Auctioneers
Telephone, Modesto 1021

OAKDENE GOAT FARM, Walnut Creek, Contra Costa Co., Cal—Breeder of milk goats. Nubian, Saanen and Toggenburg registered grades. Bred and fed for milk production.

DORSETS—ROMNEYS—Dorset ram lambs for sale. John E. Marble, South Padasna.

SHEEP FOR SALE—1000 ewes. Will sell in lots to suit. Chas. G. Owens, Livermore.

HARVEY S. VANVLEAR, Lodi, Breeder and importer of registered Hampshire sheep.

CALLA GROVE FARM, MANTECA, CAL.—Breeders and importers of Hampshire sheep.

KAUPKE BROS., WOODLAND, CALIF.—Breeders and importers of Hampshire sheep.

CARL LINDHEIMER, Woodland, Cal.—Rambouillet Ram lambs for light use.

BULLARD BROS., Woodland, Calif.—Breeders and importers of Rambouillet sheep.

MISCELLANEOUS.

BUTTE CITY RANCH
SHORTHORN CATTLE, SHROPSHIRE Sheep, Berkshire Hogs, Shetland Ponies, Bronze Turkeys, White Plymouth Rocks. Stock for sale at all times. W. B. Dwyer and W. S. Guilford, Box P, Butte City, Glenn county, California.

FOR SALE OR TRADE—Percheron stallion reg. (weight 2000). Will exchange for work horses or cattle. Address Ralph L. Clark, R. F. D. 2, Box 74, Lodi, Cal. Phone 24F4.

REGISTERED BROWN SWISS, carrying best blood of the breed. M. J. Pedrotti, San Rafael, Calif.

Dissolution Sale

50 POLAND CHINA SWINE

Entire herd owned by the well known firm of Wm. Marshall and Son of Sebastopol will be sold at Santa Rosa, November 15th. The offering includes:

HEADLIGHT, 1st Prize Junior Yearling and Senior Reserve Champion at the California State Fair, 1920.

MOUW'S SPECIAL 7TH, 5th in Aged Boar Class without fitting at Sacramento, 1920.

2 March, 1920—Sons of Headlight.
12 Tried Sows—8 bred, 4 open.
8 Fall, 1919, Bred Gilts
10 Spring Open Gilts
16 Fall Weanlings, Both Sexes

Size, Prolificacy, Profit

Write for Catalogue

WM. MARSHALL & SON

Sebastopol.
COL. GEO. W. BELL, Auctioneer.

Husky, Healthy, Growing Pigs ---the result of

The high development of LACTIC ACID found in LACTEIN Condensed BUTTERMILK supplies the growing pigs with the nourishment and tone which keeps the organs thoroughly cleansed and at the same time furnishes a most nutritious food for the rapid and strong development of the pig. LACTEIN Condensed BUTTERMILK is a proven producer in the feeding of pigs—and the demand shows how extensively it is used by the hog raisers.

Ask your dealer for LACTEIN Condensed BUTTERMILK TODAY —you'll notice the benefit and the results will spell added profit.

LACTEIN CO.

Main Office and Factory
Modesto, California

Duroc-Jersey Hogs for Sale

BOARS AND GILTS
BRED SOWS
SOWS WITH LITTERS

DIABLO STOCK FARM,
E. F. PETERSEN, Supt.
Danville, Cal.
G. W. EMMONS, Owner,
Oakland.

They are the large type and the best blood strains to be had anywhere.

HERD BOARS AND SOME OF THE SOWS

Lucy Orion's Model
California's Defender
Diablo Orion Model
Defender Colonel 70th
Prize of Tulare Belle
Pathfinder's Queen
Great Wonder I Am Gano
Lucy Orion's Mayflower
Twin Oaks Attraction
Lady Defendress 70th
and 50 others.

WEANLINGS—$15.00 EACH AT RANCH — A large number always on hand to choose from. Crates $2.50 each, refunded when returned prepaid in good condition.

MAIL ORDERS SOLICITED. SATISFACTION OR MONEY BACK.

PACIFIC INTERNATIONAL LIVESTOCK SHOW.

The interest of livestock breeders all over the Pacific Slope and Rocky Mountain states and throughout Western Canada is now centering in the Pacific International Livestock Exposition to be held at Portland, November 13-20.

The Pacific International will be the big closing livestock event of the season and the blue-ribbon winners from various fairs throughout the West, as well as from many other points, will come together at Portland.

General Manager O. M. Plummer, who has been covering various fairs and livestock shows through the Northwest for several weeks past, is enthusiastic over the prospects for a stock show this year that will surpass all previous ones. Fairs throughout the country this year, he says, have been of an unusually high standard and splendidly attended, the general public showing a keen and intelligent interest in the exhibits. This high standard of excellence will inevitably be reflected, he says, at the Pacific International's big closing event, as only the flower of the finest herds and flocks from all parts of the country will be shown.

"The Pacific International now has a nation-wide reputation," said General Manager O. M. Plummer the other day, "and farmers and breeders all over the country are coming to realize that it means something to win a Pacific International ribbon. Our stockshow is now recognized as one of the leading institutions of its kind on the continent, and it is undoubtedly one of the largest and most important all-purpose shows west of Chicago.

A WARNING REGARDING TUBERCULOSIS.

Dr. F. G. Whitehead, Veterinary Inspector of the Division of Animal Industry, California Department of Agriculture, has recently sent us this very important report, and since it contains so much food for thought and action, we deem it well worth passing alone.

While recently conducting the regular tuberculin tests in and around Santa Rosa, Doctor Whitehead condemned two cows which had reacted to the test. When he informed the owner of the results of his findings, she began to cry. Thinking that her cause for grief was the loss of the two beasts, he tried to console her with the statement that the animals were diseased and she ought to be glad to know it. Whereupon, she promptly replied: "That isn't what I am crying for. I have a baby nine months old and three months ago the doctor operated upon her for tuberculosis of the hip. As a result my baby is now in a plaster cast." She also said: "I was unable to nurse the baby and consequently it was fed entirely upon the milk from these two cows."

It developed that neither parent is tubercular, nor have they ever had tuberculosis in either of their respective families; and neither has the baby ever been away from home.

The above case is only one of the many instances which occur daily through the lack of proper forethought. The time-honored adage, "And all for the want of a horseshoe nail" might well be made to read, "And all for the lack of a tuberculin test."

The remedy for the cause lies primarily in the eradication of tuberculosis. This is accomplished by the various preventive measures; one of which is the tuberculin test. If upon application of the test tuberculous animals are found, they can be destroyed or properly disposed of, buildings and premises disinfected and such other measures instituted as will safeguard health and life.

[Too much emphasis cannot be laid upon the last paragraph. Every effort possible should be made by the well-informed cattle owners to get this knowledge to their less well informed brethern.—Livestock Ed.]

THE MODESTO BULL SALE.

(Written for Pacific Rural Press.)

The officers of the Stanislaus County Holstein Breeders' Association stated that this sale of October 21 was not intended as a money maker, or as a place to unload a few bulls that could not be otherwise disposed of, but as a part of their extension work. They believe that to offer owners of grade herds a chance to buy good, young, purebred sires to replace their grades, at prices no breeder would accept at private sale, will do two things: It will help build up the dairy industry, and it will create a future demand for purebreds at a price satisfactory to breeders.

With this in view, A. M. Bibens, Freeman & Edwards, John Saxer, James Gibson, M. J. Ruddy, H. E. Cornwell, P. Brunold, C. L. Morse, C. S. Coffee and E. M. Morrow consigned 19 well-bred young bulls—most of them around a year old, and in a short time C. N. Clark of Modesto had sold them. Did they bring what they were worth? They did not. Were the breeders satisfied? They were. Every one of these bulls will replace a grade sire and help along the purebred extension work for which this Stanislaus Holstein Association stands.

SELL AT SANTA ROSA.

A sale of Poland China swine of the truly big type will be staged at Santa Rosa, the seat of government in the shire of Sonoma in the very near future. Wm. Marshall and Son will offer their entire herd in the salesring in order to settle the existing partnership. Among the very desirable animals listed will be Headlight, the first-prize junior yearling boar at the State Fair this year. This winning was made in a very strong class, which places this young boar among the best on the Pacific Coast.

These hogs are a fine bunch, not forced, but always kept in a very thrifty condition—just right to keep on growing or producing wherever placed. The tried sows averaged 10 pigs last spring and 9½ this fall.

TAMWORTH--The Bacon Hog

PIGS OF BOTH SEXES FOR SALE
FROM MASSIVE
PRIZE WINNING PARENTS

J. J. SUMMERFIELD, SANTA ROSA, CALIFORNIA

WE WANT SIXTY SOWS

Berkshire type, not registered and not necessarily purebred
If you have one or sixty, write

BALFOUR, GUTHRIE INVESTMENT CO.

Attention of Gladstone Reed. BRENTWOOD, CAL.

DIGESTER TANKAGE

Send for Sensible Folder on Feeding Hogs

WESTERN MEAT COMPANY

Animal Food Dept. 704 Townsend St., San Francisco

SACRIFICE
AT
Private Sale

My Entire Herd of Duroc-Jersey Swine of Unequalled Breeding and Individuality Will Be Sold at Once. Included in the Offering are:

6 TAXPAYER SOWS, 2 years old. 15 GILTS, 1 year old, sired by GREAT ORION, the 1918 Champion.

Sows are bred to **Western Pathfinder, sired by Pathfinder.** Western Pathfinder is a half-brother of **Queen of Pathfinders,** the grand champion Duroc sow at California State Fair and Los Angeles Livestock Show this year.

Also 15 well-developed April Gilts and 6 Boars sired by Western Pathfinder.

An Opportunity to Acquire the Best, both in Breeding, Size and Conformation.

The Big Kind and Everything Goes

Come and see them.

O. W. WEIDLER

Winton, California

1 mile east of station.

THE PACIFIC INTERNATIONAL LIVESTOCK SHOW

PORTLAND, ORE., NOVEMBER 13 TO 20

$400,000 Exposition Buildings.
$75,000 in Premiums.
2,500 head of Livestock.
Dairy Products Show in con-

Daily Auction Sales.
Nationally Known Judges.
Student Judging Contests
Horse Show Each Night.
Reduced Railroad Rates.

ORMONDALE RANCH SHORTHORNS

REDWOOD CITY, CAL.

HERD SIRES

BOQUHAN GUINEA STAMP, the great imported young Broadhooks bull.
GOLDEN GOODS JR., sire of LITTLE SWEETHEART, Grand Champion International Show, Chicago, 1919.

Bulls and Heifers for sale.
Duroc-Jersey Hogs for sale.

JAMES McDONNELL, - Supt.

THE NATIONAL DAIRY SHOW.

(Written for Pacific Rural Press.)

We say a fair or livestock show was a success and sometimes we say it, having in mind the exhibits in combination with crowds of people in attendance. Again we say it when only crowds of visitors are taken into consideration. If the people are there who have paid to see the sights, we are sure to comment favorably. The National Dairy Show this year was a success from all viewpoints. Sam H. Greene of the California Dairy Council says the attendance on Thursday passed the high mark of last year and the time only two-thirds over.

The number of cattle, somewhat in excess of 900, was not quite as large as last year, but in every breed the quality was uniformly higher. In fact, according to Mr. Greene, it would be hard to imagine a better lot all around. One California exhibitor, J. E. Phillips of Allana Farm, Dixon, won first in class with Josephine Johanna Oak De Kol, and their senior bull calf stood second in a class of twenty.

The exhibits of dairy machinery and equipment was far in excess of that of previous years, so that extra space had to be provided.

The National Dairy Council, including the State organizations and U. S. Department of Agriculture, had exhibits that were comprehensive, highly instructive and very interesting.

Two samples of butter entered by California exhibitors in the hand separator class were in the ten highest scoring lots. A. Wirz of Hollister sample scored 92 and the Bodega Cooperative Creamery sample 89.

Wisconsin and Minnesota divided honors in the milk, butter and cheese classes.

Mr. Greene came back more strongly impressed than ever with the idea of a California Dairy Show along the lines of the National to place before the people of the United States the importance of the dairy industry on the Pacific Coast.

POLAND CHINAS SELL AT HANFORD.

(Written for Pacific Rural Press.)

The Kings County Poland China Breeders' Association's tenth semi-annual sale of registered Poland Chinas was held at Hanford, October 20th. Thirty-one head were sold, including sows, gilts and boars.

The consignors included Bassett Bros., W. Bernstein, John M. Bernstein, J. A. Crawshaw, W. T. Dice, W. L. Haag & Son, R G Hamblin, H. D. McCune, H. S. Waltz and Thos. J. Woodworth.

Timm's Princess, a bred gilt, consigned by Bassett Bros., topped the offering and was sold to R. L. Waltz for $150. The next in line was Yankee Wonder Girl, an open sow, consigned by W. Bernstein. She went to W. L. Haag & Son at $115.

In the face of an adverse market and in view of the unsettled conditions prevailing generally it required considerable faith on the part of the Kings County Association to hold a sale at this time and to offer the breeding and the individual quality that was included in this sale. While the prices received were not in keeping with the values offered, several new breeders were added to the list of those owning purebred Poland Chinas and the consignors generally were well satisfied with the results.

REGISTERED JERSEYS NEEDED.

The committee of the Stanislaus County Jersey Association to secure animals for the calf club are having trouble in finding enough of the right kind of registered heifer calves to go around. Jersey breeders who are willing to help out should write the Secretary, Guy Miller of Modesto. Sixteen calves are needed for the charter members.

Unusual loss due to predatory animals among flocks of sheep in the High Sierras this summer is attributed by owners to the close season on bears.

Breed Shorthorns!

CALIFORNIA LIVESTOCK OPPORTUNITY

There is no more attractive business for the ranchers of this State than the production of registered Shorthorns. California breeders do not produce one-tenth the number of bulls annually required. There is a wide and profitable market for both bulls and females. Many ranchers are finding that they can produce Shorthorns without serious labor problems or expensive equipment and that they can be economically grown on the cheaper feeds.

Men with foresight will take advantage of the opportunity to make selections from herds that have earned a reputation for cattle of reliable breeding and correct type. To such men there will be wide appeal in the

Caledonia Farms' Sale

(at the Farms)

WEST SACRAMENTO, CAL.

FRIDAY, NOVEMBER 12

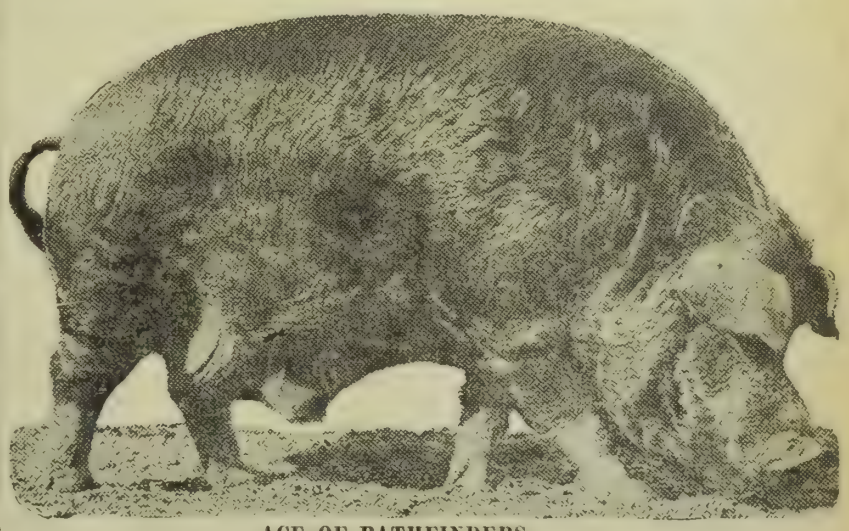
where 50 females, 15 of which sell with calves at foot, and all bred, and ten high-class young bulls have been listed. The females are well bred (a number are Scotch), of good ages and colors and they are the big, thick-fleshed, straight-backed, deep-chested, heavy-quartered and heavy milking sorts that have been raised under normal conditions. Many of the cows have never tasted grain yet are remarkably thick fleshed. All will carry the services of one or another of the three great herd bulls, IMP. CALEDONIA, GAINFORD MATCHLESS and PINE GROVE KING. Several of the calves are sired by the same bulls. The 10 young bulls constitute one of the best lots ever offered in this State.

EVERY ANIMAL IS GUARANTEED TO BE A BREEDER
EVERY ANIMAL SELLS TUBERCULIN TESTED
Write for the catalog
Management

CALIFORNIA BREEDERS' SALES AND PEDIGREE COMPANY

C. L. Hughes, Sales Manager, Sacramento, Calif.
Auctioneer—Col. Ben. A. Rhoades, Los Angeles

DUROC-JERSEYS
Diamond Bar Ranch Offering



ACE OF PATHFINDERS

You now have an opportunity to insure perfect quality in your pigs by purchasing purebred boars sired by the ACE OF PATHFINDERS, Grand Champion Duroc-Jersey Boar, L. A. Stock Show, 1919, and head of the World's Grand Champion Herd of 1919. We are offering the following:

Spring Boars by Ace of Pathfinders
Boars Sired by Ace of Pathfinders and out of Pathfinder's Very Best, winner of Reserve Grand Championship, Los Angeles Livestock Show.
Spring Boars by Royal Pathfinder and Great Orion Sensation
Visit the Diamond Bar Ranch and inspect these purebred Duroc-Jerseys.

Diamond Bar Ranch

F. E. LEWIS, Owner & Mgr. R. K. WALKER, Hog. Dept.

SPADRA, LOS ANGELES COUNTY, CALIF.

GUASTI BERKSHIRES

Weaned pigs, both sexes, from sows that farrow large litters and raise them. Priced reasonable — they are money-makers.

ITALIAN VINEYARD COMPANY

ALEX. M. WILSON, Supt. Guasti, Calif.

CALIFORNIA HEREFORD SALES.

The first week in November will witness a supreme offering in Herefords at Sacramento. A three-day sale with consignments from all the leading herds of the Pacific Coast with a grand total of 150 head of their finest cattle.

The first day will be devoted to selling the offerings of the members of the Pacific Coast Herford Cattle Breeders' Association.

The second day, J. H. Cazier & Sons Co. of Wells, Nevada, will offer 55 head of the very best of Herefords. Thirty heifers sired by Harris Standard 2d and bred to Beau Blanchard 76th, the grand champion at Sacramento and Los Angeles this year.

Barngrover & Wright on the third day have their innings and offer 50 head of the most popular Hereford lines of breeding in the country. These cattle are the equal of any.

A SALE OF HEALTHY HOLSTEINS.

A Federal accredited offering of Holstein-Friesians that are good in every other way as well. The first time that an entire offering of this class of cattle ever was made in California. Not only absolutely clean, but a class of Holsteins of the very highest quality, performance and conformation. Then they have the records and performance back of them.

An opportunity to start now in the best business in the world, bar none. Purebred milk producers where the progeny are a fortune every year and the milk income a growing certainty.

It is a satisfaction to know that a person is working with cattle that are apt to make production records excelling any in the world. It has been done in California before and in the Toyon Farms herd, and they will sell cattle that will do it again.

"The unerring prepotency of the HEREFORD to reproduce like is responsible for their wide popularity."

Northwest Hereford Breeders

will sell at public auction

150 REGISTERED HEREFORDS

WESTERN ROYAL LIVESTOCK SHOW

SPOKANE, WASHINGTON, THURSDAY, NOVEMBER 4, 1920

Auctioneer—Col. Harry C. Cranke, Nezperce, Idaho.

NORTHWEST LIVESTOCK SHOW

LEWISTON, IDAHO, THURSDAY, NOVEMBER 11, 1920

Auctioneer—Col. Harry C. Cranke, Nezperce, Idaho

PACIFIC INTERNATIONAL LIVESTOCK EXPOSITION

PORTLAND, OREGON, FRIDAY, NOVEMBER 19, 1920

Auctioneers—Arthur W. Thompson, York, Nebraska, and Harry C. Cranke, Nezperce, Idaho.

The splendid young cows, bred heifers and open heifers in this 1920 offering are especially worthy of the consideration of the established breeder. An abundance of desirable type and breeding are among the many lots. Females in calf are bred to some of the leading Hereford sires of the West.

In the bull consignment are herd bulls qualified to head any registered herd. Among them will be: **Rupert's Model 14th by Prince Rupert 80th; Beau Gomez, Jr., by Beau Gomez; Severn by Cuba's Panama; and Beau Hesiod by Beau Gomez 5th.**

There will be a desirable lot of RANGE BULLS. White-Faced range bulls that will pay their own way can be purchased at auction prices at these Fall Sales.

Sales held under the auspices of

THE NORTHWEST HEREFORD CATTLE BREEDERS' ASS'N.

Catalogues will be mailed on request

Address: R. P. BANKS, Sales Manager, Box 85, Portland, Ore.

HILLCREST STOCK FARM

Shorthorn Cattle

Won at Sacramento Both Championships

7 Firsts and 5 Second Prizes

Shropshire and Merino Sheep

RAMS AND BULLS FOR SALE

Single or in Carload Lots

T. S. GLIDE, Prop. DAVIS, CALIFORNIA

Hereford Breeders!

The three events outlined below will afford the most attractive opportunity for selection of registered Hereford breeding animals that has yet been presented in the west, and among the 150 head to be sold are individuals of ages, blood lines, and type, to meet a wide demand. These sales will be a real buying opportunity, all at

State Fair Grounds, Sacramento, Calif.

THURSDAY, NOVEMBER 4,

45--Registered Herefords--45

The cattle for this offering have been personally selected and passed upon by Mr. Frank Van Natta of Indiana, representing the American Hereford Cattle Breeders' Association, and every individual has been judged worthy a place in this sale, the object of which is to place before the buying public the highest class cattle that has yet appeared in an Association sale in California.

After the above statement it is hardly necessary to add that the buyer of real top breeding and type will find a rare selection in this offering, animals with which the owners have parted with great reluctance in many instances.

Contributors to sale:

J. H. CAZIER & SONS CO., Wells, Nev.
UNIVERSITY OF NEVADA, Reno, Nev.
ED. T. MORGAN, Northam, Nev.
H. M. BARNGROVER, Santa Clara, Calif.
CHAS. RULE, Jenner, Calif.
J. A. BUNTING, Mission San Jose, Calif.

Sale under auspices of

PACIFIC COAST HEREFORD CATTLE BREEDERS' ASSOCIATION

J. I. Cazier, Pres., Wells, Nevada. J. A. Bunting, Sec., Mission San Jose, Calif.

FRIDAY, NOVEMBER 5

NEVADA HEREFORD RANCH

WILL SELL

55--Registered Herefords--55

With 200 registered breeding cows in its herd, the result of 16 years' experience with registered Herefords, with a [illegible] history of good health, and with a most satisfactory [illegible] of good breeding and good type, the owners are here making a notable offering in their first individual public sale.

BEAU BLANCHARD 76TH was Grand Champion bull at 1920 California State Fair and Los Angeles Livestock Show. One of his junior calf sons, out of a Harris Standard 2nd dam, was junior champion at Sacramento, and another similarly bred was junior champion at Los Angeles.

Beau Blanchard 76th

Harris Standard 2nd

HARRIS STANDARD 2ND is as well bred as any bull in the United States, and the Nevada Hereford Ranch show herd for the past three years has been composed almost entirely of his get, winning consistently wherever shown. As a breeding bull he is widely recognized as a foremost sire in the west.

30 DAUGHTERS OF HARRIS STANDARD 2ND, bred to Beau Blanchard 76th, will be a feature of this offering.

ADDED ATTRACTIONS: At the last moment the owners have decided to include Donna [illegible], richly bred 2-year-old Anxiety heifer, safe in calf to Beau Blanchard, the greatest living Anxiety bull, and Dew Drop, a 2-year-old daughter of Beau Perfect, safe in calf to Dandy Mischief, one of Mousel Bros.' famous sires.

5 CHOICE YOUNG BULLS

A few selected bulls will round out this offering, and they are of the quality for which this herd is justly famous.

Owners:

J. H. CAZIER & SONS CO., WELLS, NEVADA

SATURDAY, NOVEMBER 6

50--Registered Herefords--50

Most of the individuals in this offering were bred in the well-known herd formerly owned by Governor Packard of Arizona, and contains a very large percentage of heifers, many of their dams now being in the herds of Mr. J. A. Bunting, Mission San Jose, Calif., and Mr. Ed T. Morgan, Northam, Nev.

22 DAUGHTERS OF BOURBON COLUMBUS, out of dams by Beau Donald, Beau Tempter, Rupert Donald, Repeater 9th, and Perfect Donald.
5 DAUGHTERS OF BEAU FAIRFAX, out of dams by Beau Tempter, Erling March On, Woodford 2nd, and Rupert Donald.
8 DAUGHTERS OF DON PERFECT 10TH, out of dams by Beau Donald, Beau Tempter, Paloma's Erling, and Don Brummel.
4 DAUGHTERS OF BEAU TEMPTER, out of dams by Rupert Donald and Columbus Busybody.

Many of these choice young females are bred to MAPLES LAD 137TH, who is by the famous show and breeding bull Bonnie Brae 8th and out of a daughter of Domino.

Owners:

BARNGROVER & WRIGHT, SANTA CLARA, CALIF.

For catalog of any or all sales, write the management

Auctioneer: Col. Ben A. Rhoades, Los Angeles.
In the Ring: John A. Bunting, Mission San Jose.

Calif. Breeders' Sales & Pedigree Co.

C. L. Hughes, Sales Manager, Sacramento, Cal.

Poultry for Profit

FATTENING THE HOLIDAY TURKEY.

Once upon a time every farm family had its flock of turkeys, which supplied plenty of birds for the home table and some for the tables of those who lived in the towns. Turkey raising in recent years, however, has decreased, one of the main reasons for this decline being that as the population of the country increased farming became more intensive and the area suitable for turkey raising was reduced. Turkeys require plenty of range in order to thrive.

Many farmers, however, still consider turkeys a profitable side line on the farm, and about this time begin to consider how to put more flesh on their turkey flock.

During the summer and early fall turkeys can find an abundance of feed on the average farm. Grasshoppers and other insects, weeds and grass seeds, green vegetation, berries, and grain picked up in the fields all go to make up the turkey's daily ration. When this natural feed is plentiful, very little need be added until fattening time, except for the purpose of bringing the turkeys every night to roost and to keep them from straying from home. For this purpose one feed of grain every night just before roosting time is sufficient.

Increase Extra Feed Slowly.

In fattening turkeys for the market an excellent plan is to begin about six weeks before marketing to feed night and morning, feeding only so much at a time that the birds go away a little hungry, and gradually increasing the quantity until they are given all they will clean up three times a day during the week before marketing. By the latter feeding is meant that they are fed until they leave the feed and walk away. Some turkey raisers feed wheat and oats during the first part of the fattening season, gradually changing to corn as the weather becomes cooler. Since turkeys are not accustomed to such heavy feeding, scours often result, especially if new corn is used. New corn can be fed safely if the turkeys are gradually accustomed to it by feeding lightly at first and more heavily afterwards.

Turkeys Lose Flesh When Penned.

Confining turkeys during the fattening season to prevent their using so much energy in ranging has been tried to some extent, but with very little success, say poultry specialists of the United States Department of Agriculture. Those confined to a pen eat heartily for two or three days, but after this they lose their appetite and begin to lose flesh rapidly. On allowing them free range again, they pick up rapidly and are soon eating as heartily as ever. The better method is to allow them free range, as it keeps them in good, healthy condition, and they are always eager to be fed.

Many turkey growers in Texas depend solely upon acorns for fattening their turkeys, and when the mast is plentiful the birds are marketed in fairly good condition.

DECLINING EGG MARKET ARRESTED.

The slow decline in the price of fresh eggs in the past week or two has been arrested, mainly through free shipments of fancy ranch eggs to Eastern markets, which, while not maintaining the high figures of a week ago, are still attractive enough to draw strongly on California's excess supply. One result of this Eastern draught on our prime ranch eggs has been to lessen the spread between them and extra pullets. It is altogether improbable that any further price set-back of a serious character will occur in the near future, as the beginning of winter is normally marked by a strengthening of the market which, with slight fluctuations, continues for at least two months.

CALIF. FARM BUREAU EGG-LAYING CONTEST.

In this contest some very creditable records have been made—records that compare favorably with those of any other contest. The following pen records are for ten hens for a period of 329 days:

Bellows Bros., Lakeside	1980	eggs.
D. B. Walls, Petaluma	1926	"
S. L. Gibson, Santa Cruz	1908	"
W. J. Neef, Santa Cruz	1888	"
Enterprise Ranch, Chino	1882	"

Leading individuals for the same period:

No. 16 D. B. Walls, Petaluma	272	eggs
No. 144, Enterprise Ranch, Chino	241	"
No. 103, A. M. Webb, Santa Cruz	239	"
No. 66, R. C. Gibson, Newhall	237	"
No. 272, H. Peck, Santa Cruz	235	"

POULTRY PRATTLE.

Oregon Poultry and Pet Stock Association will hold their annual show at the Portland Auditorium, Dec. 12-18, 1920.

Oakland Poultry Show comes off Nov. 22-28 inclusive, 1920. Sec., Jno. J. Smith, 4829 Webster St., Oakland, California.

The San Diego Co. Exhibitors Club Poultry and Pet Stock Show occurs Nov. 25-28, 1920. L. W. Buechner, Sec., National City, Calif.

California produces around $18,000,000 worth of poultry and eggs, largely because the hens are "egged on", according to a statement made by the college of agriculture of the University of California.

Poultry farming has proven a profitable occupation for blinded soldiers whom the American Red Cross is training in gainful trades that the men may be enabled to earn an independent living.

Five cents for every egg delivered by its members to the headquarters of the Tulare Co-operative Poultry Association has been announced for the month of September, the highest price in the history of the organization. The price of sixty cents a dozen is nine cents in excess of the price for September eggs in 1919.

The poultry farm of Atascadero is developing into a sound commercial industry under the supervision of Henry Miller. Due to the care and selection of stock he is getting excellent returns for this season of the year. Cleanliness is the keystone of the plant.

According to Consul General Cunningham, Shanghai, the height of the egg production season for Shanghai is from April to the middle of July, during which time about 90 per cent of the entire production is frozen or dried immediately, upon arrival at the factories. During 1918, 2,301,165 pounds of frozen and 571,322 pounds of desiccated eggs were exported from Shanghai to the United States and in 1919 these amounts increased to 3,920,626 pounds of frozen and 3,948,406 pounds of desiccated eggs.

SEX IN GEESE.

To the Editor: Kindly give me some information in regard to raising geese. I have just bought some, but do not know how to tell the males from the females. Should like to know how to handle them to raise young ones, how to keep the eggs until time to set, etc.—W. H. C., Escalon, Cal.

It is not an easy matter for a beginner to distinguish the sex of geese, especially when the fowls are young. The gander is usually somewhat larger than the goose, has heavier, longer neck, and a larger head. The gander has a shrill cry, while the goose has a coarse cry. At times it is possible to prove up on the selection of the sexes by placing the supposed gander on one side of a tight board fence and the geese on the other side. When this is done they usually call frequently and offer an opportunity to distinguish the call of the male and the females. Lack of space prohibits the publication of extended advice regarding the proper handling of geese, but readers may obtain a very satisfactory booklet on the subject by addressing the Department of Agriculture, Washington, D. C. Ask for Farmers' Bulletin No. 767, entitled Goose Raising. It is mailed free.

SNUFFLES.

To the Editor: Can you tell me what ails my rabbits and a cure for same? They sneeze at intervals discharging a yellow mucus from the nostrils. One has been in this condition about six weeks. Will be very thankful for any information.A Subscriber, Cayucos.

Your rabbits are troubled with what is known as "snuffles"—a disease very contagious and practically incurable. Those animals having it any length of time should be killed so as not to spread the disease. Its origin is with a cold and at the early stage can be cured with a few drops of camphorted oil or a solution of ½ olive oil and ½ eucalyptus oil dropped in each nostril twice each day.

Poultry Breeder' Directory

Rate, 4c. per word. Cash must accompany all orders.

BARRED PLYMOUTH ROCKS — "Nothing Better in Poultry." Wonderful layers. Choice hens and pullets for sale; also fine cockerels that will improve your flock. Now booking orders for hatching eggs. I have made a specialty of Barred Rocks for over twenty-two years. That's why our birds win at all the leading shows. Catalog free. Chas. H Vodden, Box 3, Los Gatos, Calif.

RAISE FALL CHICKS—They are profitable. Write for circular. See why they pay. Chicks every week. R. I. Red. Barred Rock. White Leghorn. Also booking for spring delivery. Order now and get a desirable date. Safe arrival guaranteed. Stubbe Poultry Ranch and Hatchery, P. O. Box 67, Palo Alto.

PETALUMA HATCHERY — Established 1902. If you want good fall layers, get chicks in the fall. We guarantee satisfaction. There will be but few chicks hatched this fall. The wise ones are buying. Send for prices. L. W. Clark, 615 Main St., Petaluma, Cal.

PEERLESS WHITE WYANDOTTES — Our 200-egg strain, bred for years for show qualities and high-egg production. Fifty cockerels, 100 pullets for sale. Trios and mated yards. Eggs for hatching. Catalogue free. J. W. Atkinson, Box 8, 130 Willard St., San Jose.

WHITE LEGHORN BABY CHIX from heavy-laying Hoganized Stock. Safe arrival of full count, live, strong chix guaranteed Price list and interesting literature on application. The Pioneer Hatchery, 408 Sixth St., Petaluma, Cal.

BARRED ROCKS, White Orpingtons that win and lay. 1 Special, 8 Firsts, 3 Seconds, 1 Third at Sacramento, 4 Firsts, 3 Seconds, 1 Third at Fresno. Special prices on old and young stock. R. P. Lutzi, 1450 23rd Ave., San Francisco.

S. C. WHITE LEGHORN CHICKS in 100 or 1000 lots from our Hoganized and trapnested stock. Booking orders for 1921 delivery; hatching dates mailed upon request. Forster Brothers, 2918 Otis street, Berkeley, Cal.

DOLLAR EGGS COMING!—A few hundred White Leghorn pullets from early spring hatch for sale. Priced at $2.00 and $2.50 each in dozen lots and up. No culls. Geo. L. Horine, Winton, Cal.

GOLDCROFT BUFF ORPINGTONS. Columbian Wyandottes and White Leghorns. Heavy laying strains. Breeders and young stock. Samuel Abrams, Box 13, Los Altos.

PULLETS, $2.00 Cockerels, $5.00 each and upward; White Leghorn, Brown Leghorn, White Rocks. Mahajo Farm, P. O. box 597, Sacramento, Calif

HART'S MAMMOTH BRONZE TURKEYS—Large, well-marked, year-old hens. Thrifty young stock of both sexes. Albert M. Hart Clements, Cal.

FOR SALE—Buff Leghorn Cockerels, fit for any show, guaranteed winners. Eggs in season. W. L. Bartholomew, Chino, Cal.

WHITE HOLLAND TURKEYS — A few seven-months-old breeding toms at $10.00 each. A. P. Ward & Son, Calistoga.

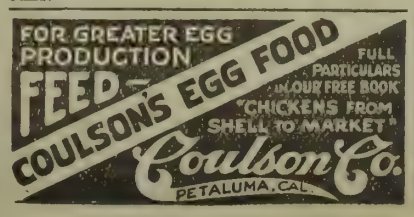
CHICKENS, DUCKS, GEESE, GUINEAS, Pea Fowl, Pigeons. Wm. A. French, 545 W. Park St., Stockton, California. Stamps.

EASTMAN'S "BRED-TO-LAY." Hoganized and trapnested. Barred Rocks. Fall Chicks. Fairmead Poultry Farm, Fairmead, Cal.

GUINEAS, MATED PIGEONS, CANARIES—Good stock. E. A. McKinley, R. F. D., Box 91, Ukiah, Cal.

WHITE INDIAN RUNNER DUCKS for sale, matured and young stock. John Fransen, Box 168, R. R. No. 1, Orland, Calif.

BOURBON RED TURKEYS—Buff Orpingtons. The Ferris Ranch, R. 2-144D, Pomona Calif.



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HIGH GRADE HOMES and FARM LANDS

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ONE OF OUR BEST VALUES

Artistic two-story plaster and shingle residence, situate on a 100-foot lot, commanding exquisite view over bay and Marin county hills. The home contains nine beautiful rooms, two baths, hardwood floors. Very large living and dining room. Close to local and San Francisco transportation near University. This property is in Berkeley. Price only $14,000.

Communicate with
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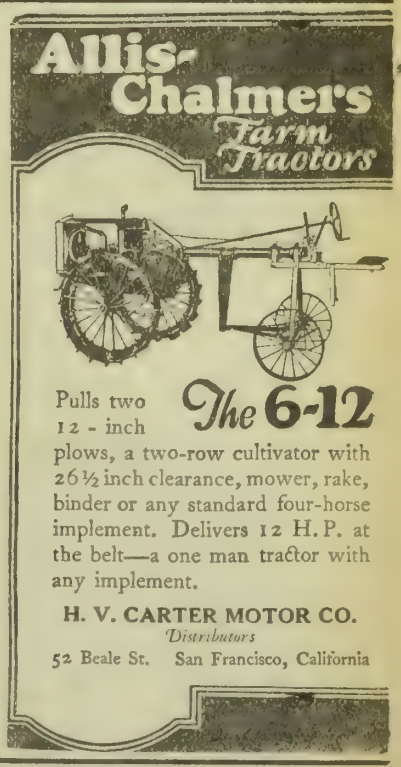

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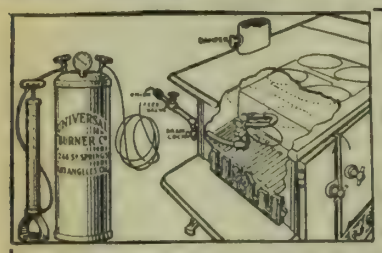

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UNIVERSAL "OIL-GAS" BURNERS
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BURNERS IN SIZES FOR EVERY NEED
"Standard Domestic Outfit" (Gravity Pressure) Complete Equipment for Cook Stoves, Ranges or Heaters, $17.50, Forwarding Charges Collect.

"Compressed Air System," with 10-Gal. Pressure Tank. Complete Equipment, $35.00, Forwarding Charges Collect. Greater heat and better combustion can be obtained with "Compressed Air System."

UNIVERSAL BURNER CO.
Sales Dept. "B," 246 So. Spring Street.
LOS ANGELES, CALIF.

Home Circle Department

MAKING THE ENTIRE NATION AS HEALTHY AS CALIFORNIA.

"What do we need of a health center in this town?" wondered Mrs. Winston, with California naivete, "haven't we our wonderful climate?"

The delegate from the local Red Cross Chapter, who was seeking to enlist public opinion in the cause of a Red Cross Health Center, felt, inwardly, just as any other native Washingtonian would have felt under similar provocation, but all she said was, "Did the climate save us from the "flue" epidemic two winters ago?"

"Oh, well," disparaged the California woman, "that was different. Everybody had their turn at that, of course, but it was the shortage of nurses and the impossibility of giving proper care, that really made it so serious. With our climate, under normal conditions—"

"Exactly!" exclaimed the Health Center advocate. "The shortage of nurses. And if we had had a Health Center under Red Cross supervision, there would never have been a shortage of nurses. Classes in home nursing and home hygiene would have been formed long before, recruited from the women of our own community, and when epidemics or emergencies arose, we would have had plenty of efficient, trained volunteers ready to meet them."

"Oh!" Mrs. Winston remarked for the second time, but with a world of difference in the ejaculation. "I never thought of that!"

"That's the case with every one of us in this 'great and glorious republic.'" The Red Cross Health Center delegate was waxing more and more eloquent. "As a people we never thought of our health at all, until the selective draft came along and demonstrated in terms of rejected men and diseased man power just what that irresponsible attitude meant to our integrity and strength as a nation. That is why the peace-time policy of the American Red Cross is to be one of Public Health Service. Life will be conserved at its fountainhead by a nation-wide plan of baby saving. Health Centers and Teaching Centers will be established in every community where instruction will be made available to all in such health-building knowledge as Dietetics, Personal, Home and Community Hygiene, First Aid, and Home Nursing.

"It sounds wonderful, but won't it take an awful lot of money?" Mrs. Winston asked, rather wistfully.

"Only a dollar apiece, from every Red Cross member. The Fourth Annual Roll Call, to be held from November 11 to Thanksgiving Day, November 25th, is the period set for the payment of these dollar dues. If every one of the ten million Red Cross members will only feel about them the same way he or she feels about any other club dues, and pay the dollar promptly, there is not the slightest doubt but that public health service for the United States will be an accomplished fact. All we really need to make us a healthy country is 'a heart and a dollar,'" the delegate finished her discourse.

"And a climate like California's," the incorrigible native of the Sunset State amended it, as she fished two dollar bills out of her "miser purse," in payment of her own and her husband's Red Cross dues for 1921.

WORD TO THE WISE.

"What are you cutting out of the paper?"

"About a man getting a divorce because his wife went through his pockets."

"What are you going to do with it?"

"Put it in my pocket."

WHERE INDEED?

Alabam: "They tell me that up No'th the Yankees put signs on their cemeteries, 'No autos allowed.'"

Mississipp: "Huh, then tell me what they do when their engine dies on them."

DREADNAUGHT
BLAZING-AWAY-IN-COST-DEFENCE!

A clean burning and reliable oil-gas burner for all domestic purposes.

Burner and Valve Prepaid $8.50

Write for circular. Live agents wanted.

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Manufacturers
2411 S. Main St., Los Angeles

America's Pioneer Dog Medicines

BOOK ON
DOG DISEASES
And How to Feed
Mailed free to any address by the Author
H. CLAY GLOVER CO., Inc.,
118 West 31st Street, New York

VOTE "YES"
ON NUMBER 2
Prohibition Inforcement Act

Whatever our previous stand upon the question, Prohibition is now a part of the Constitution of the United States.

The safety of our nation demands that our National Constitution be strictly enforced. As long as Prohibition is in the Constitution, Prohibition must be enforced or California must become a lawless and law-breaking state.

The National Constitution has directed California and all other states to pass a Prohibition Enforcement Act. Most of the states have done this, with the result that they are almost entirely free from the scandals of illegal liquor traffic such as are now stirring California.

The Federal Government, with its scanty supply of peace officers and courts can not enforce the law and constitution without the help of the State Enforcement law, numbered "2" on Tuesday's ballot.

The question for California is "law or lawlessness." To that question a law-respecting citizen can give only one answer.

WM. D. STEPHENS
C. C. YOUNG
MRS. AARON SCHLOSS
WARREN OLNEY JR
CURTIS D. WILBUR
WILLIAM J. HUNSAKER
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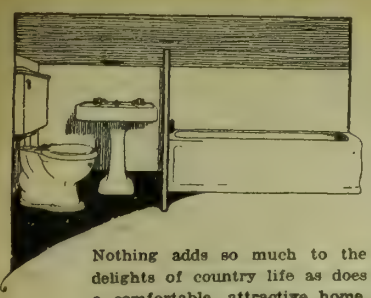
RAY LYMAN WILBUR
KATHERINE PHILLIPS EDSON

STATE COMMITTEE

Among the members of this committee are the Governor and Lieutenant-Governor, Members of the Supreme and Appellate Courts, Presidents of Universities, President and Past President of the California Federation of Women's Clubs, President of California Parent-Teachers' Association, Members of Railroad Commission, State Treasurer, State Bank Commissioner, State Superintendent of Schools, President Industrial Accident Board, Past President of State Board of Agriculture, Editors and Leaders in Public Affairs and in the Commercial and Industrial Activities of the State.



Nothing adds so much to the delights of country life as does a comfortable, attractive home. And a home is most attractive and most comfortable when equipped with Pacific Plumbing Fixtures in bathroom and laundry.

Pacific Plumbing Fixtures combine rare utility and high quality, with a beautiful richness of design.

Every Pacific Plumbing Fixture is guaranteed forever against defects in workmanship or materials.

Write for a copy of "The Book of Bathrooms." It is free.

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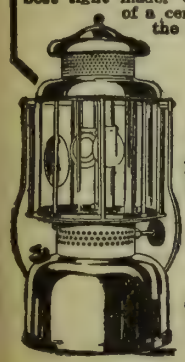
More Light Than 20 Oil Lanterns

AT LAST—the light of lights! A lantern that lights with common matches just like the old style oil lantern, but makes and burns its own gas from common gasoline, giving a brilliant, steady, white light of 300 candle power.

Most Brilliant Light Made

Brighter than the brightest electric bulb. More light than 20 oil lanterns. Cheapest and best light made. Costs less than one-third of a cent per hour. Safer than the safest oil lantern. The



Coleman Quick-Lite

No wicks to trim—No globes to wash. No dirt or grease, no glare or flicker. Absolutely safe. Fuel can't spill—no danger if tipped over. Guaranteed Five Years—will last a lifetime.

If your dealer can't supply, address our nearest office for Catalog No. 64

The Coleman Lamp Co.
Los Angeles Cal.
Los Angeles, Cal.

Let's go

The sure way to put pep into your job on a rainy day is to get into a

FISH BRAND Reflex Slicker

There is a FISH BRAND garment for every kind of wet work or sport

DEALERS EVERYWHERE

A.J.TOWER CO.
ESTABLISHED 1836
BOSTON MASS.

TOWER'S FISH BRAND

2024

MAKE YOUR STOVE A GAS RANGE

STAR OIL-GAS BURNER
Makes cheap gas from kerosene. Use in any stove. Users delighted. Saves half fuel. Ten years successful record. Folder No. 35 free.

STAR HEATING AND LIGHTING CO.
STATION C — LOS ANGELES

WINTER READING.

(Written for Pacific Rural Press.)

We once made the profound remark to an old colored cook: "Well, Aunty, the days are getting short." She replied: "Yes, an' ah notices it specially in the mawnin an de evenin." On the farm we notice the short days, especially in the evening. The winter evenings are reading time for many of us. What shall we read?

If you happen to be asking the question and haven't found the answer, perhaps the Reading Circle conducted by the Bureau of Education may help you out. This reading circle is made up of groups and individuals, old and young, from every part of the country. There are sixteen courses. The rules are simplicity itself and there will be no expense, for we have the County Free Library that will cheerfully furnish the books.

Suppose we send for the list of courses and information regarding them. Address the Commissioner of Education, Bureau of Education, Department of the Interior, Washington, D. C.

If we don't want to do that, suppose we drop into the branch library and talk with the librarian about something to read. She will be "tickled to death" to have you call and ask for some suggestions. Anyway, it's your library. Use it. You can't use it too much to suit those who are working hard to extend its service. Maybe you read of a community in the East that was bragging about its wonderful library of so many volumes that has been brought right to the village doors. Well, we can go them several better. Any book that is published is brought right to your door through the County Free Library. That's the library's part. Our part is to use the service. If you don't want books, get a bunch of magazines. Except for current numbers, you may cart home an auto load at a time and let the whole family enjoy them. At 25c to 50c each we can't afford to buy all the magazines printed, but we may have them all to read by just asking for them. That is, if we are within reach of a county library branch, and most of us are.

THE COUNTRY MOVIE BEGINS TO MOVE.

(Written for Pacific Rural Press.)

We hope some of you anyway remember what this paper has been saying about the motion picture for rural communities. There are increasing evidences that if a lot of us take the thing up and do a little personal work, we may soon get what we want.

A number of Farm Bureau centers have already installed machines. So far the films used as available out here are not such as to cause enthusiasm over them to set the river afire, but they are better than none for they are a start. If our beloved "Departments" could get over the notion that we need instruction rather than recreation, if they would only turn the thing around, they might be of wonderful service just now.

Now word comes that the Middle West may beat us to it. Ohio at least already has community moving picture circuits, started by a young school teacher in a dinky little country village. They say the circuit is widening with wonderful rapidity and they are already strong enough to rent worth while pictures from big companies and keep each one busy on the circuit for a month at a time. They are getting such plays as "Les Miserables" and "Shepherd of the Hills" and —hear ye! The latest comedy. Now, then, if Ohio can do it, so can we. Come on! Let's go!

WITH MALICE AFORETHOUGHT.

"Ever have any accidents?" asked the insurance man of the lanky Westerner who had put in an application for a policy.

"Nope." Then he added as an afterthought, "Got a couple o' rattlesnake bites though."

"Great Scott, man! Don't you call those accidents?"

"No, sir. They bit me on purpose."

It pays to put underwear money into "HANES"

—bigger value, longer wear and greater comfort!

HANES
ELASTIC KNIT
UNDERWEAR

FOR years "Hanes" winter underwear for men has proven itself to be the *national standard.* Its popularity extends from coast-to-coast! It wins on merit! Your confidence in every "Hanes" garment can never be misplaced. *"Hanes" guarantee proves that!*

"Hanes" underwear is made in heavy and medium winter weight union suits and heavy weight shirts and drawers. The medium weight union suit, new this year and illustrated in this advertisement, is exceptional value. It is made of full combed yarn, is silk trimmed and carries a yellow Hanes label.

"Hanes" Union Suits for boys

duplicate the men's Union Suits in important features with added fleeciness. They stand the stiffest wear and the hardest wash. Sizes 20 to 34, covering ages from 2 to 16 years. Two to four year old sizes have drop seat. Inspect these remarkable "Hanes" garments at your dealer's. If he cannot supply you, write us.

P. H. HANES KNITTING CO.
Winston-Salem, N. C.
New York Office: 366 Broadway

Read Hanes Guarantee:

"We guarantee Hanes Underwear absolutely—every thread, stitch and button. We guarantee to return your money or give you a new garment if any seam breaks."

Next Summer—You'll want to wear Hanes Nainsook Union Suits!

PEARL OIL
(KEROSENE)
HEAT AND LIGHT

Raining Outside, but Inside—

—the warm steady glow of a good oil heater filled with PEARL OIL. Whatever the day or the time, PEARL OIL is ready to give you cheerful warmth at the touch of a match. No smoke, no odor. Economical and ever-obtainable. Sold in bulk by dealers everywhere

Order by name—Pearl Oil.

STANDARD OIL COMPANY
(California)

Classified Advertisements.

Rate, 4c. per word. Cash must accompany all orders.

COUNTRY LANDS.

HIGHLY IMPROVED

POULTRY FARM

Suburbs of Sacramento, equipped for 3500 hens and $3,000 modern brooder house—capacity, 7500 chicks—10 acres in all, 5 acres bearing fruit. Poultry houses, all electric lighted. Splendid water system and lots of shade. A bargain and ten years time to pay.

BROOKE FARM,

Sacramento, Cal.

MEXICAN LANDS—400 acres in American colony near Hermosillo and Southern Pacific Railway. Rich river bottom land; will grow anything; two crops each year. Investigate this opportunity to start big farming at small cost. Owner, 329 Ochsner Bldg., Sacramento, Cal.

FOR SALE—160 A. deep level loam, will grow anything. 70 miles from San Francisco. Reasonable terms. A. M., Box 2230, Pacific Rural Press.

FREE BARBECUE AND AUCTION
JAMES RANCH
We will sell at Public Auctio in San Joaquin, Fresno county, California on
SATURDAY, NOVEMBER 6th, 1920
COMMENCING AT TEN O'CLOCK
30 Head of Mules
200 Head of Horses.
Harness
All Farm Machinery
Tractors.
Engines.
Tools and Equipment
50 Brood Sows
Our lands are selling so rapidly that we have to quit—no more lands to farm, and all our equipment will be sold. Terms cash.
EVERYBODY INVITED. FREE.
JAMES RANCH.
San Joaquin, Fresno County, California.
H. M. Bernstein, Auctioneer.
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ORANGE GROVE FARM
With Equipment Only $5800
On state highway to Los Angeles, only 2½ miles R. R. depot, 300 feet big packinghouse; 9 acres all tillable, highly cultivated; 650 navel orange trees; also pomegranates, olives, figs, apricots, plums, peaches, etc.; attractive nearly new bungalow, umbrella shade trees, new barn, garage, etc. Owner returning Europe, includes farm tools, poultry, wagon, household furniture. $5800 takes all, part cash, balance easy terms. Details this and other farms, ranches, groves California and many states, page 91 Strout's Big New Illustrated Catalog Farm Bargains. Call or write for free copy. STROUT FARM AGENCY, 831FA Wright-Callender Bldg., Los Angeles, Calif.

MISCELLANEOUS.

WANTED BY DECEMBER — Competent married live wire working orchardist, who can handle men and horses on 90 acres five-year-old almonds, peaches and Thompsons. One who is apt and willing in modern pruning, orchard and vine care and will qualify by his brains, hands and feet to become working foreman from the horse plow up. There are 'no chief talkers or favorite sons" here; so unusual opportunity for permanence, promotion and experience awaits the right man. Personal interview preferred, or write with reference, encumbrance, nationality, age, and what you can and will do and wage wanted first letter. J. B. Hall, Winton, Merced Co., Calif.

TENNESSEE

WINTER BARLEY

Recleaned seed for sale.
Grown from State Universlay Farm Stock

W. A. BEARD
Marysville, Calif.

DAIRY HERDS WANTED
TO CONSUME OUR ALFALFA HAY
Dairy opportunities unexcelled on Newlands Irrigation Project. Never failing water supply and great variety of crops. 1920 alfalfa crop, 100,000 tons. Ideal climate. Good markets. Leasing opportunities or feeding contracts available. Address
NEWLANDS PROJECT ALFALFA ASS'N.
Box 478, Fallon, Nevada
Reference, L. E. Cline,
U. S. Dept. of Agriculture, Fallon, Nevada.

FOR SALE—Fordson Tractor and 3 share 12-inch plow. Double cutaway disk, with seeder attachment; fuel and oil drums, used two seasons. New land roller; new steel frame power saw; new 50-ft. Belt, pulley and governor. $1000 if taken at once. 'Phone 31F11 Napa. Write Mrs. Frances Rosel, Napa Junction, Cal.

FOR SALE—Well-established dairy and milk route in a small but fast growing town. Business of over $400 per month and increasing rapidly. Have twelve cows and equipment and will sell on easy terms or lease to right party. Address H. H. Ames, Chowchilla, Cal.

FOR SALE — Cletrac Tank Type Tractor. Ready to go right to work. Need a larger tractor. Quick sale, $800.00. Rt. 1, Box 365, Turlock.

36 SHASTA STRAWBERRY PLANTS by parcel post, $1.00. Order now. F. M. Witt, 24 California St., San Francisco.

THE MARKET REPORTS

SAN FRANCISCO.

San Francisco, October 27, 1920.

WHEAT.

There is no trading of any consequence, all business being on a hand-to-mouth basis. Hedging from the northwest put some pressure on the market early in the week. Quotations are the same.

Wheat .....$3.75@3.90

OATS.

There is some demand for seed but the feed market remains very dull, with a few samples of black seed being offered on the market at $3.65 to $3.70, with no takers at that price.

Red Feed, ctl. .....$2.35@2.40

BARLEY.

A greatly increased activity features the barley market with a stronger demand and an increased price quotation. Call board bids are brisk.

Feed Barley, ctl. .....$2.10@2.15

CORN.

Prices quoted for corn are nominal as the market continues to be exceedingly weak. There are scarcely any offerings.

Egyptian, white	Nominal
do, brown	$2.80@2.90
California	$3.00@3.10

FEEDSTUFFS.

Rolled barley has advance slightly in price, but on the whole the market is quiet and deals have been few. With a good rain in the country sections the market would liven, but buyers are now holding off.

Rolled Barley	$45.00@46.00
Rolled Oats	$50.00@55.00
Alfalfa Products	$39.00@40.00
Cracked Corn	$80.00@81.00

HAY.

With a keen demand for all grades of hay, prices have advanced on practically all varieties. Although buyers seem to be limiting their purchases to as small a quantity as possible the market is steadily climbing. The farmers seem to have won the long fight for better hay prices. Last week's receipts were 1,347 tons. During the week before, 941 tons were received. While receipts were heavier during last week and may be still heavier this week, it is not thought that large quantities will be able to make prices return to their former level. Shippers of Nevada hay, which is arriving regularly, are getting prices which do not conflict with the California prices. Alfalfa is strongest of all brands and will continue firm, according to all indications. Surveys made recently indicate that the crop does not exceed requirements as had been thought in some quarters earlier in the season. Prices quoted are f. o. b. cars San Francisco less $1.00 a ton for commission charges.

Wheat, hay, new	$28.00@29.00
Tame oat, new	$24.00@27.00
Wild oat, new	$18.00@20.00
Barley	$17.00@20.00
Alfalfa, 2nd cutting	$22.00@25.00

RICE.

The market is fluctuating every day and it is impossible to forecast with any degree of accuracy what tomorrow's prices will be. Quotations on practically all grades of rice are higher at the end of the past week. Although seems firm at present, it is of an uncertain character.

California fancy	$7.25
do. Choice	$7.00
Southern Honduras, long grain	$12.00
China, No. 1, double mat	$11.00
Blue Rose, fancy	$10.00
Fancy Head (Philips & Co.), 10 lbs.	$13.00
California Japanese, No. 1	$7.10
do, No. 2	$6.75

FRESH FRUITS.

(Wholesale prices paid by commission houses.)

With heavy receipts of all grades of apples during the week prices have generally fallen, although a good demand continues. Berries of all kinds are very scarce and are quoted higher, with a brisk demand for what small quantities are appearing on the market. Melons are arriving in large quantities but are not moving. Melon prices are still quoted at last week's figures but indications point to a decline. Grapes have also arrived in large quantities and are not moving as well as formerly, owing principally to the large quantity on hand. What figs are on the market are in poor condition.

Apples: Wagner's	$2.00
do, Spitzenberg	$2.00@2.50
do, Jonathan	$2.00@2.50
do, Gravenstein, fancy	$1.75@2.00
do, Bellflowers	$1.15@1.60
do, Rhode Island Greenings	$1.50@1.75
do, Virginia Greenings	$2.00@2.25
Plums	$1.25@2.00
Peaches, 4 baskets	$1.50@1.75
Pears	$2.00@4.00
Strawberries, 6 12-oz. boxes	$1.50@1.65
do, Flats	Nominal
Casaba, crate	$1.00
Blackberries, drawer, 12-oz. drawer	75@90c
Raspberries, drawer	65@80c
do, 8-oz boxes	30c@40c
do, 8-oz. boxes	40@50c
Cantaloupes, Standard	$1.50@2.00
do, Flats	50@75c
Watermelon, lb.	1@1½c
Persian Melons, lb.	2@3c
Grapes, large box	$2.00@3.50
do, crates	$1.50@3.00

POULTRY.

Heavy receipts on all varieties continue to flood the market, which is becoming weaker daily. To date price quotations are the same. Jack rabbits and Belgian Hares are the strongest grades. Indications point to a decline in other grades of poultry.

Broilers, small	55@60c
do, large	47@50c
Hens, mixed color	34@35c
do, Leghorns	28@35c
Roosters, young	32@35c
do, old	20@22c
Friers	35@38c
Squabs	70@80c
Geese	25@30c
Ducks	28@32c
do, old	28@30c
Belgian Hare, live	18@22c
do, dressed	22@25c
Jack Rabbits	Nominal
Turkeys, young, large, lb.	50@55c
do, old	50@55c
do, dressed, lb.	60c

BUTTER.

Except for top grades the market is very weak, although prices are holding up fairly well. Reports of firmness in the East and increased consumption is causing a more optimistic outlook, although dealers are still anxious about the influence of foreign butter. A shipment of New Zealand butter will arrive soon.

	Thu.	Fri.	Sat.	Mon.	Tu.	Wed.
Extra	55½	56	..	54	54	54
Prime 1sts	..	53½	..	51½	51½	51½

CHEESE.

But little interest is shown in the market and dealers are well supplied. Undergrades are hard to move and show considerable accumulation. Full cream Jack cheese has been moving slowly and a considerable quantity has been placed in storage during the week. Production is reported to be increasing in some localities.

California Flats, fancy	22½c
do, Firsts	17½c
Oregon Triplets	26½c
do, Y. A., fancy	32½c

EGGS.

The week closed with the market slightly weaker, and prices off a little in some grades. Ranch eggs, however, are fairly steady and pullets firm.

	Thu.	Fri.	Sat.	Mon.	Tu.	Wed.
Extra	76	73	..	74½	74	73½
Ex. Pullet	63	63	..	63½	63½	63½
Dirties	66½	66½	..	66½	66½	66½
Undersized	55	55	..	55½	56	55

HONEY.

Receipts of all grades are plentiful and the market seems overstocked, except for comb varieties, which are in great demand. Although the market is perhaps a little weaker than last week, prices are still quoted at the same figures.

POTATOES, ONIONS, ETC.

(Wholesale prices quoted by commission houses.)

The potato market is very quiet and growing weaker, it is thought. Receipts have been very heavy during the past week. With an overstocked potato market it is expected that the supply will be greater than the demand for some time to come. Prices have dropped considerably. Onion receipts have been light and continue so, but are meeting with a very dull market. Onion prices generally have fallen along with potatoes. Garlic has gone up—it is scarce and has a good market.

Turnips	$1.25@1.50
Peas, Halfmoon	12@13c
Beans, wax, lb.	5@6c
do, green, lb.	7@8c
Carrots, per sack	$1.25@1.50
Green Corn, sack	$2.50@3.00
Lettuce, local, doz.	25@30c
Cucumbers, Alameda, lug box	$1.00@1.25
Tomatoes, Alameda, large box	75c@1.50
Summer Squash, box 35-40 lbs.	90@$1.15
Egg Plant, box	75@90c
Potatoes, New River, cwt.	$1.25@1.90
Onions, yellow, sack	40@60c
do, Red	Nominal
Green Onions, box, 25 lbs.	$1.50@1.75
Celery, crate	$3.00@3.25

BEANS.

A poor demand for beans continues, although the market shows a better tone than last week, and it is thought to be picking

Special Livestock Market Report

San Francisco, October 27, 1920.

CATTLE—In spite of strenuous efforts on the part of buyers to bear prices, results are slow of attainment. General and generous rains have had a very stimulating effect on cattle values throughout the Coast region. While no actual advance in beef cattle values occurred, feeder and half fats are commanding more money.

Steers, No. 1, 1000-1200 lbs.	9 @ 9½c
do, 1200-1400	8½@ 9c
do, 2nd quality	7 @ 7½c
do, thin	5½@ 6c
Cows and Heifers, No. 1	7½@ 8c
do, 2nd quality	6 @ 7c
do, thin	3 @ 4c
Bulls and Stags, good	4½@ 5½c
do, fair	3½@ 4c
Calves, lightweight	10 @11c
do, medium	8 @ 9c
do, heavy	7 @ 8c

SHEEP AND LAMBS—The general tone of both these markets is one of improvement. This is particularly true of lambs. The prospect of cheap feed in all of the sheep-raising sections is responsible for the firm stand taken by sheep men.

Lambs, milk	9 @10c
do, yearling	7½@ 8c
Sheep, wethers	7 @ 7½c
do, ewes	4½@ 5c

HOGS—Receipt of hogs were in excess of the demand and as a result we find packers in a position to buy cheaper. The market was about one-half cent off for the week, the market closing week at the decline.

Hard, fat, grain-fed, 100-150 lbs.	14c
do, 150-225 lbs.	15c
do, 225-300 lbs.	14½c
do, 300-400 lbs.	13½c

Los Angeles, October 26, 1920.

CATTLE—There is no change to note in this market from a week ago. God heavy steers are scarce and in very good demand, but light steers are plentiful and slow sale. Cows are still dull and plenty are to be had at quotations.

Per cwt. f. o. b., Los Angeles:

Light	$15.50@16.00
Prime cows and heifers	$8.00@ 8.50
Good cows and heifers	$7.00@ 7.50
Canners	$4.00@ 4.50

HOGS—In sympathy with sharp decline East and the lower price of corn, the hog market has broken badly since our last review. Receipts continue good, which also tended to make buyers independent. With corn growing lower every day a still further break is being looked for in the near future.

Per cwt. f. o. b. Los Angeles.

Heavy, average 275@350 lbs.	$10.00@11.00
do, 225@275 lbs.	$12.00@12.50
Light	$13.00@14.00

Rough docked 20 lbs. piggy sows 40 lbs. and stags 40 per cent.

SHEEP—A steady market continues to be had and demand is very good for yearlings and lambs. Wethers and ewes, however, are still very dull, but what few moving bring quotations.

Prime wethers	$6.00@ 7.00
Yearlings	$6.00@ 7.00
Prime ewes	$5.00@ 6.00
Lambs	$10.00@11.00

REMANUFACTURED PIPE
All sizes standard pipe and wrought iron screw casing. All kinds of fittings. Guaranteed good as new. Write for prices. Weissbaum Pipe Works, 160 Eleventh street, San Francisco.

WANTED TRACTOR AND IMPLEMENTS by private party for 600 acres of diversified farming. Will pay all cash. Holt 45 or 75 tractor preferred. Describe fully and state price. Walter W. Atkinson, 845 So. San Pedro St., Los Angeles, Cal.

STRAWBERRY PLANTS FOR SALE—We sold $933.00 worth of strawberries from one-fourth acre of Everbearers last year. I have the plants. Have you the ground! Alright! Let's go! R. M. Crisman, Rt. 1, Box 54A, Sebastopol, Cal.

EXTRACTED ALFALFA HONEY direct from producer—60-lb. can, $8.50; case, 2 cans, $16.00. Sample by mail, 20c. Freight paid 150 miles. Remittance with order. E. Jackman, Firebaugh, Fresno Co., Cal.

FIREMEN, BRAKEMEN — for railroads nearest their homes—Everywhere, $250-$300 monthly, experience unnecessary (which position). Railway Association, Desk W9, Brooklyn, N. Y.

CITRUS EXPERT for South Africa. Must be familiar with all phases of the industry. Salary, £800 per annum, three years' contract. Fare both ways. Address F. T. Bioletti, Berkeley.

WANTED—Dairy to work on shares or salary and bonus, by experienced young married dairyman. One string or more. References. L. C. Miller, 211 E. Jefferson St., Stockton, Cal.

ALL SIZES OF PIPE and screw casing, both new and second-hand, dipped and undipped. Guaranteed. Prices right. Shecter Pipe Works, 304 Howard St., San Francisco.

RELIABLE CABBAGE SEEDS—I grow them. You want them. Let's get together. Write for special offer on what you need. Isaac F. Tillinghast, 32 Podel St., Santa Rosa.

APPLES FROM GROWERS—Bulk pack. Bellflowers, $1.50 per box; No. 2 grades, $1.10; Newtowns, $1.75; No. 2, $1.25. Edward A. Hall, Rt. 1, Box 39, Watsonville, Cal.

FOR RENT—Pasture for 700 head of cattle more or less, within 50 miles of San Francisco. Also 100 head of red cattle for sale. F. N. Chaplin, Argonaut Hotel, San Francisco.

FOR LEASE—640 A. mountain ranch. Fenced; building tools, machinery. 300 acres good grain land, some alfalfa, plenty water. K. B. McCarthy, 1615 M St., Sacramento.

FOR SALE—Two Monitor Bean Separators, size 5-E; condition as good as new. Call or write, California Almond Growers' Exchange, 18th C Street, Sacramento, Calif.

EXPERT ON TROPICAL and Sub-tropical Horticulture for South Africa. Salary, £450 to £550 per annum and free quarters. Address F. T. Bioletti, Berkeley.

$30 A DAY selling Powerene. Equals gasoline at 5c. The equivalent of 20 gallons, express prepaid, $1. W. Porter Barnes, Box 424A33, Santa Rosa, Calif.

CORY THORNLESS Mammoth Blackberry. Write for descriptive price list. Get your plants from the grower. Wm. Mortenson, Rt. A, Box 209, Lodi, Calif.

CHEAP 24-43-2 Cylinder Threshing Machine Parts for grain, beans and rice. Almost new. S. Camman & Son, 2766 21st St., Sacramento.

FOR SALE—Brandywine Strawberry plants, 60c per 100; Marshall, Magoon and Ettersburg, No. 80, 75c. Jas. H. Little, R. 1, Box 67E, Stockton, Cal.

CROLEY'S BALANCED HOG FEED—The cheapest feed to fatten hogs. Write Geo. H Croley, Townsend St., San Francisco, Calif.

WANTED 15 TONS Good Barley. Send sample with price per ton. San Jose Poultry Yards, 15th and Margaret Sts., San Jose, Cal.

FOR SALE — Marriout Barley Seed—clean and good quality, weighing over 100 lbs. per sack. J. D. Rowe & Sons, Davis.

EX-HIGH SCHOOL TEACHER wants permanent employment on general fruit ranch. Box 2240, Pacific Rural Press.

TREES, PLANTS, ALFALFA SEED, Etc.—Full stock, best varieties now. Write, J. L. Lawson, San Jose, Cal.

STRAWBERRY PLANTS—Improved stove oil burners. Cash Nursery, Sebastopol.

up. The weather is good for threshing. Prices of two grades have advanced while other grades have held their old prices, showing a coming strength in the market.

Bayos	$8.75@9.00
Blackeyes	$5.65@5.90
Cranberries	$6.00@6.25
Red Mexican	$5.75@5.90
Pinks	$5.40@5.65
Large Whites	$4.25@4.50
Small Whites	$4.25@4.50
Limas, S. F. prices	$7.50@7.75
do, Baby, S. F. prices	$7.00@7.25

LOS ANGELES.

Los Angeles, October 26, 1920.

BUTTER.

There was a further break in this market the past week in sympathy with declines north of us. The receipts were not heavy but the increased use of butter substitutes caused the creamery people to meet this growing competition in order to get the people to return to pure butter. A fair consumptive demand, however, was had at the lower prices for extras, but low grades were slow sale throughout the week. We quote:

California, extra creamery	54c
do, prime first	52c
do, first	51c

EGGS.

There was a weaker tone to this market the past week. As the molting season draws to a close and early pullets are beginning to lay, and the fact that we have been higher than any other market north or east, caused a break in the market here Monday in Extras of 3c. Offerings were the best for some time and buyers not very urgent. The high price of fresh eggs also caused many people to turn to storage eggs, which also had a bearish influence upon the market. We quote:

Fresh ranch, extras	75c
do, case count	73c
do, pullets	63c

POULTRY.

The market the past week was much the same as the week before. Receipts of broilers were only fair and they met with a very good demand at quotations. Friers were also in fair demand. Hens coming in rather slow and in very good demand at old prices. Ducks steady and selling fairly. Turkeys are arriving more freely and the market is slow at old prices.

Broilers, 1 to 1¼ lbs.	38c
do, 1¼ to 1¾ lbs.	42c
Friers, 2 to 3 lbs.	34c
Hens	29@35c
Roosters (soft bone) 3 lbs. and up	34c
Ducks	24@25c
Turkeys	40@44c
Geese	25c

FRUITS.

The market the past week was much the same as the week before. Apples and grapes made up most of the offerings and they were both in very good demand.

Figs, lb.	8@15c
Grapes, Malaga, lb.	8@10c
do, Muscat, lb.	8@10c
do, Cornechons, lb.	9@10c
do, Tokays, lb.	9@10c
Apples: Bellflower, 4 tier	$1.50@1.65
do, Delicious, lb.	5@6c
do, Jonathan, packed box	$2.75@3.00
do, Newtown Pippins, 4 tier	$1.75@2.00
Pears, lb.	5@10c

VEGETABLES.

All good fresh stuff the past week was in fair demand. Potatoes are still coming in freely and are again lower and slow sale. The same may be said of onions. Cucumbers and summer squash are both higher under light receipts and demand fair. Lettuce also bringing a little more money and in fair demand. Cauliflower coming in freely and sharply lower and dull. Celery lower and slow sale. Sweet potatoes still dull at old prices. Tomatoes steady and in fair demand. String beans steady and selling fairly. Green peppers unchanged but slow sale. We quote from growers:

Potatoes, local, cwt.	$1.75@2.00
do, Northern, cwt.	$2.15@2.25
do, Idaho Russet, cwt.	$2.15@2.25
Sweet Potatoes, lb.	3@3½c
Cauliflower, large, crate	$2.75@3.00
Onions, Stockton, white, cwt.	$1.50@1.75
do, yellow, cwt.	90c@1.00
do, Australian Brown, cwt.	$1.05@1.10
do, local, crate	40@50c
Lettuce, crate	$1.15@1.25
Rhubarb, per 30-lb. box	80@1.00
Peas, lb.	12@14c
Carrots, bunches,	30@35c
Summer Squash, local, lug	75c@1.00
String Beans, green, lb.	8@9c
do, wax, lb.	8@9c
do, Kentucky, lb.	9@10c
Cucumbers, lug	$1.25@1.50
Tomatoes, home-grown, No. 1 lug	60@70c
do, No. 2	25@35c
Bell Peppers, lb.	3@4c
do, Chile, lb.	3@4c
Celery, crate	$4.50@5.00

WALNUTS.

The market remains steady and demand good. The Walnut Growers' Association says their shipments the past week averaged 40 cars a day and that they have sold out of No. 2s. The Association prices are:

No. 1	22½c
No. 2	16½c
Fancy budded	25½c

Orchard run from independent growers selling at 12@14c a pound.

BEANS.

The arrival of heavy shipments of small whites from Japan in San Francisco and Seattle caused a sharp decline in both whites and limas and even at the lower prices there was a little moving. Blackeyes steady and some little doing in them.

Limas, per cwt.	$6.00
Large white, per cwt.	$4.50@5.00
Small white, per cwt.	$3.00@3.25
Pink, cwt.	$6.00@6.25
Blackeyes, cwt.	$5.00@5.25

HAY.

There was a little better tone to this market the past week. The receipts were fair and there was some little doing at old prices. We quote f. o. b. Los Angeles.

Barley hay, ton	$21.00@24.00
Oat hay, ton	$24.00@27.00
Alfalfa, Northern, ton	$25.00@27.00
do, local, ton	$28.00@32.00
Straw, ton	$ 9.00@11.00

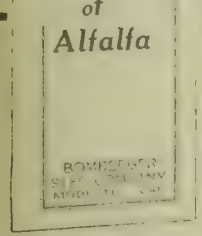
MARKET COMMENT.

Paddy Rice Price Fixed at $3.08.

Directors of the Pacific Rice Growers' Association, at a meeting in Sacramento on Friday, October 22nd, voted to fix the minimum price at $3.08 for paddy rice at the growers' shipping point. In an effort to move at least a portion of the crop, President J. H. Stephens of the Growers' Association, proposed a plan by which the crop might be turned over to the millers to be milled at a fixed price. The plan did not meet with favor and was rejected.

Wheat Growers' Strike.

A wheat growers' strike is on. The "walk out" began three weeks ago when the officials of the National Wheat Growers' Association, with headquarters in Wichita, Kansas, issued a proclamation to 70,000 members not to sell any wheat after 8 o'clock, October 20, until the price at their nearest terminal market reached $3 a bushel. Many farmers stopped selling wheat at once, and the decline in receipts has been gradual since that time. W. H. McGreevy, secretary of the Wheat Growers' Association, says that the members of the association demand a fair profit and are refusing to sell their wheat until they can obtain for it what it cost to raise it. It is estimated that there are 96,000,000 bushels of wheat in the bins and stocks of Kansas farmers, representing two-thirds of the year's crops.



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3—SHORTRIDGE is pledged by the Republican Platform of California to aid in the extension of farm credits and foster the producers co-operative market associations. His opponent, now representing this State, is part of the present Democratic administration, which is doing its utmost to destroy our farmers' organizations.

4—SHORTRIDGE is and has been for twenty years advocating Japanese exclusion.

5—SHORTRIDGE is against the Wilson League of Nations.

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THE Fisk Clincher Cord offers the Greatest tire value on the market for the small car owner.

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Next time—BUY FISK from your dealer

STATE FRUIT GROWERS' AND NURSERYMEN'S CONVENTION AT FRESNO, CALIFORNIA, NOVEMBER 9TH TO 13TH, 1920.

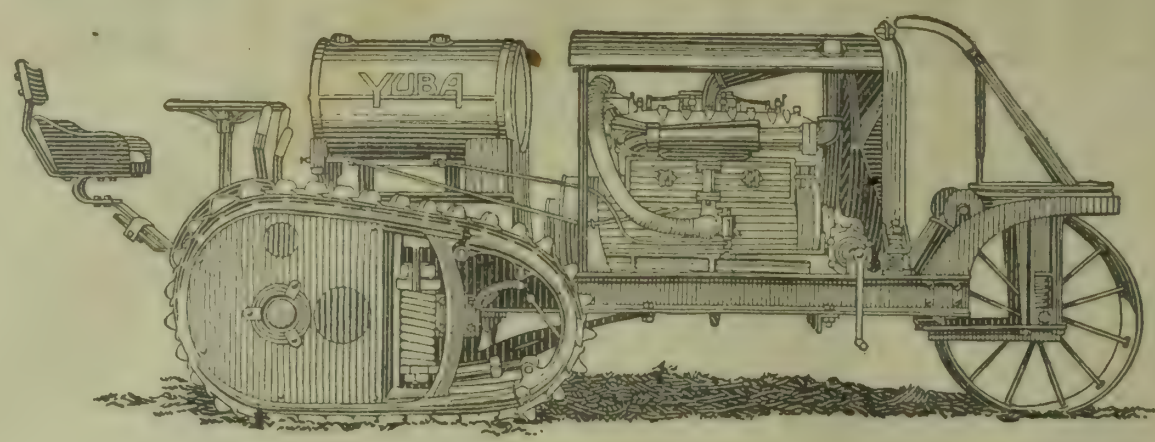
VOL. C—No. 19 Fiftieth Year

THE PACIFIC RURAL PRESS

SAN FRANCISCO NOVEMBER 6, 1920 LOS ANGELES

PRODUCING A PEDIGREED STRAIN OF COMMON BARLEY.

The illustration above shows a field test with barley varieties at the University Farm. "Four Thousand," the improved barley variety shown at the left of the picture, yielded 31 sacks to the acre. The unimproved "Common" barley, shown at the right, yielded but 19 sacks to the acre. Prof. G. W. Hendry, University Farm, Davis, has written a carefully prepared article on the development of this new barley strain, which will be found on page 608 of this issue of the Pacific Rural Press.



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Yuba owners have been making suggestions for four years. These were carefully considered and studied by our engineers; when found to be practicable they have been adopted. Now the new model is ready for delivery. It is the last word *in driver-comfort—in engineering skill and mechanical perfection.*

Your Suggestions Resulted as Follows:

The new seat is more comfortable—also note the safety catch.

The transmission replaces the differential.

The new track is boltless and almost indestructible.

The oil tank has master control from the seat.

The housed-in two-clutch transmission and the drive are protected from dust and dirt.

The impulse magneto allows easy starting and gear shifting—a big help on cold mornings.

The high clearance is of advantage in soft ground.

Burns fifty-fifty mixture of kerosene and gasoline.

Only fifty-four inches wide—it will pull sixty pounds for each inch of width.

The motor is easily accessible for inspection and repair.

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Designed to meet the comfort of the driver.

The Yuba is the only machine of track type with treads independently reversible—the turn is as short as anyone can demand. Only track machine combining sufficient power to clean out a 7-foot row of hops or grapes, yet narrow enough to go between the rows.

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General Agricultural and Horticultural Review

HORTICULTURAL JOTTINGS.

Value of grapes shipped from the Livingston district this season is conservatively estimated by Fruit Inspector A. W. Chinn to be $1,029,020.

Many of the prominent growers of Los Altos, Santa Clara county, have voted to affiliate with the Fruit Growers of California, Inc., a co-operative marketing association with headquarters at San Jose.

Even the culls are bringing top-notch prices, while heretofore they were sent to the dump. The California Fruit distributors report that $100 per ton is being paid for grape culls, so great is the demand for wine grapes in the eastern markets.

Completion of the $20,000 plant of the Contra Costa County Walnut Growers' Association has been announced. The new plant is to be used as the association's headquarters and warehouse. In a few weeks it will receive 250 tons of walnuts.

Heavy arrivals of Almeria (Malaga) grapes are arriving on the New York market. The heavy movement of this Spanish grape is now on. Ten cargoes, approximating 125,000 barrels, are scheduled for arrival within the next two weeks.

Robert Hodgson, farm advisor of Los Angeles county, has made the statement that an orange growers' contest similar to the Sutter county peach contest would be taken up in the southern portion of the state by him among the orange growers of the important counties.

There is to be a home-canned fruit contest by the women of Sutter county. Bogue Hall of Yuba City has been selected as the setting for the big meeting of the Sutter housewives on December 4, when the fruit will be judged and the prizes awarded to the most successful canners. The contest will be along the lines laid down by the University of California.

According to the U. S. Department of Agriculture's Market Report, a recently incorporated firm proposes to make Southhampton the English distributing center for imported American fresh fruits. Up to the present time imported fruits have usually been sent from the port of arrival to London to be sold by auction at Covent Garden.

The Terra Bella section of Tulare county is now experiencing a lively real estate boom. Many tracts of land are being purchased by parties from different sections of the state who have learned of Terra Bella, as ideal fruit-producing land, with a splendid climate for both citrus and deciduous fruits, also tomatoes and cantaloupes.

Increased production of fruits need not worry the growers of California if the report be true that the University of California has discovered a new freezing process by which fruits and berries may be held for twelve months or longer in the frozen condition in water under the new process, the products retaining the fresh flavor and color of the original product.

The Canadian government claims to have in their possession information indicating that the Japanese government has placed an embargo on shipment to Japan of apples, pears, marmalades, peaches, apricots and plums, or their containers, from the United States, South America, Africa, Australia, New Zealand, Brazil, Canada, Europe and Tasmania. It is said to prevent introduction of diseases into Japan.

G. Harold Powell, general manager of the California Fruit Growers' Exchange, is optimistic over the future of the California lemon. He states that within a short time California will produce a lemon crop large enough to supply the entire United States. California will be the largest lemon-producing area in the world when the 60 per cent increase of trees now being planted come into bearing.

It looks as though there is still hope for a silver lining to the cloud of the Tulare olive growers. In order that disaster may be averted and this year's olive crop saved, the Visalia plant of the California Co-operative Canneries will be operated jointly by peach and olive growers of the county. An invstment of $40,000 for equipment to manufacture olive oil will be expended, so states J. T. Curry, field representative of California Co-operative Canneries.

According to Horitcultural Commissioner Fred Roullard of Fresno county, owners of wine grape vineyards made a good deal more money as a rule than owners of raisin vineyards this year, though both were prosperous. In some parts of the state wine grapes were shipped east too immature and the shippers lost money, but Commissioner Roullard refused to allow immature shipments from his county and eastern sales were satisfactory.

Frederick Maskew, for eight years head of the Plant Quarantine Service of the State Department of Agriculture, and for 30 years engaged in protecting California Agriculture from the introduction of foreign pests and diseases, has submitted this resignation to Director Hecke of the Department of Agriculture, which has been accepted and D. B. Mackie, formerly in charge of Plant Quarantine and Pest Control for the Philippine Islands, has been appointed instead.

So enthusiastic have the peach growers of the state become over the remarkable showing made by the Sutter county cling peach growers at their recent peach contest, the orchardists throughout California are seriously considering entering the 1921 Sutter County Farm Bureau peach contest. The Sutter County Farm Bureau plans to throw the contest open to all orchards in the state. It is stated that the canners will donate cups and ribbons for such a contest.

Shippers of oranges and lemons in Tulare county and Southern California have requested official state inspection for the coming season. This greatly desired service is now available for the first time in California. Certificates as to the quality and condition of the product inspected are prima facie evidence in any court in the state, which provides the shipper with a definite protection in case of practiced by unscrupulous buyers in order to get a reduction in purchase price. This inspection also protects attempted rejection, which is often the buyer against unscrupulous packing.

AGRICULTURAL NOTES.

The rice market jumped two cents over the price set by the Pacific Rice Growers' Association when 18,000 bags of the Japan variety were sold in Sacramento last week at $3.10. The price fixed by the association was $3.08.

A San Joaquin valley branch of the Arizona American-Egyptian Cotton Growers' Association has been organized at Bakersfield at a meeting held last week, which was attended by 200 members of approximately 490 cotton growers in Kern county.

From a small building that would hold only a few sacks of grain, the Walnut Creek Grain Company have taken over a new 4,000-ton warehouse on the San Francisco-Sacramento railway. It has a capacity of 100,000 sacks and will be used for grain storage exclusively.

It is said that half the jams consumed in Australia, as well as 90 per cent of what is used in South Africa, is made by a Hobart concern, which is to establish a factory in the United States. The output of this company is 500 tins a minute, the machinery in operation making, filling and labeling the tins without the aid of human hands. The capacity of the American factory is to be 300,000 tins a day.

Chicago is scheduled to be the scene of the first conference of high school agricultural instructors of Northern California as a result of plans that have been made by R. M. Hagen, assistant State Club leader of the University of California, and Martin Singer, in charge of the Agricultural Department of the Chico High School.

The Holland Company, one of the late accessions to the tillable lands of the delta region of the Sacramento river, is fast coming to the front as a producer. This season's production of barley was an average of 60 sacks per acre. Sixty acres of sugar beets averaged 25 tons per acre that tested 18 per cent sugar. Nine hundred acres of beans of different varieties averaged 18 sacks per acre.

Ginning prices for cotton have been announced by commercial ginners of Fresno at 60 cents per 100 pounds of seed cotton for short staple varieties and $1.60 for Pima cotton plus $2.90 for burlap and other material used in baling. This amounts to about $13.50 per bale for short staple cotton, or 2½ cents a pound of lint, and $32.00 per bale for Pima, or more than six cents a pound of lint. From six to nine cents is paid for seed cotton of the Durango variety and nine to 12 cents for Pima cotton. Fifteen dollars per ton is offered for seed and from 40 to 70 cents a pound for Pima cotton in the bale.

The sweet potato crop of the Sutter Basin is now ready for harvest.

More than 100 carloads of onions have been shipped from the Sutter Basin to Cuba this season.

The grain farmers of the Helm and Burrel district are considering the erection of a co-operative grain elevator.

In the extensive winter vegetable garden of the Sutter Basin Co., large crews of men are thinning lettuce. The warm weather has caused a rapid development of the plants.

R. G. Risser of the California Vegetable Union states that the celery crop is in excellent condition, and harvesting will be well under way this week. Supplies for the Thanksgiving market will be ample to meet the demand.

The annual meeting of the San Joaquin County Farm Bureau will be held at Stockton Saturday, Nov. 6.

Sutter county has been chosen by the California Experiment Station as the site for the 20 acres to be planted in flax this winter to prove that flax can be grown in California at a profit.

The yearly report of Stanislaus County Fire Warden Wallace shows a considerable decrease in rural fires and losses for the year 1920. Mr. Wallace had an assistant fire warden who devoted his entire time to rural fire-fighting organization work during three months of the most dangerous part of the fire season.

Former Administrator of the pure-food department of the Federal Government, Dr. H. H. Wiley, has been in Fresno studying the methods of curing peaches and figs. Dr. Wiley believes that there is a great opportunity for developing the consumption of the California fig.

The merchants and bankers of Walnut Creek, Contra Costa county, are loud in their praise of the satisfactory results attending the present season's production and prices of hay and grain, fruit and nuts. It is stated that there has also been a marked improvement in the products of the ranches.

The Sunny Slope Nursery Company of Butte County intends making a "Wonder Garden" display at the coming Oroville Orange and Olive Exposition. The exhibit will be in the form of a tropical and semi-tropical display of such fruits as are grown in Butte county. Arrangements for the exhibit are now being made by Manager Boucher of the Oroville Chamber of Commerce.

On October 20 there were stored in Los Angeles warehouses 13,150 bags of potatoes as against none at all on the same date last year. What does this mean? It probably means that the dealers who are storing think the price will go up enough to pay storage, decay, cost of re-sorting, and a greater profit than they could make by selling now. If storage continues to increase, it means that a reserve will be created which will in the winter and spring prevent the unprecedented prices of last spring.

Damaged beans make fine hog feed at a low cost for the actual nourishment. But they must be cooked in order to get anything like their full value. Cooking formerly required two hours of fire and attention on the Brook Hollow Farm near Hollister. Now it requires not over 20 minutes, and the beans come out beautifully mellow. They are put into 52-gallon vinegar barrels with sacks packed over the top and live steam is turned in for fifteen minutes. This heats the beans all through. Then they are placed in a fireless cooker. This consists ofa room with six compartments, each big enough for a barrel. This room is cement floored. Building paper is used as a lining to hold the heat. The beans are ready for use next day.

ALL ROADS LEAD TO FRESNO. WHY?

From November 9 to 13 the city of Fresno will act as host to the Fifty-third Annual Fruit Growers' and Farmers' Convention, the Tenth Annual Meeting of the California Association of Nurserymen, the Fourth Annual Meeting of the Ladies' Auxiliary of the California Association of Nurserymen, and the State Association of County Horticultural Commissioners. This will be the greatest aggregation of State-wide interests ever to assemble in Fresno, the recognized agricultural-horticultural metropolis in the San Joaquin Valley. A program has been so arranged that every meeting will be addressed by men and women of State and National prominence. At 2 o'clock on Wednesday of convention week, Wm. S. Sproule, President of the Southern Pacific Railroad, will speak on "Prospective Freight Service for California Perishables"—a matter in which every farmer and fruit grower in California is directly interested. Colonel John S. Chambers, State Controller, will speak on "The State Government's Responsibility to Agriculture." E. E. Kaufman, Statistician California Co-operative Crop Reporting Service, will address the convention on the "Important Phases of Crop Statistics." Each succeeding meeting for the entire week will be of equal interest and importance; therefore, every farmer and fruit grower should avail themselves of the opportunity of attending these schools of instruction.

The city of Fresno is leaving nothing undone to make this meeting the largest attended, the most enjoyable, and the most beneficial in the history of the different organizations.

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EDITORIAL

IT WILL NEVER COME TO THAT.

To the Editor: It may not be up to you, as you say, to advise the Farm Bureau what they should do, but why not say what you believe they can and will do? I am not a farmer. I am nothing; I am too old—but I can see in the near future the greatest class "brotherhood" that ever existed. The Grange, the Alliance, and other former attempts of farmers to work together for common good, were ridiculed and laid aside by politicians and brokers or middlemen with the assurance that producers never could stick together. The "producer" in America is a very different animal now from what he was a generation ago. The citrus fruit growers pointed the way. The many other associations with authority to hold and sell, are working satisfactorily. It is only a step now to amalgamate those into one, for a certain purpose which will probably be restricted production and all these bright young chaps that are practicing every day telling the producer what and how, may develop over night into the most intelligent "walking delegates" ever imagined. We are all wondering what the railroad brotherhoods are going to demand next. They are only a generation old. In members, power and intelligence they do not compare favorably with the present day producers, yet they have, through organized demands, forced this government to guarantee them work at excessive rates.

I will tell you what the farmers in the United States are going to do. They will starve these "demanders" and idlers off the pavements, out of the "modern apartments," onto the soil! and make greater profits than ever before while doing so. Within the next three years it will be so. The last move to this end is working out now. The "producer," the man who does things and feeds the human animals, was forced to pay the very highest wages imaginable for labor; excessive prices for oil, gas, machinery, water and for what he must buy for his table and to clothe his family. Then the trap is sprung before he can sell his product, and he is expected to take the loss of bringing things down in the readjustment! Is he going ahead next year? Or will he live out of his garden? Get out and ask him. It's coming, and me for a garden! Such a "class" organization was never thought of as there is now in sight.—N. M., Santa Monica.

As to the situation which food producers are now in and the relations to other industrial interests, which have thrown them into such a situation and apparently propose to hold them in it, you have characterized them very clearly and forcibly. From your conclusion that the remedy will be to refrain from production, except in particular lines, which may demonstrate over-production, we dissent.

First: the inhumanity of starving people into paying tribute to them is an idea abhorrent to farmers as a class. They will not, in any great numbers, adopt a policy which they honestly condemn in others—even though it is largely to blame for their present troubles. They do not believe that two wrongs make a right.

Second: Farmers do not know how to be idle. To them, bare fields are an abomination of desolation; unproductive animals are a reproach; for them, to lose time from productive labor is like losing their souls; they will work until they are actually driven off the land. They will work also in spite of suffering because of the optimism which supports them; they will struggle on in hope of better times and they will be cunning in their optimism, for the thought that others somewhere may be adopting a non-producing policy will impel each of them, not to follow suit, but to trump into the game with a product which others' non-production may bring into greater demand.

Therefore, your proposition is impracticable. The farmer's patriotism and morality will prevent his descent to evil; his heart will be tender toward his fellowmen; his hand will be on the plow; his eye will be on the main chance. The farmer's problem is not to abandon enterprise, to relax thrift, to resort to idleness, but to carry on in conscious service and increasing strength and influence until the world is fair to his industry.

But who comes here?

LABOR AND FARMER ORGANIZATIONS.

To the Editor: Agriculturally your paper is splendid, but I cannot conscientiously approve a publication that never misses an opportunity editorially to attempt to discredit organized labor. When the editor is not openly attacking the labor movement he is taking a back-handed slap at it. He has been criticised often by his readers for this and only one with a prejudiced and warped conscience would fail to give heed to such protests.—M. T. A., Oakland.

You entirely misapprehend our attitude toward organized labor. Instead of always condemning it, as you claim, we have praised it. We have even gone so far as to claim that unorganized agriculture could learn from organized labor how to amass influence and suggested long ago that a farming Gompers should be installed in the national capitol to bore his way into the interior of administration and legislation. This has now been accomplished. We have condemned what seem to us the evils of labor unionism, viz.: class selfishness and greed; disregard of the human rights of others to labor as they choose; injustice and inhumanity in methods of pursuing what they desire for themselves. In these wrongs to others in the pursuits of what they desire for themselves, we have abused labor unions by front-slap and back-slap, with the same "prejudiced and warped conscience" which we have used in abusing bankers, real-estaters, profiteers and even farmers when they get together to do wrong things, or to pursue good things in wrong ways. Against this course we brook no protest.

Your esteemed communication serves our present purpose for consideration in connection with the preceding letter, which claims that farmers ought to get together to fight the exactions of labor and other interests and to reduce them all to subservience by starvation. Suppose that this starvation program were practicable (though it is not, as we have already claimed), what is the matter with it as a course of conduct? It is a repudiation of human duty, a denial of human rights; a cruel and greedy class-contention. It is honestly advocated no doubt by N. M. as a means of securing producers' rights, but it is a mistaken recourse. It is just as bad as a labor-strike which denies the community food, fuel and indispensable transportation to advance wages of those who repudiate their duty as community servants. It is just as bad as a merchants' or manufacturer's agreement to advance prices simply to get more profits. It is just as bad as a bankers' consortium to advance interest or deny credits to force sale of products at less than the cost of producing them. And because it is essentially bad in principle as are these things which can be done and are being done, would the farmers do it if they could? They surely would not; farmers are not as other industrial groups of men are. It is true that they lost Eden for all mankind, but it has always been their good fortune to stick around and chop thistles just outside the gates of the garden where the bounteous bloom of the Tree of Life could waft its inspiring perfume to them to quicken their consciences. Thus the farmers, in spite of their first transgression, have always remained in their thoughts and aspirations nearest to the original and eternal right of things, while other men have pursued callings which led them farther and farther away and the devil has made easy conquest of them with his temptations to social and industrial unrighteousness. Our observation is that the more farmers you assemble the more goodness and simplicity their joint-action will manifest and a conception of duty will sway them irresistibly. We have seen the reverse elsewhere. We have seen assemblies scout duty and approve cruelty and greed, which very few of the throng would individually stand for, except as bound to it by joint action. Farmers will not practice the wrongs of organization, but they need the rights of it.

IS IT A FARMERS' STRIKE?

To the Editor: I have noticed that you have declared against the morality of strikes a good many times. What do you think of the dispatches which are coming every day? I read such statements as these: Seventy thousand wheat growers in the Middle West and many cotton growers in the South have been employing the strike method for more than two weeks by refusing to sell at present prices, which they say are below the cost of production. The farmers' strike in Iowa, which was originally called by the Iowa Farm Bureau Federation, spread to the Iowa Farmers Union. The union, which claims a membership of 35,000, pledged itself to support the strike for higher grain. Should both state organizations respond as a unit to the "strike" call it is estimated 150,000 farmers would be affected. As you have roasted strikes before, why not warm up this one—L. C. W., San Francisco.

We have two reasons: first, it is not a strike; second, it is a righteous action. Here is the latest Standard dictionary definition of a strike, which in these troubled times everybody should bear in mind:

Strike—A quitting of work by a body of laborers for the purpose of compelling their employer or employers to comply with some demand or condition, as for increase or against reduction of wages; as carried out, especially in recent times, usually accompanied by active interference with the business thus sought to be suspended as by the employment of a boycott, intimidation of new employes, etc.

The present situation in the middle west has nothing of this nature. Passing the point that the joint action which the dispatches describe is not a strike because there is no body of employes participating in it, or if you claim that these producers stand in the relation of employes to the public at large—still it is not a strike because these producers are not arresting production which is in progress, nor are they refusing to enter upon production. Possibly refusing to proceed with production, as proposed by the first writer on this page, might be closely analogous to a strike and a revision of the definition might include it, but the operation of the farmers of the middle west is very different both in essence and operation. They have made their crops, they have a year's work, investment and expenses in these crops, and now the growers' problem is to dispose of the finished product for enough to recover his outlay. The growers claim is that the federal financial officials discounted the market by declaring that prices would go down and then forced them down by raising interest rates and refusing loans to those who desired to get whatever advantage there might be in holding the grain in warehouse until the price would cover the growers' costs—which, considering the world's need for staples, it would be reasonable to expect before another crop could be harvested. And now the joint action of the growers is to support each other in refusing to endure the loss which present selling would inflict upon them. More than thirty farmers' organizations met, by representatives, in Washington on Friday last, and adopted a resolution calling on farmers to band themselves together so all products may be marketed "in an orderly manner." It was explained this meant "throughout the twelve months of the year from one harvest to another as the demand required." This is not a strike in any accepted sense of the word. It is simply co-operation among producers to get their pay for a finished product and to protect the public from dealing with speculators all the rest of the year. The government refused to finance them through the banks by the usual loans on grain in storage and they are trying to help themselves. They should be supported by the public. Of course, the suddenness of their action may give it the appearance of a strike, but it has not the nature of one. The suddenness is due to the fact that farmers have not been organized nor financed as they should be. As they improve themselves in these respects, as now seems fair to expect, it will not be necessary for them to appeal

to each other for self-protection in the picturesque ways which have misled you into the thought that a farmers' strike was in progress.

QUERIES AND REPLIES

By the Editor.

Inquirers Must Give Full Name and Address
Answered Questions also on other pages.

Prunes and Egyptians.

To the Editor: In your opinion is Egyptian corn, as an intercrop among young trees, injurious to them? We irrigate the ground and the corn is very rank—seven or eight feet high, and has stooled out until it is very thick.—W. B., Grimes.

The trees have no use for the corn. If you have, you can reduce their natural objection to a minimum by growing them in a well cultivated strip eight feet wide and using water enough to be sure that the trees are amply supplied but not swamped. You can do this for a year or two after planting, but not longer, because tree roots cannot make much of a fight against sorghum roots. If you need the corn very much, however, you can lessen the ill effects by making the sorghum belt two rows narrower each year until it disappears in the middle. As we have said, it is simply a question of whether you need corn now more than you will need prunes later. The rule will be, the more corn the less prunes—and you can take that to mean trees or fruit, according to how hard you pinch them with the sorghum.

Growing Trees in a Corn Field.

To the Editor: With reference to planting corn between prune trees, it was our belief that the corn was planted well in the middle and distant from the trees, but on the occasion of our last visit to the ranch, the corn was so high we had to use a searchlight to find the trees. We presume that corn will naturally grow faster than prune trees and for this reason we desire to consult an expert to discover whether it would pay us better to plant nothing between the trees, and pay a man a salary for looking after the ranch, rather than as present to allow him to make all the money he can out of a crop of corn, with possible detriment to our young trees.—C. B., San Francisco.

If you go on growing corn with the effect you describe you will surely have to increase the power of your searchlight from year to year to find the trees, for the result of continuance of the contract, supposing your tenant is supplied with the normal amount of human nature, will be progressively more corn for him and less trees for you. Your present plan is not only depressing the growth of the trees but is rendering the soil less and less able to grow good trees, and to enable them to carry full crops of fruit, if they ever should get to age and size for it, which we doubt. By all means pay a fair price to keep the land in good shape; stop growing summer crops entirely; improve the soil by growing winter cover crops for plowing-under. You are making an investment; make a good one! Growing crops between trees is sometimes necessitated by the needs of the grower, who may be able later, perhaps, to return what he has to take away. Your course should be to give the trees all the soil has for them and keep it in the best condition for them to use it.

Blasting Stunted Olives.

To the Editor: A young olive orchard, five years old, has made a remarkable growth with the exception of one spot of about six acres. In this spot the trees are considerably smaller and we were at a loss to understand why until we discovered. We find, however, that there is a subsoil which, although not the regular rocky hardpan so often encountered, yet is hard enough to prevent roots from going down to their proper depths. The thickness varies from 8 to 12 inches. I had thought about boring about 3 feet from the trees in the harpan about 3 or 4 inches and then blasting, using about half a stick of Giant powder. Can you suggest any better method or is there any objection to this method? I had thought of blasting only on one side of the tree this year and on the other side next year. Do you think it would injure the tree if both sides were blasted this year?—A. L. M., San Francisco.

The case you describe seems to include conditions which can be greatly improved by soil blasting—providing you have rainfall or irrigation enough to supply the trees with adequate moisture for growth, after your blasting has provided better drainage and deeper penetration of the water. We apprehend that blasting so near to the trees is neither necessary nor desirable, and that central blasting in the middles may be enough. It is not necessary to upset the soil directly under the tree; deeper-growing roots away from the center or the base of the tree are more easily promoted and more serviceable, probably. We do not offer specific advice on blasting methods. It is better to get advice from the experts of the powder companies after they have seen the trees, the depth and character of the hardpan, etc. After blasting, such stunted trees as you describe should be well-manured and amply supplied with water to make the improvement which you desire.

Planting by the Zodiac.

To the Editor: Can you give me some information on planting fruit trees and vegetables by the different signs of the zodiac?—R. L., San Jose.

No. We plant according to the nature and growth-requirements of the plant, the time of the year when such requirements may be expected to ensue, and the condition of the soil as related to seed sprouting or plant rooting—and we let it go at that.

Almond Shot-Hole.

To the Editor: I send leaves from an almond tree, which I thought to be effected with shot-hole fungus. Am I correct? If not, what is the disease? Last winter I sprayed those trees affected at the same time and with the same lime-sulphur spray that cleaned our peach trees of curl leaf, but I could not see that any good was accomplished. When and what is the proper spray? I noticed the trees bloom well, with plenty of leaf buds. From early spring the leaves keep falling with only a few if any nuts maturing. The disease likes the Ne Plus best, IXL second, is seldom seen on the Nonpareil, and have never found any on Drake trees. It does not seem to spread to other trees. Does the disease winter in the leaf and fruit buds, and is the sap affected? Could the tree be grafted and the disease not come to life in the new wood.—H. J. D., Fairoaks.

There are three fungi which may cause shot-hole on the almond. One is the "peach blight," which calls for Bordeaux as soon as the leaves fall and lime-sulphur before the buds swell in the spring. The other two are usually checked by one treatment—that is, the lime-sulphur in the early spring or late winter, according to the time the buds swell. This is generally prescribed for almond shot-hole and found enough. The spores of the disease winter on the bark, waiting to break into new tissue. They do not go over in the sap nor is the latter a menace to a new growth of a resistant character. You can graft over to Nonpareil or Drake, and expect them to act just the same as on the other trees, although growing on a stock of which its own growth is subject to the disease.

Hard Spot in Alfalfa.

To the Editor: Is it advisable to use sub-soiler on hard spot in alfalfa? Five-year-old stand. If so, how deep should it be used?—A. C. H., Oakland.

Unless you find that the hardpan is very shallow and thin and you propose to break up the spot and resow it, we should blast the spot which will give you deeper escape and not destroy your present stand.

Plants for Cow Pasture.

To the Editor: What is the best pasture for cows? I have a two-acre piece, which had wild oats on it. Shall I plow it up now and put in "Dry pasture mixture," or shall I wait till spring, as some advise, and put in Sudan grass? I want what will stay green the longest, be most relished by the cows, and, of course, something that will not have to be planted every year. How long ought a pasture to last before reseeding?—M. C. S., Concord.

Sudan grass is a tender, summer-growing annual. It would not stay with you over winter, for the old plants would die, and if seedlings came in the fall moisture and warmth, winter frosts would kill them. The plants of your "dry pasture mixture" would not keep green long after spring rains ceased—though, if your land is not too dry, some of them might hold life in the root for an early fall start. You could get all the year verdure by sowing rye in the fall and Sudan grass in the spring—if the land holds moisture enough to make anything of the latter, or if you can irrigate. But that would keep you turning over the land twice a year, and probably you are not keen for that. It is our judgment that you can get most pasture by sowing down to alfalfa, which will give some continuous summer growth without irrigation, and you can scratch in rye or barley in the fall for growth while the alfalfa is asleep during the early part of the winter. If you feed your cow in the corral while the ground is too wet to carry her, two acres of alfalfa and barley will keep her in salad if you have other feeds to keep her from gnawing the roof off the pasture in the late summer.

Substitutes for Manure.

To the Editor: I came to the West about a year ago and am gardening quite extensively. I notice this ground needs considerable fertilizing and think barnyard manure the best but I am unable to obtain enough. Is there a commercial fertilizer that will take its place? What is it, where can I get it, and how and when is it best applied?—H. A. A., Boonville.

Barnyard manure is best of all because of the organic matter it contains. The best substitutes to supply this are cover crops, to be plowed in green, rotten straw, forest leaves, and other vegetable refuse—all of them to be used in connection with moisture enough to promote decay. In addition to the organic matter, the best substitute for animal manure is a "complete fertilizer," which any dealer advertising fertilizers in our columns can supply you. All fertilizers, except the very soluble nitrates and superphosphates, should be applied early in the rainy season. The soluble substances are best when top-dressed lightly toward the close of the rains, and when there are still some showers to be expected.

Pollination of Winesaps.

To the Editor: I have placed an order for 2,000 Winesap apples. Will it be necessary for me to plant any other varieties of apples to insure proper pollination, and if so, what percentage and varieties would you recommend?—H. S. D., Laws.

We are not aware that the special behavior and needs of the Winesap have been determined by California observations. It is, however, pretty well established by experience that planting solid blocks of one variety of apples is rather a risky proposition, for, though a variety may not be self-sterile it may be helped by cross pollination. There is not very wide difference in the blooming period of apples, and the Winesap is about central in it. The chances are that the varieties which you find by local observation are best to plant will help each other. If you wish mostly Winesaps, interplanting every fifth row with another variety will be enough—especially if there are plenty of bees on the job.

Fertilizing Strawberries.

To the Editor: Do you think it is a good idea to fertilize strawberries the second year, or for that matter any year, and if so, what fertilizer would you recommend?—J. N., San Jose.

It depends entirely upon the soil you are using and must be settled in each case by the way the plants behave. If the plants have small and scant leafage and slack fruit, they need fertilizing, and for this stable manure is best and complete commercial fertilizer next best. If the plants are growing very rankly and not fruiting, manure will make them worse. In the case of insufficient leaf growth, always be sure they are getting moisture enough—that may be all they need. If water does no do it, use manure.

Japanese Quince for Jelly.

To the Editor: Is the fruit of the Japanese quince (also called flowering quince) good to use for jelly, or for anything?—It looks too good to be useless.—A. M. L., Santa Cruz.

Yes; it makes a very, very beautifully tinted and delicious jelly.

CALIFORNIA WEATHER RECORD

The following rainfall and temperature record is furnished the Pacific Rural Press by the United States Department of Agriculture Weather Bureau at San Francisco for the week ending November 1, 1920.

Station—	Rainfall Past Week	Rainfall Seasonal To Date	Rainfall Normal To Date	Temperature Highest	Temperature Lowest
Eureka	.01	7.50	4.07	62	38
Red Bluff	T	2.01	2.45	78	36
Sacramento	.00	1.27	1.47	78	36
San Francisco	.00	1.96	1.63	72	49
San Jose	.00	1.72	1.31	72	34
Fresno	.00	.95	1.00	76	42
San Luis Obispo	.00	1.20	1.85	82	36
Los Angeles	.32	.80	.84	80	38
San Diego	.19	.38	.53	72	47
Winnemucca	.00	.55	1.22	68	14
Reno	T	.57	1.08	72	24
Tonopah	.08	.24	2.07	66	24

Practices In Pruning---Both Proper and Improper.

Written for Pacific Rural Press by W. S. Killingsworth.

For several months past we have talked production and harvesting, markets and marketing of the fruits of the most successful season in the memory of California's deciduous industry, which is now about to pass into history. However, another season will soon follow and the same care and attention that wrought wonders for its predecessor must necessarily be employed to meet that end, so now for the next few months it shall be our aim to draw the attention of the readers of the Pacific Rural Press to the many important matters connected with the care and protection of tree and vine. Fortunate will be the orchardist who does not allow his enthusiasm over the results of the present season to interfere with his duties towards the coming season. Never before in the history of the industry was it more fitting that the orchardists of California enter upon the important task of cultural requirements to be met during the season of 1921 than at the present time.

All that we might say would have but little bearing upon the activities of the successful orchardists. However, they are fortunately of the kind that are too well versed in the art of horticulture not to be familiar with the fact that "times change and we change with them." And for the benefit of those who are less conversant with conditions it will be well for them to know there is not a season that passes without traces, and in many instances the ill effects of some new fungous or insect pests that require the skill of the state and nation's horticultural, viticultural and pomological experts to devise a remedy successfully dealing with these evils. Now that the wise heads of the industry are free to admit that they are willing to be informed of any improvements that will enhance their values, any discoveries that may lessen their difficulties in combatting orchard pests, it is infinitely of as great importance that the amateur profit himself by the experience of others.

It is not our intention to go too much into detail, as we assume that the average orchardist has at least a "passing acquaintance" with the care and protection of his orchard; but if he hasn't this is one instance where a bluff will not work. He must know his business, or a part of it at least, or his orchard will soon be the rendezvous for every inmate of the horticultural pest-house. While there are several angles of importance bearing upon the annual initiatory step in orchard care, to meet the requirements necessary in the development of the next season's crop, we shall consider them one at a time, not so much in order to prevent confusion, but to deal with them at the time considered most beneficial to the orchard.

Begin Pruning Early.

Our experience with orchard care has taught us that as soon as it is permissible pruning of the trees should begin. That was done for two reasons: (1) the work of pruning was performed when the weather was ideal for such; it was, as a rule, before the rains began, which allowed those who were doing the pruning to finish the job and then pick up and burn the brush. (2) It made the matter of spraying much easier and less expensive in the matter of the cost of material that would be lost in the spraying of the brush that was pruned away, and as a rule, unless the rains came very early, we finished our fall spraying while the ground was dry, and it was easy to travel through the orchard with the spray outfit. As a matter of fact, it is the only way to get the best results with the first application of spray. The trees are dry and where they are sprayed according to instructions, as to mixture of material and the pressure under which it is applied, the best results may be expected to follow.

The pruning of a tree is conceded by all practical orchardists to be one of the most important moves in horticulture; and this importance should always be recognized. A tree is nothing more nor less than a machine for the manufacture of fruit, and it should be cared for with the same end in view that the master mechanic has in caring for his lathe. However, it must be confessed that the general knowledge of pruning is highly inadequate to our needs. The progress made during recent years in other forms of horticultural practice as in cultivation, propagation, thinning and spraying, has no parallel in pruning. In this very influential matter we have made but little improvement in the orchards proper, but instructions along that line are now being intelligently given by the pomological department of the University of California.

Diverse Practices in Pruning.

The practice of pruning is exceedingly diverse, even among successful horticulturists. They apparently have no fixed time. Some prune in winter, some in spring, some in mid-summer. Some do not prune at all, or not so that one can notice it; others butcher their trees. Some grow their trees with tall trunks, others head them down to the ground. With a knowledge of all of these ways of performing, it is manifestly dangerous to attempt to lay down stringent rules for the guidance of the amateur.

In the early stages of orchard planting in California, the rule was to head the trees high. There is not a fruit-growing section where there may not be found some of the early plantings that were headed four and five feet from the ground, more noticeable in the Bartlett pear and apple trees than any other. We have been told that the principle reason for such was to allow the team to walk near the tree in order that the plow would perform its work properly. However, as the orchardists became better acquainted with the conditions under which the trees produced the best results, such has been adopted—the low heading. The pruning which a tree receives during the first two or three years after it is planted has a great deal to do with its future. Mistakes in forming the head or the results of neglect during the early years in the life of a tree are practically beyond redemption. On the other hand, if the tree is well formed and properly pruned during its first years, the foundation for a good tree is established; mistakes thereafter may be remedied. In our day and time we have planted many trees, and it was our rule to head the young tree back to 18 to 20 inches above the ground.

The low heading undoubtedly has many advantages. The trees are much stronger and are less liable to blow over. This is more noticeable during the first few years of growth. A young tree with an "umbrella" top on a trunk four to five feet from the ground is a target for the wind. It is also subject to many other attacks from which the low-headed tree is practically safe. Sun-burn is always much more injurious to the long trunk than to the short one. The frame work of the tree having been designed, the work of pruning enters upon its second stage, and there is where the orchardist must show his ability, for there are several points to be considered, one among the leading being to keep the tree shapely and within bounds.

Keep the Tree Open at Center.

Another, which we consider the most important, is to keep the center opened up that there may be a free passage of both light and air. Let in all the sunshine possible; it gives the fruit more color and makes it more hardy as a shipper. As the tree reaches the bearing age, prune it to keep up a supply of fruiting wood, well furnished with fruit spurs. Prune it to secure an annual setting of healthy blossom buds. Prune to maintain the size of the tree so as to give it sufficient bearing area, and above all prune it to remove disease, dead wood and any broken limbs. A proper condition of growth being well established, the production of sound fruit spurs set with vigorous fruit buds depends chiefly on an abundant growth of foliage. It must be remembered, however, that the fruit buds are formed comparatively early in the summer, so that any damage occurring to foliage in the latter part of the season makes less difference in the succeeding crop than a similar amount of defoliation occurring earlier. Here we have reference to injury from red spider, which have been so prevalent in the orchards of the state during the past two seasons.

It is a recognized fact that the orchards of the state have suffered to the extent of hundreds of thousands of dollars resulting from improper pruning—not pruned but butchered, not so much from ignorance as to how it should be done, but shiftlessness on the part of those employed to do the work—especially if done by contract. There are seasons, the present for example, that many trees take on but little growth, which of course lessens the fruit-bearing space as well as the actual number of fruit buds. Orchards in this condition are at the mercy of the pruning contractor, and insult is often added to injury by the pruning of such orchards being done by a novice, when it requires the eye and judgment of a thoroughly competent individual.

It is bad enough to turn such "cattle" loose on a peach, plum, or apricot orchard where practically every bud is in evidence, but when they are allowed access to a pear orchard when it takes the eye and judgment of an expert to tell the fruit buds, especially if the pruning is done early in the fall, bad results may be expected to follow.

Don't Leave Too Much Wood.

It is imperative, therefore, that the utmost care be exercised during the pruning season, and it is up to the orchardist to see to it that his trees are not put out of commission. A great many growers make the mistake of allowing too much wood to remain in the trees, done for the purpose of getting increased tonnage. That is a very poor practice. In the first place, the fruit is of inferior quality; next, if there is a lack of moisture the trees will suffer materially, and in the case of peaches and some varieties of plums, where the wood is very brittle, there will be great destruction from breaking of limbs. So it is far better to prune with all such in mind. Where there are dead limbs to be taken out they should be sawed on an angle at the nearest healthy lateral, and if a large wound, it should be either waxed or painted. Frequently one or more of the large limb—leaders—die and are sawed off. In cases of this kind the limb should be sawed as close to the body as possible and at a sharp angle and then painted. As the pruning season advances we shall have more to say on the subject.

WHAT? TENTH CONVENTION CALIFORNIA NURSERYMEN.
WHEN? NOVEMBER 11, 12, 13, 1920.
WHERE? WOODMAN HALL, FRESNO, CALIFORNIA.

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BASIC TOPICS TO BE COVERED BY EACH SESSION:

Thursday Forenoon, November 11.

A GENERAL SURVEY OF HORTICULTURE

By the Twelve Standing Committees, composed of recognized horticulturists in the California Association of Nurserymen.

Thursday Afternoon.

FACTORS OF TODAY IN FRUIT CULTURE.

A Symposium of Addresses by Fruit Growers, Canners, Shippers and Nurserymen.

Thursday Evening.

SIDE LIGHTS ON PLANTING PROBLEMS

Embracing a Retrospective Glance at the Nursery Industry, Problems in Citrus Culture, and Kindred Subjects.

Friday Forenoon, November 12.

A PLEA FOR THE BEAUTIFUL IN PLANT LIFE.

A Series of Addresses on Ornamental Horticulture and Its Importance and Value to California's Development and Progress.

Friday Afternoon.

BUD SELECTION: A PIVOTAL MOVEMENT

A Series of Addresses by some of the foremost fruit growers, horticultural authorities and fruit tree nurserymen; a subject that is nothing less than revolutionary in its economic tendencies.

Friday Evening—Ladies' Night.

THE HOME AND THE CITY BEAUTIFUL

A session given over to the Ladies of Fresno, who have generously provided a rare program (interspersed with musical numbers), covering a wide range of subjects dealing with public parks and private gardens, including a moving picture story of the California Nursery Industry.

OPEN TO THE PUBLIC

Everybody in any way interested in plant life is cordially invited to attend all the sessions.

A complete list of speakers and their subjects will be found in another portion of this paper.

Owing to the heavy travel at this season of the year, visitors should make room reservations in advance through Wm. T. Kirkman, Jr., Tulare and O Sts., Fresno, Cal.

Program and detailed information furnished by

Henry W. Kruckeberg, Secretary, 237 Court St., Los Angeles, Calif.

J. E. Bergtholdt, President Newcastle, Calif.

Agricultural and Mechanical Service

Rice or Irrigated Grain?

To the Editor: If land is checked and barley wheat and oats planted so it can be properly irrigated, I am sure our land will more than double its crop. I planted the above in small patches and wheat planted June 30 produced 46 stalks, all having good heads, from one seed, while the same ground planted January 1st produced two to four heads without irrigation. Oats and barley gave me, with irrigation, 16 to 25 good heads against 5 to 7 heads without. Large portions of Shasta County grain land has and will be planted to rice. The water used is fifty times greater than grain requires. The odor from rice swamps makes it so unhealthy we can not keep help on our ranches, and all our low spots are huge lakes from seepage from the rice fields. Have you any information on irrigated grains, wheat, barley and oats?—A. T. D., Redding.

Wheat and barley have long been irrigated in the Tulare Lake bottom and in several irrigated districts of the San Joaquin and even Sacramento Valleys. Yield is practically always much greater than on unirrigated lands nearby and the kernels are generally much heavier. Economy of grain irrigation depends on possibility of double cropping or getting cheap water and on yield and price on which are less with grain than with rice.

Sunflower Seed Probabilities.

How are sunflower seed threshed out? What are the commercial uses for seed? What has been the average price to grower for seed during past six years? Kindly give names of two or three dealers or firms who buy sunflower seed in quantities.—H. C. Whiteman, Jr., Woodlake, Tulare county.

Your questions were referred to Ed. Powers of Manteca, who is probably more responsible for introduction of sunflowers than anyone else, and whose district produces most of the seed grown in California. He replies that sunflower seeds are threshed the same as gyp corn, their average yield the past six years has been about 1,000 pounds per acre, average price to grower has been close to five cents per pound, and practically their only use now is for chicken feed. They were formerly used in limited quantities for oil. Names of dealers have been sent by mail.

Combined Float and Scraper.

To the Editor: How can I make a two-horse drag or float with a device for picking up dirt and dropping it at will?—H. H. U., Kern county.

Make a sled of 2x6's with a scraper fixed to raise and lower between the runners. Separate the runners by two 2x6's four feet long and raised about an inch above bottom of runners. Run a long bolt between runners alongside the crosspieces. Put an X-brace of 1x6's across the top but not reaching far enough back to interfere with the scraper which may be located close to the rear end. The scraper will be a section of boiler plate fixed to raise and lower in slightly sloping grooves by means of a lever whose rear end is hinged to a standard behind the scraper and whose front end extends forward so the driver can raise and lower it. A better but more expensive scraper will be the same boiler plate with wings, whose forward points are hooked into eye-bolts projecting through the runners.

Alfalfa on Sloping Hardpan Land.

I have 10 acres which I want to check for alfalfa. The soil is fairly light on top; the next stratum is a crumbly sandy clay; the next is reddish clay hard if dry and sticky if wet. Below this is hardpan 9 to 12 inches thick and 26 to 36 inches under the surface. The piece slopes toward one corner. I want to avoid leveling for level checks, because that would expose the poor soil and get too near hardpan; but neighbors say if I put in sloping checks 40 rods long and 40 to 50 feet wide, the ends of checks nearest the head ditch will dry out and the other ends will drown out. Level checks would allow better control of water, but would require more ditches, and I don't want to waste soil where it is thin. I am wondering if I put in the sloping strip checks and about one-third of the way down blast holes at regular intervals to the bottom of check, would that drain the checks sufficiently.—G. H. G., Stanislaus county.

Save all of your soil depth for the alfalfa. It is none too deep at best. If the slope is great, turn a smaller head of water into the upper end of each check in order to keep water on it longer before the lower end gets wet. That is a matter of using a little skill in apportioning the water. The bottom of each check should be absolutely level crosswise and smoothly finished. Blasting to the hardpan will do no good, but the more of the hardpan you actually blast through, the better will your field hold moisture, and the more extensive feeding grounds will your alfalfa roots have. Probably it would pay eventually for you to break the hardpan with dynamite at intervals not farther than 25 feet each way.

The pumpkin crop of Arroyo Grande, amounting to 900 tons, will be dehydrated this season. A plant has been recently constructed for that purpose.

HIGHEST AND LOWEST PRICES OF POTATOES IN S. F

I would like to see in your columns a list of the highest and lowest prices of merchantable potatoes in San Francisco for each month in each of the past five years. I think many years potatoes have sold below the cost of production, or with very little profit, so that many farmers have quit raising them.—Geo. W. McC.

I note in your issue of October 9 a paragraph entitled, "Will It Pay to Hold Hay?" How can you publish a hint to us hard-working potato growers on, "Will It pay to hold some of our potatoes?" or sell all our crop now out of the field. I have read that there is a 400,000,000 bushel crop in the United States. There are no commission men around this year while we are digging, and yet we have received several letters from firms that never wanted potatoes any other year. They want fancy stock but are offering only $1.75 per hundredweight and we pay 10 cents for sacks and 30 to 40 cents for digging.—Subscriber, Marin county.

We print below a table showing the wholesale prices for Delta Burbanks in San Francisco, as recorded in Pacific Rural Press market reports. Generally in May, June, or July, the old Delta potatoes were cleaned up, and the prices represent new potatoes, especially in June and July.

It will be noted that generally the prices in September and October were weak and that they picked up toward the holidays. The pick-up is already being felt this fall and we believe the market will be somewhat stronger as time shall pass. Workingmen throughout the country are beginning to fear the unemployment that has overtaken many of them. Such a fear will prevent their filling up on higher-priced foods and will stimulate the demand for potatoes and other staples of highest food value per dollar. Crop figures also are encouraging. With a main crop not much larger than in 1919, our September prices were higher than those of September, 1919, which were followed by unparalleled prices throughout the first half of 1920. The October report of the Bureau of Crop Estimates gives California a crop of 13,095,000 bushels, which is 1,743,000 bushels more than last year, but only 225,000 bushels more than in 1918. But a very considerable part of this increase is in early potatoes which wil not greatly affect the markets henceforth. This statement is partially based on the fact that Southern California alone had shipped 58 carloads more up to October 2 this year than that section shipped the entire season of 1919. New potatoes came onto the San Francisco market quotably in May, 1920, which is earlier than in any year since 1916. More earlies were raised in the Delta this season than in recent years. Subtracting the extra-large early crop, which can have no particular effect on prices in coming months, we have left a main crop not very much larger than in 1919.

The U. S. potato crop was estimated October 1 at 414,896,000 bushels, which is about 57,000,000 bushels more than in 1911. We may assume that the early crop was a larger proportion of this total in the U. S. as a whole than was in California, so the same future prospects hold true for the nation as a whole. We doubt that prices will go up to the high levels of early 1920, but we believe that the present strengthening of the market is the forerunner of a substantial increase in prices. Whether such an increase will cover the cost of storage, loss by rotting and freezing, insurance, theft, whatever risk there is in regard to the rise in prices interest on the money which could be obtained now, plus cost of sorting and resacking, each grower will have to judge for himself.

SAN FRANCISCO WHOLESALE PRICE RANGES ON POTATOES.

	1920	1919	1918	1917	1916
January	$4.25—5.25	$1.90—2.15	$1.50—2.25	$2.10—2.75	$ .85—1.90
February	4.65—5.15	1.50—2.15	1.10—1.75	2.50—4.00	1.10—1.65
March	4.90—6.00	1.50—2.15	1.10—1.50	3.00—4.25	1.10—1.65
April	6.50—7.25	1.85—2.75	1.00—1.35	2.50—5.50	1.25—1.85
May	6.00—7.50	2.00—2.40	1.00—1.50	3.25—5.50	1.50—3.00
June	6.00—8.25	2.00—2.40	1.00—1.25	3.25—4.50	1.75—2.25
July	3.00—5.75	2.00—2.50	1.50—2.60	2.00—2.75	1.45—2.25
August	1.75—3.00	2.00—2.35	2.25—2.90	2.50—3.00	1.50—2.00
September	2.25—2.75	2.00—2.35	2.25—2.60	1.75—2.75	1.25—1.90
October	.....	2.00—2.35	1.65—2.25	1.50—2.75	1.35—2.10
November	.....	2.25—3.00	1.65—2.00	1.75—2.50	2.00—2.35
December	.....	2.75—4.50	1.75—2.15	2.00—2.40	2.00—2.35

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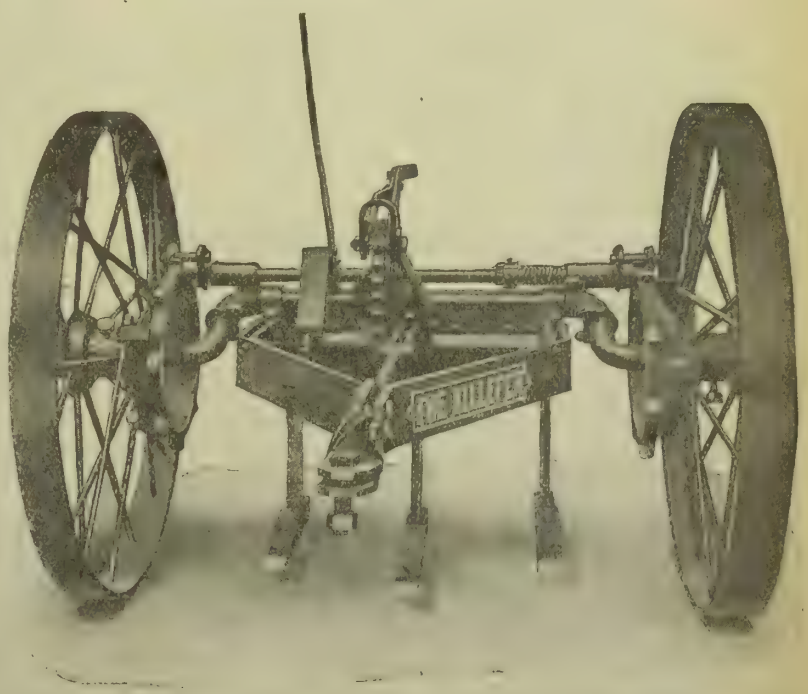

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The wise orchardist knows when his trees are run out—the time when it's good economy to take out the old fellows and give the youngsters a chance.

Then is the time that he puts his old friend and helper back on the job, for it's a cinch to blow out those old trees and plant new ones if you use

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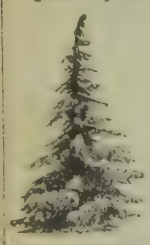

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Timely Work in the Orchard

(Written for Pacific Rural Press by W. S. Killingsworth.)

Planting Young Trees.

Planting young trees is a matter of much more importance than the average orchardist realizes. As a rule, this very important work is intrusted to any one on the premises that can dig a hole, place the tree therein, and pile enough earth about it to hold it in a perpendicular position. In planting a tree with the expectation of its growing there are specific rules to be followed aside from the mere ceremony of burying its roots. In the first place, before a tree is planted, the body should be carefully examined for sunburn and borers. If affected to any great degree, lay it aside for adjustment with the nursery, as the nursery shipping such stock should be made to replace it. However, the nursery will not ship such stock if the horticultural commissioner has been notified that such shipment is about to be made, as he will not give it a clean bill of health. Assuming that the body of the tree is healthy, then a careful examination of the roots should be made for the many diseases and insect pests that accumulate in and about the roots before the tree is taken from the nursery. Should there be troubles of this kind extending beyond the aid of any of the remedies used in combatting such, these trees should also be set aside for adjustment. When both body and roots are found free of disease or pests, then the roots should be examined for bruises and breaks that often occur when the trees are being taken from nursery row, and at the time of packing, preparatory for shipment. When parts are to be removed a sharp knife should be used and not the shears; the knife makes a clean cut wound, where the shears, however sharp they may be, will pinch the edges of the wound, which invites disease, checking the growth and in many cases causing the death of the tree. There being no apparent cause for the loss of the tree, the grower naturally thinks it the fault of the nursery, when in reality it was his own.

How to Plant a Healthy Tree.

The tree being pronounced free from diseases, insect pests and bruises, it is ready for planting. Dig a large hole, not as though a post was to be inserted, but a tree. Place the tree therein and fill the hole with top earth, carefully sifting it around and among the fine roots, tamping it well with the foot, not the shovel handle. If it be light, sandy loam, the earth may come up well around the tree, but very little, if any, above where it stood in nursery row. Tramp the earth well and proceed with the next one, giving it the same treatment. We will advise later as to further procedure.

Use Care in Manuring Young Trees.

We are frequently asked if it is injurious to put manure in the hole when planting young trees. It is and must be avoided. Manure of any kind is injurious—it will go through a heat and burn the roots, causing death, and the nurseryman who sold the trees gets another "panning." After the tree is planted manure may be spread upon the ground in close proximity to the tree, and the winter rains will do the rest; however, in the spring it is turned under, giving the tree the remaining substance that will prove beneficial as a fertilizer and a mulch.

Watch Nursery Stock Carefully.

Assuming that there will be a certain number of trees planted on the ranch, when those trees arrive, which they are liable to do at any time after they are thoroughly dormant and there has been sufficent rain to allow them to be taken from nursery row with ease, avoid allowing the "bale" to lay around the barnyard exposed to the rain, which will cause the roots to mould and sour. Neither should the bale be placed in the dry packing shed, allowing the roots to dry out, but as soon as it reaches the ranch, notify the county horticultural commissioner that there is a bale of trees at the ranch to be inspected. When this is done and they "pass muster," "heel" them in at once. This is done by digging a trench, standing the trees therein on the slant, carefully sifting fine earth about the roots until they are well covered and allow them to remain in that position until the land is in readiness for planting. Should conditions be such that planting is delayed until the trees show signs of leafing out, take them out of the trench, allowing the roots to be exposed to the air several hours, then place them back in the trench. This exposure checks the flow of sap and weakens the fibrous roots that had commenced to grow.

Use Care in Pruning for Next Season.

The experienced orchardist is not in need of suggestions as to the care that must be exercised in pruning in order to meet the requirements in the production of a satisfactory crop of fruit from trees that have suffered from lack of moisture as all non-irrigated orchards have during the past two years. Many orchards have been brought to our attention, especially apricots and Bartlett pears, that made no growth whatever, hence buds now maturing, that will produce the 1921 crop, are mostly on the old wood, and will probably be pruned to the limit during the present—1920—pruning season. Orchards that come under such unusual conditions must be pruned with care, else there will be a shortage of production under the most favorable climatic conditions yet to follow. The orchards suffering the most from careless pruning will be those pruned by contract, most of which is done by Oriental labor, and in many instances there are amateur pruners among those who are supposed to do a perfect job, who know nothing of the care to be exercised in such important work. These "students" are employed at a minimum wage and are mounted on a ladder, pruning saw and shear in hand, with no more knowledge as to the importance of the work to be done than they had of the English language when they walked down the "gang plank" of the Korea Maru, etc. However, this is not intended as a slam against all pruners as there are those and many of them that are strictly onto the work, but "safety first."

Watch the Pear Blight.

Simply because pear trees are gradually reaching a dormant state, it is no criterion that the blight will not continue to encroach on healthy growth. A tree-to-tree canvass should be made in all pear and apple orchards, and where the least sign of blight is detected it should be carefully removed. Twigs that have been affected should be taken off before the disease travels into the larger limbs, thence to the trunk and roots. The blight may be easily detected until the foliage has dropped, as the leaves will have turned a very dark red and the twigs black. On the larger limbs the bark of the affected part shrinks and turns dark brown to black. Beneath it will be found streaks of red, sappy condition of the inner bark. If this shows up in the large limbs and trunk of the tree, the outer bark should be taken off and this discolored substance should be carefully dissected away, leaving a perfectly healthy wound, which should be treated with a disinfectant of the following formula: corrosive sublimate, one part to 1,000 parts of water. Several years ago, when the blight was at its height of destruction, many valuable trees in all parts of the state were so badly affected that they were taken out and destroyed. The same rule should be followed now when trees are beyond redemption. In very few cases will such disaster occur to the trees if care is exercised in cutting away all affected parts as soon as the blight is discovered.

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Don't Delay Another Day!

The regular rainy season will soon be here. The regular arrival of diseases injurious to deciduous fruit trees is as sure as the rains. While the orchards are taking their annual nap, it's your duty to be wide awake.

Yet there are some orchardists who have not taken the precaution called for by common sense. Are you among the number? The present time is the RIGHT TIME to use

Orchard Brand

BORDEAUX PASTE, 32-36 lbs. or BORDEAUX POWDER, 16-18 lbs. } per 200 gal. tank

If scale insects are present, or if more sticking qualities or penetration are desired, add Miscible Oil and Glue to the above formula as outlined in our Deciduous Bulletin.

As a fall treatment for deciduous fruit trees, it assures control of California Peach Blight and other diseases that attack apricot, plum and peach orchards. One yearly treatment with our spray, properly applied, prevents the development of serious troubles later on.

Save labor and prevent waste by using ORCHARD BRAND sprays instead of trying to make and store your Bordeaux mixture at home. You'll find the slight difference in first cost more than offset by your more efficient and better-mixed spray.

Paul R. Jones, our expert entomologist, has prepared a new bulletin on deciduous spraying. A free copy will be forwarded to you on request. Write for it today.

INSECTICIDE DEPARTMENT

BALFOUR, GUTHRIE & CO.

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SAN FRANCISCO

Lindsay Warehouse
Phone 211-R

Cut Out the Guesswork

Why take chances on the trees you plant when you can buy stock that you KNOW is right. Cut out the guess-work. Buy your trees from a nursery with a reputation for trees that grow.

Write for Price List

We are still accepting orders for Prune and Pear Trees—and June-budded Peach Trees.

Elmer Bros. Nursery

"The Nursery That Helped to make Santa Clara Valley Famous."

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FREE BOOK ON LAND CLEARING

MAKES HARD WORK EASY

WRITE FOR THIS BOOK TO-DAY
IT ALSO TELLS ABOUT THE WORLD FAMOUS
LABOR SAVING FULLY GUARANTEED
SINGLE-DOUBLE-TRIPLE POWER

BULL DOG pulls largest, smallest, low cut, green, rotten, tap-rooted stumps or trees, either in swamp or on hillsides in minutes. Other methods take hours. Made of tough steel. Weighs less. Will last a life time. *You alone* can yank out biggest stumps quickly and cheaply. Plenty of the strongest cable, blocks, hooks and guaranteed "Take-up." Root Hook FREE with every outfit.

100% POWER AND SPEED

BULL DOG SUPERIOR ONE MAN STUMP PULLER

FREE TRIAL

FOUR PLANS OF PAYMENT

MOHR STEEL CO. 2810 26th St., San Francisco.

Must Fertilize Orchard for Best Result

(Written for Pacific Rural Press by W. S. Killingsworth.)

There is not an orchardist in California so negligent as to overlook the necessity of proper food and housing facilities for the stock employed in the cultivatoin and general team work on the ranch. Now, along with such an important feature in connection with ranch prosperity, it seems incredible that the bone and sinew of the ranch—the trees and vines—should be allowed to work from year to year without any vestage of food, in the form of commercial fertilizer. To the knowledge of the writer there are thousands upon thousands of acres of orchards and vineyards in the state that have produced fruit continuously for thirty years—and how much longer we are not prepared to say—that have never had one ounce of commercial fertilizer placed on the soil, and a large percentage of them have never had a pound of home-made manure, and a still greater percentage have never had the assistance of a cover crop, other than the weeds and grass that will naturally grow.

Shiftlessness.

Now, does it stand to reason that tree and vine will continue to function under such conditions? Too many growers are satisfied with short crops of medium-sized fruit of poor quality—the belief and practice of shiftless tenants in the majority of cases—with off years and short-lived trees, some from neglect on the part of the grower, others that they do not realize that these conditions may be improved by a proper feeding of tree and vine, and that such feeding will usually result in a very largely increased profit. When the soil is naturally good the fertilization need not begin with the setting of the trees or vines, as the food obtainable is usually sufficient to provide for a good growth of leaf and wood, and in many cases maximum crops of fruit for a number of years, though even here fertilization should preferably begin as soon as large crops are produced, whereas on light soils fertilization should begin when the tree is set. After fruit-bearing period begins, the vegetation processes do not cease, but are coincident with the growth and ripening of the fruit.

Nourishment Needed Entire Growing Season.

In fruit growing it is necessary that there shall be a constant transfer of the nutritive juices from the tree to the fruit throughout the entire growing season. While the growth for each succeeding year of both tree, vine and fruit is dependent upon the nutrition stored up in the buds and branches, as well as from that which may be derived directly from the soil.

Fortunately, a large proportion of the acreage confined to tree and vine production is of the very best soil, thereby enabling it to stand the constant drain in the productions of tons upon tons of fruit that are annually harvested. Even so, there is not one acre of those orchards or vineyards but what are showing the lack of fertilization, both in quality and quantity of the fruit produced, and it is but a question of time before these once prosperous orchards and vineyards will be but a memory.

Commercial Fertilizers.

However, many orchardists have long since awakened to the fact that their trees and vines must be fed and they have inaugurated a system of fertilization by the use of commercial fertilizers, cover crops and home-made manures. The increased demand for the former has greatly stimulated its manufacture until now some of the largest commercial fertilizer manufacturing concerns in the United States are located in California, some of which are clients of the Pacific Rural Press. These concerns have made a study of soil conditions of California's orchards and farms and are prepared to assist the growers in the selection of the proper fertilizers for the different soils. They have agencies in all of the important fruit and farming districts, who make it their business to study conditions. With these splendid facilities, without cost to the grower, there is no reasonable excuse for a deterioration of orchard and farm lands that are annually depreciating in life and production.

Total production of sugar beet seed in the United States this year is estimated to be 6,770,000 pounds. Reports to the Bureau of Markets place the average yield per acre at 870 pounds on 7,780 acres harvested. This total is about 70,000 pounds greater than last year's record production.

SULPHUR

It has been proven and so recommended by the University of California that if you sulphur your grape vines and orchards 6 times they will not be affected by MILDEW or RED SPIDERS.

ANCHOR Brand Velvet Flowers of Sulphur, also EAGLE Brand, and Fleur de Soufre, packed in double sacks, are the fluffiest and PUREST sulphurs that money can buy; the best for vineyards; the best for bleaching purposes, LEAVING NO ASH.

VENTILATED Sublimed Sulphur — Impalpable Powder, 100% pure, in double sacks, for Dry Dusting and making Paste Sulphurs.

For LIME-SULPHUR SOLUTION, use our DIAMOND "8" BRAND REFINED FLOUR SULPHUR. We can furnish you this sulphur at such a low price that it would pay you to mix your own solution and net you a profit equal to the amount paid out for labor in spraying your orchard, even if you pay your men $5 per day for making the solution and applying same.

To create additional available plant food, and prevent smut in grain, drill into the soil 110 pounds per acre of TORO BRAND SPECIALLY PREPARED AGRICULTURAL SULPHUR or our DIAMOND "8" BRAND REFINED POWDERED SULPHUR. This soil treatment has increased various crops up to 500 per cent. Send for Circulars Nos. 6, 7 and 8.

Also PREPARED DRY DUSTING MATERIALS, Tobacco Dust, Dusting Sulphur Mixtures, etc.

Carried in stock and mixed to order.

SAN FRANCISCO SULPHUR CO.,
624 California St., San Francisco, Cal.

We are equipped to make immediate shipments. Send for Price-list and Samples.

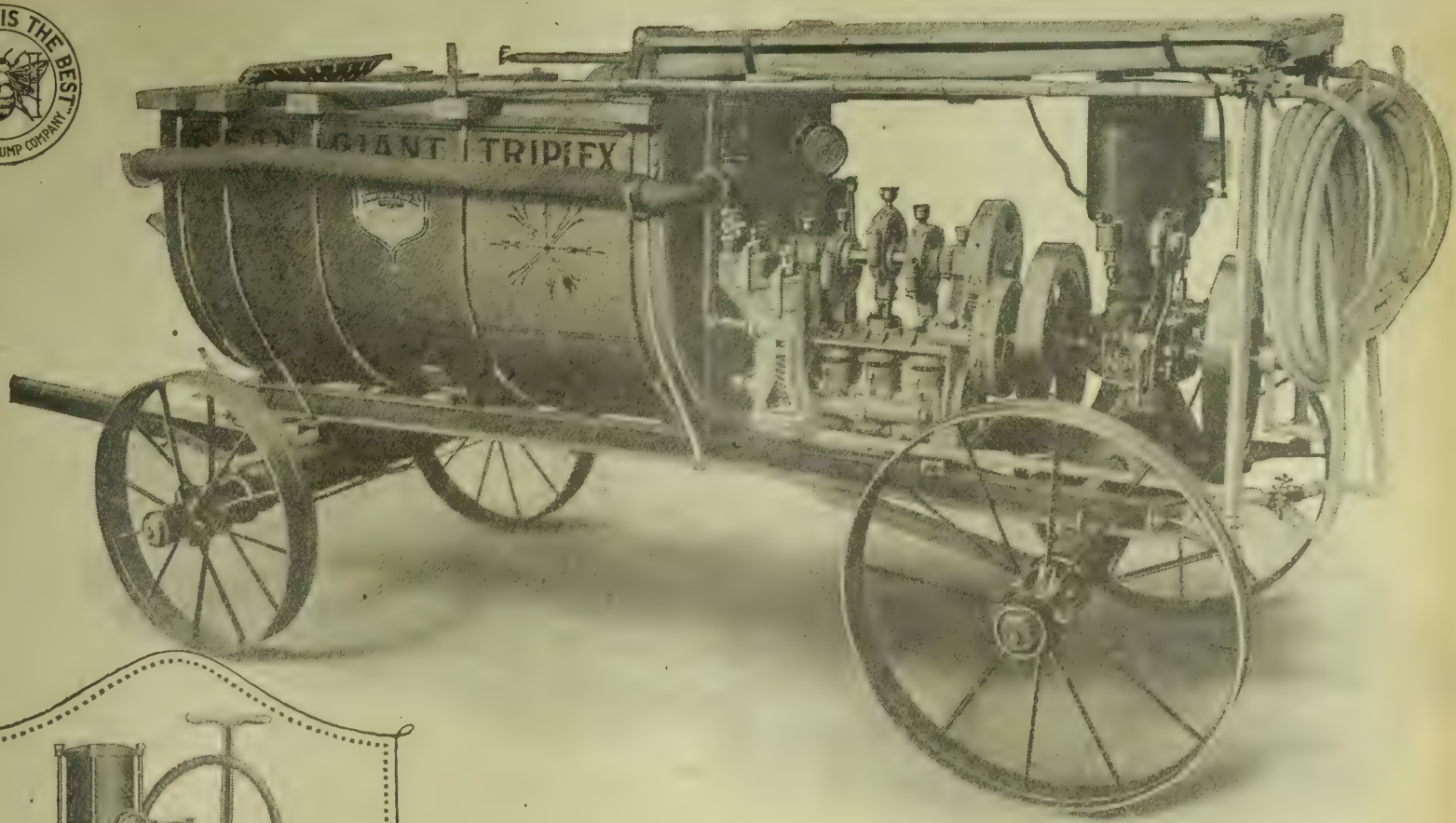
Ask us for prices for Carbon Bisulphate, the surest remedy for destroying ground squirrels.

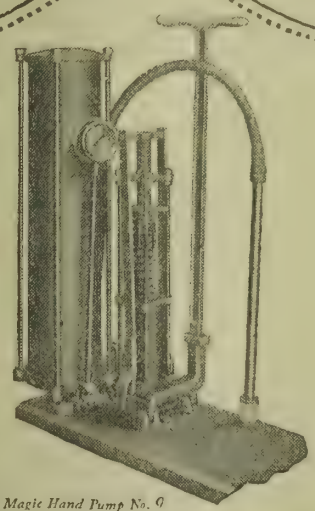
PEAR and APPLE PLANTERS

We solicit your inquiries regarding your needs in Pear and Apple plantings, either for home or commercial orchards. Our trees are especially fine this year and feel certain you will find ARENCO TREES just what you want for your orchard needs. Oregon trees mature early, thus enabling us to deliver them to you in time for early planting.

Good Trees at reasonable prices.

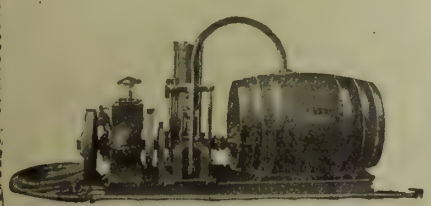
OREGON NURSERY CO.
ORENCO, OREGON





Bean Magic Hand Pump No. 9 which can be operated at 100 to 125 lbs. pressure without exhaustive effort.

Bean Little Giant Spray Pump No. 70 for spraying, whitewashing, etc. Large air chamber makes continuous high pressure possible.



Bean Simplicity No. 602-B, a low priced highly efficient power outfit.

A Real Giant Among Power Sprayers

High Pressure, of course; the Bean drives the spray onto the trees in a dense saturating mist which reaches every crack and crevice—and *kills the pest.* Large capacity, too—a Bean outfit will throw more liquid than any other outfit with the same size engine. But there's more to a Bean than pressure and capacity. There's the equally important feature of absolute dependability—downright sturdiness—ability to stay on the job until the work is done.

Stays on the Job

The Bean stays with it hour after hour—day after day—until the spraying season is over. When spraying time is at hand, there is no time to waste with adjustments, replacements, or repairs. You have all you can do at the business end of the spray rod or gun—no time to waste with the engine and pump. A day's delay may mean a tremendous loss. With a Bean, you simply start the outfit, open up the nozzle, and forget everything but the saturating of the trees. You get—

—high pressure
—more gallons of liquid per minute
—speedier work
—more thorough covering
—absolute dependability at all times

You never find Bean Threadless Ball Valves corroded or stuck tight because there are no threads to stick.

No Stuffing Boxes

No stuffing box troubles because the Bean has no stuffing boxes. Think of that.

The Bean Re-filler enables you to fill up the tank in less than five minutes. Another big saving of time.

Bean Pressure Regulator

The Bean Pressure Regulator holds the pressure exactly where you want it, and makes possible the removal of any valve in two minutes with full pressure in the air chamber and without stopping the engine. No time lost here.

Send the Coupon

There are many other vitally important Bean features illustrated and described in the new Bean catalog which tells you all about the Bean line of Hand and Power sprays, Spray Rods, Spray Guns, Spray Hose, and other accessories. Send the Coupon.

BEAN SPRAY PUMP CO.
Originators of the first High Pressure Sprayers
112 WEST JULIAN STREET, SAN JOSE, CALIFORNIA
Branches: Fresno Los Angeles

Bean
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BEAN SPRAY PUMP CO.
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Please send your "Sprayer Catalog"
Name
Street
Town State
Kind of Fruit Grown
No. of Acres

50-62

Fall and Winter spraying
—(for tired trees)

The Scale Insects, the eggs of
Aphis and Red Spider (Bryobia)
These are controlled with **ZENO.**
The softening of the bark,
The cleansing from Moss and Lichen,
The general conditioning of the
Trees—are affected with **ZENO.**

ZENO

Is an internationally used
Miscible oil spray, and these are reasons why
It has proved the best by years of test.

MANUFACTURED ONLY BY

Eastbay Chemical Company
of Emeryville, California

(ZENO MAY BE HAD OF YOUR LOCAL DISTRIBUTOR, FRUIT COMPANY EXCHANGE, OR BY WRITING TO US DIRECT)

Order your TREES now

Make Sure Next Season's Planting
Many Varieties Will Be Scarce

Any delay in ordering may mean
a year's delay in planting

WE ARE ALWAYS PLEASED TO ANSWER QUESTIONS REGARDING BEST VARIETIES TO GROW, SOIL, IRRIGATION, PRUNING, ETC.

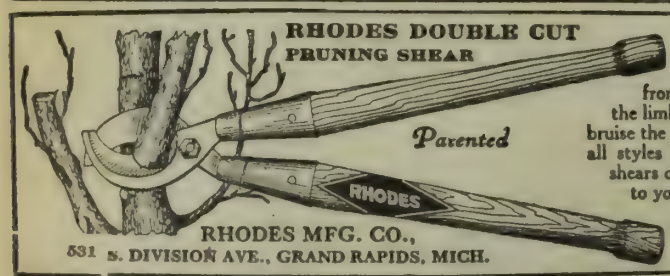
ROEDING TREES FRESNO, CAL.

FANCHER CREEK NURSERIES
FRESNO, CALIFORNIA

Your Soil Needs Humus and Nitrogen Bacteria
Melilotus Indica Supplies Both

Now is the time to plant it. Buy only seed that has a quality test tag on every sack. It protects you against seed of low germination.
Buy from your local dealer or from

Aggeler & Musser Seed Co.
Look for the Tag LOS ANGELES, CAL.



THE only pruner made that cuts from both sides of the limb and does not bruise the bark. Made in all styles and sizes. All shears delivered free to your door. Write for circular and prices.

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531 S. DIVISION AVE., GRAND RAPIDS, MICH.

NURSERY STOCK
PLACENTIA AND EUREKA SPECIALISTS
NURSERIES—VENTURA and LOS ANGELES COUNTIES
R. E. Pierce OXNARD, CAL. A. G. Snow

Here and There in the Fruit Business

Quarantine Against Citrus Black Fly.

Secretary of Agriculture Meredith has called a public hearing to consider the advisability of quarantining Cuba, Philippine Islands, Jamaica, and many other foreign countries on account of the citrus black fly, an insect pest which attacks many plants in the regions named, and which is not known to occur in the United States. There is danger of bringing this insect into this country in connection with shipments of fruits and vegetables, in the raw or unmanufactured state, with plants or portions of plants used as packing materials or otherwise. The hearing will be held in Washington, D. C., December 20. All persons interested in the proposed quarantine are requested to attend and be heard either in person or by attorney. The restrictions on account of the citrus black fly will not necessarily be an embargo, as provisions will probably be made for the entry of fruits and vegetables at certain designated ports after inspection.

Big Gain in Fruit Shipments.

Through the courtesy of our genial friend Wilmer Sieg, Sales Manager of the California Fruit Distributors, we learn that deciduous fruit shipments up to October 12 amounted to 26,504½ carloads against 23,249 carloads for the season of 1919. The greatest increase is shown in the shipment of grapes, 15,612½ carloads against 12,714 carloads for the season of 1919. There is a decrease in plum shipments of 355½ carloads; also a decrease of 106½ carloads of apricots. There was an increase of 90 carloads of pears; also 160 carloads of cherries. Should climatic conditions remain favorable, total shipments are liable to reach 30,000 carloads.

Vacaville 1920 Fruit Season Ends.

With but very few exceptions Vacaville, Solano county, blazes the way for the annual opening of the California fruit shipping season, and continues without interruption until far into the Fall. In years past we assisted in loading mixed cars of grapes, pears, quinces, pomegranates and persimmons just before Thanksgiving. This season the "run board" was crossed the last time, and the doors were sealed on the last car on Saturday, October 16th. Total shipments for the season amounted to 776 refrigerator cars by freight and 40 by express, total of 816. The 1919 shipments amounted to 967 refrigerator cars and 78 box cars handling fruit for the canneries.

Cover Crop Sown on Furrows.

On heavy soil, at least, it pays to leave furrows in the orange orchard when planting cover crops, as experienced by W. A. Matern of Los Angeles county. Mr. Matern has seven kinds of soil on his 100 acres of Valencias. He tried planting the winter cover crop flat two winters, but he learned that it must be irrigated regardless of rain, and furrows are the way to do it here, using a small stream day and night because a short, fast irrigation does not sink into the ground. After irrigating as early in October as convenient, he works up the ground and broadcasts ten to twelve pounds per acre of melilotus indica crosswise of the way he irrigated. He then harrows it lightly, opens the furrows, ten per 24-foot center, and broadcasts as much more seed lengthwise of the irrigation. Then water is run slowly through the open furrows until they are well soaked and gets an early start before cold weather, so his cover crop is "as good as anybody's."

Sebastopol Apples Sell Well.

E. C. Merritt, president and general manager of the Sebastopol Apple Growers' Union, announces a price of $1.78 per box net to the grower. This splendid price was obtained in spite of the fact that the pack of Gravensteins was the heaviest ever sent out from Sebastopol. Prices ranged as follows: Fancy pack, 3½ and 4 tier, $1.78; fancy, 4½ tier, $1.60; B grade, 3½ and 4 tier, $1.11; B grade, 4½ tier, 85 cents. The crop handled by the Union amounted to approximately 525 cars for the season, which is about 40 per cent in excess of last season.

The English Apple Market.

The London markets are flooded with apples, according to cablegram from the American Agricultural Trade Commission. The cheap supplies from European-producing sections that are now glutting the market will last only until November. The supply of American apples are plentiful. The total stock landed and afloat amounts to about 125,000 barrels. At the Covent Garden Market, Yorks sold at $8.80 to $10.56 per barrel; Hubbardston and Baldwin ranged from $8.80 to $10.56 per barrel; Ben Davis, $8.27 to $9.68 per barrel.

Tulare Co. Olive Growers Organize.

Permanent organization of Tulare county olive growers has been perfected with W. B. Kiggins, president, and R. M. Carr, secretary. C. W. Brawswell of Lindsay, B. J. Morey of Strathmore and Porterville districts, L. J. Williams of Orosi and A. E. Imber of Delano have been named a committee to sell Tulare county olives. The report is that local crops are excellent and dominate the State supply. Latest prices locally are $160 per ton.

Fig Importation Heavy.

J. F. Niswander, general manager of the peach and fig association, states that heavy importation of figs into the United States are largely responsible for the almost chaotic condition of the fig market this year. The association is now engaged in canvassing the fig territory of the San Joaquin Valley to ascertain the total fig tonnage remaining unsold in the hands of the growers. The association proposes to aid the growers in disposing of this holdover crop for the 1920 season. Twelve months ago white Adriatics were selling at 15 cents per pound. This year the only offers are for 4½ cents per pound, and the buying is very limited.

The second raisin allotment to be offered by the California Associated Raisin Company will amount to about 25,000 tons.

Pear Blight

If you intend planting pears, you will want to know all about PYRUS USURIENSIS, the new Asiatic pear stock, by aid of which 75 per cent of blight peril may be eliminated and orchards doubled in value without increase of planting cost.

Can be supplied by no other Pacific Coast nursery this season. Sold under guarantee to refund price if blight-killed within TEN YEARS. For particulars, write

Loma Rica Nursery
Pear Specialists.
A. L. Wisker, Mgr., Grass Valley, Calif.

LYE TREATMENT OF RIPE OLIVES.

Now that this is the olive curing season, the owner of the family orchard might be benefited by knowing the process by which ripe olives may be cured.

1. Gather the fruit carefully by hand without bruising. Soft, shriveled, or frost-bitten olives are unsuited for pickling. 2. Place the olives in an open vessel of glass or earthenware or a wooden bucket or barrel. Metal vessels should not be used. A wooden cover, to fit loosely inside the vessel on top of the olives will prevent the spotting of olives which float. 3. Make a lye solution of three tablespoonfuls of soda lye to a gallon of water or approximately one pound of lye to five gallons of water. 4. Cover the olives with this solution, keeping them submerged by means of the wooden cover. Stir and examine the olives every hour. As soon as the skin changes color, cut an olive occasionally to note by the discoloration of the flesh how far the lye has penetrated. 5. When the lye has gone through the skin but only a very short way into the flesh, pour it off into another vessel. This will be in from three to eight hours, according to the olives and the temperature. 6. Expose the olives to the air until the color is darkened and equalized. They should be stirred frequently while exposed. To make them all black requires from one to three days or more, but the flavor is better if not exposed too long. 7. When the desired color is attained, replace the old lye by fresh lye and leave with frequent stirring until it has penetrated to the pit. It must reach the pit or the olives will be bitter, but if left long after reaching the pit, the flesh will be softened and the color bleached. 8. Replace the lye with water, which should be changed twice daily, until all taste of lye is removed—about five to seven days. 9. Then place for twenty-four hours in a brine of five tablespoons of salt to a gallon of water. 10. Then heat olives and brine to boiling and pour hot into scalded jars or cans. Cover and seal and place in a pot or washboiler sterilizer and heat for one hour. Before sterilizing the brine may be poured out of the jars or cans, which are then sealed immediately, while still hot, and sterilized as above. They keep quite as well without the brine.

RAISINS SELLING WELL.

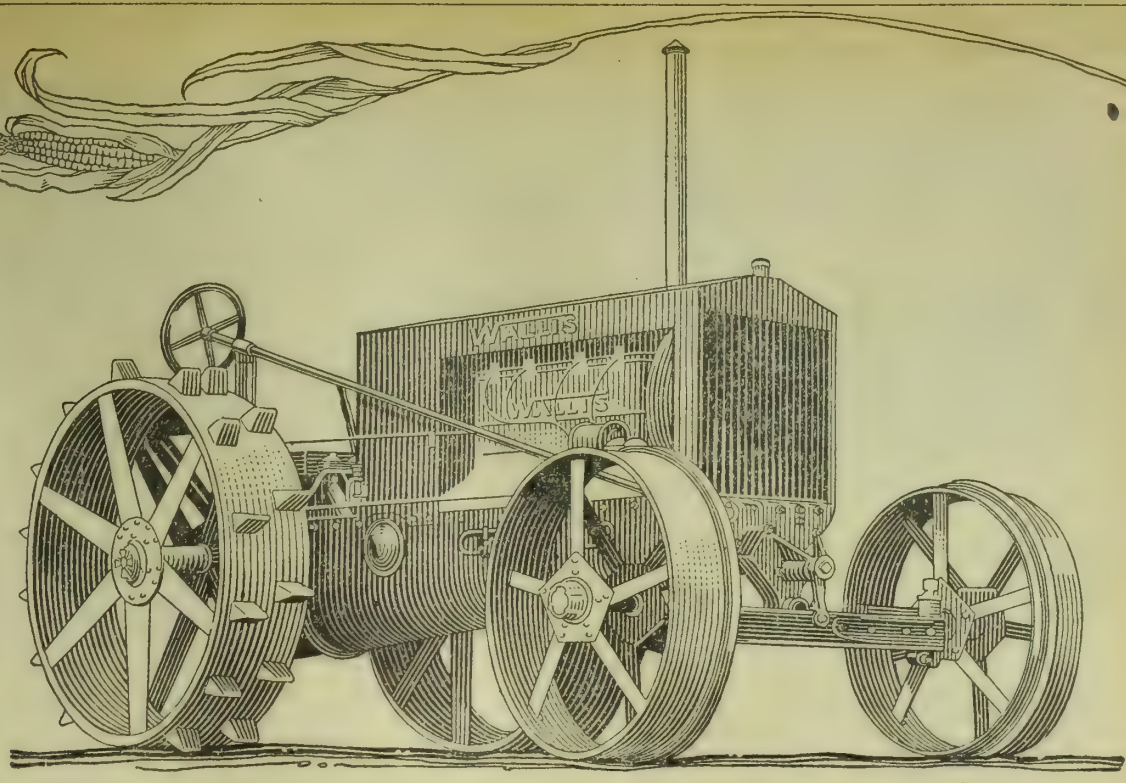
The present season, according to Assistant Manager Seymour of the Associated Raisin Company, has seen a greater amount and proportion of the raisin crop marketed and shipped than has ever been shipped at as early a date before. There is considerable talk in some quarters about cancelled orders in the trade, but as far as the Raisin Company is concerned there is not a particle more than other years and in fact not as much.

The Company was a little embarassed by a shorter crop than had been figured on; particularly since the forced sale by the Government further reduced the amount of raisins it expected to handle by a very great amount, but it can supply its customers all right anyway.

Whatever the result of the suit brought by the government there is no question in the mind of the company officials, but what the company can and will be reorganized, if reorganization is necessary, so as to continue with as much benefit to the industry as ever.

Although the crop was shorter than was expected the vineyards as a whole are in good shape and with a favorable winter and spring the crop of 1921 ought to be quite a bit larger than that of the last two years.

Five tourists were "pinched" for theft of Emperor grapes in a wholesale way from the vineyard of Dofflemeyer & Sons at Exeter a few days ago. Good for the "cop." This indiscriminate wholesale pilfering of fruits should be stopped. One hundred pounds are reported as taken. When Emperor grapes are worth 30 cents per pound it means something.



Why the U-Frame Adds to Wallis Power

The U-shaped frame of the Wallis is typical of this tractor's sensible design. Yet, it required exhaustive experiments to develop this exclusive frame, simple as it is.

To the Wallis this "U" frame gives a solidity and rigid strength best obtainable in this method of construction. There is a noticeable freedom of vibration, too, whether the Wallis is pulling a load or working on the belt. With this U-frame the Wallis is lighter in weight than any tractor of its class.

This ideal combination of great power with light weight makes the Wallis AMERICA'S FOREMOST TRACTOR. The U-frame is but one of the many desirable features to be found only in the Wallis. Years of untiring research and experience with the problems of tractor building and operation have placed Wallis in a leading position. Wallis power means *more acres per hour*, whatever the field or belt operation.

Let us tell you more about Wallis—what it does—how it is built—how it means bigger, better crops and more profits to thousands of farmers. Inquiries will receive prompt response. Also visit the nearest Wallis dealer.

J. I. CASE PLOW WORKS COMPANY, Dept. A4781 Racine, Wisconsin

WALLIS
—more acres per hour

NOTICE: We want the public to know that the WALLIS TRACTOR is made by the J. I. CASE PLOW WORKS COMPANY of Racine, Wisconsin, and is NOT the product of any other company with "J. I. CASE" as part of its corporate name.

"GROZ-IT" BRAND
Pulverized Sheep Manure

IN BAGS OR IN BULK. NOT LIKE ORDINARY MANURE.
"Groz-It" is well aged, dry, free from weed seeds and foreign matter. Odorless. Can be applied with a drill.
A Complete Fertilizer. Cheap and efficient.
Minimum Guarantee
2.25% AMMONIA. 1.25% PHOSPHATE ACID. 3% WATER SOLUBLE POTASH
1 ton is equivalent to from 5 to 7 tons ordinary barnyard manure
CALL OR WRITE
PACIFIC MANURE FERTILIZER COMPANY,
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RELIABLE
MARIOUT
BARLEY SEED
HAS
Greatest Yield Record. Our Seed Is COMPETENTLY TESTED FOR HIGH PURITY.
H. G. STEVENSON, JR.
Winters, California

JOHNSTON
TURBINE CENTRIFUGAL PUMPS

Installations can be made in wells 10 in. or larger. Produce 300 to 4000 gallons per minute. Ask for Folder No. 7.
AMERICAN WELL & PROSPECTING CO.
407 E. 3rd St., Los Angeles

Green manures save time, expense, special equipment and inconvenience

Early Cover Crops Enrich the Soil

IMMEDIATE PLANTING of the variety of legume best suited to your purpose insures a healthy stand and vigorous root-growth throughout the winter.

The soil becomes thoroughly permeated with a dense mass of fibrous roots bearing the precious nodules of nitrogen.

The texture of the soil is greatly improved by the root action and the addition of the humus and nitrogen to the soil.

Orchards, or any crop following the plowing under of a cover crop, quickly show the wonderful benefits derived.

Favored Varieties are:

Sweet clover (Melilotus alba)
Burr clover (Medicago denticulata)
Bitter clover (Melilotus indica)
Field peas, Canada
Cow peas, Blackeye
Cowpeas, Whipporwill or speckled
Niles Peas
Soja Beans
Velvet Beans
Hairy Vetch (Vicia Villosa)
Spring Vetch (Vicia Sativa)
Wooly Podded Vetch (Vicia dasycarpa)

Prices depend on quantities and are subject to change. Latest and most favorable price on any variety will be quoted if quantity is specified.

TESTED FOR VITALITY AND FREEDOM FROM WEEDS

C. C. Morse & Co.

Operators of World's Largest Seed Farms

731 FRONT ST., SAN FRANCISCO

Mariout Barley

Good clean seed from heavy yielding stock

KARL A. HESS, Dixon, California

How Our Olive Industry Can Be Saved

(Written for Pacific Rural Press by B. B. Meek, Oroville.)

While the olive scare has subsided and people are again eating California ripe olives, still there was a period of about six months when the consumption of ripe olives all but stopped. The olives which would normally have been consumed during that six months period will, of course, be carried over to the next season. If the consumption were normal, and it is still far from it, it is obvious then that a normal pack this year would have the effect of overstocking an already glutted market. The resulting demoralization of the market will hurt the wholesaler and the packer and eventually the grower.

Confidence Being Restored.

The olive scare broke last spring at the very time that the packers were making deliveries to the wholesalers. The packers were able to effect deliveries upon the promise of a national advertising campaign which it was hoped would relieve the situation. The advertising campaign has unquestionably helped and the lapse of time without any recurring adverse publicity has tended to restore confidence in this delicious California product. More advertising and more time is needed to make the consumpton normal. With a limited pack this year and an increasing consumption, it is hoped that the industry will face the season a year hence under normally favorable conditions.

The answer, then, is for the packer to pack only his actual sales of futures and to put the balance of the crop into oil. This plan may not show a profit for the grower or the packer, but under the existing circumstances both the grower and the packer must be prepared to operate at least this one year without a profit. Anyway this plan cannot show a very great loss.

Olive Crop 60 Per Cent of Normal.

The reports indicate that the crop in Northern California is normal and that the crop in the San Joaquin Valley and Southern California is very short, some estimates being as low as 20 per cent of normal. This means that the total crop in the state runs perhaps about 60 per cent of normal. If the entire crop of olives grown in California were to go into olive oil, it would not be enough to affect the olive oil market at all. With olive oil the price it is today the returns to the grower for his olives on an oil basis, where he has a normal crop, should be sufficient to pay producing and harvesting costs.

If the olive growers and olive packers are willing to operate this year with no profit or even a loss, under the plan outlined above, it may be that the situation will be cured in the one season. Otherwise our no profit period may be several years in extent.

Co-operative Effort Imperative.

It took a good many "no profit years" to convince the orange growers that co-operative effort was necessary to save the industry. It took several "no profit years" to convince the raisin men that co-operative effort was necessary to save the industry. It is to be hoped that the olive men will profit by these and numerous other instances of the value of co-operative effort instead of learning by their own costly experience. The one big thing every olive grower and olive packer in the State can do now is to join the California Olive Association in its national advertising campaign.

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A big day's work, every day, year after year, with no stops nor delays to hinder performance—that's what you get in a Rumely OilPull tractor. A distinctive design and exclusive features make this possible. Ten years' test has proved it.

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There is in California a very limited quantity of choice wheat and barley seed of these varieties. All our seed grown on new soils, one irrigation only. All water from deep wells; no Bermuda, Johnson or Morning Glory. Orders booked as received, shipments following consecutively.

We also have limited quantities Early Baart, Sonora, Diener's Hybrid-Baart and Diener's Hybrid Sonora Seed Wheats. This is our first year with last two varieties and data not yet sufficient to permit our making definite conclusions or recommendations. Both tiller well, permitting light planting, and neither shatters so badly as Sonora.

In our judgment Bunyip, Bayah and Dart Imperial wheats and Mariout and Beldi barleys yield more on less soil moisture and shatter less in wind than any grains we have grown

We are also now booking cotton seed orders for late fall and winter delivery. Pure strains, Durango and Mebane, grown by us in selected, hand-rogued fields. We do our own ginning, carefully avoiding seed mixing.

We invite trial of our seeds for results with less moisture.

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A SUCCESSFUL REMOVAL OF CROWN GALL.

(Written for Pacific Rural Press by H. E. Drobish.)

A demonstration at the orchard of Richards and Duell in Chico shows that it does pay to remove crown gall or root knot in an orchard where most of the trees are infected.

This 30-acre almond orchard was showing very bad effects of crown gall infection when Dr. Whitten and members of the Pomology Division of the University, in company with the Farm Advisor, visited this orchard over two years ago. A plan of treatment was recommended and carefully followed out under the direction of Mr. Richards. Every tree in the orchard was numbered and the soil was moved away from the crown down to eighteen inches deep and out as far as two feet from the trunk, and a careful examination made for crown galls. A careful record was kept of each tree examined and 85 per cent of the trees showed crown gall infection. The galls were cut away and all infected tissue chiseled out and the wounds were treated with corrosive sublimate and blue stone. The corrosive sublimate was used at the rate of two pellets in one quart of water. The bluestone was used as a concentrated solution. After treatment the wounds were painted with bordeaux paste and grade "D" asphaltum. No care was exercised in handling the cut galls and chips but all bruised places were carefully disinfected. A careful record of every tree examined was made by Mr. Richards showing where the galls were removed and how treated. The next year every tree in the orchard was again examined and only 5 per cent of the trees showed any signs of infection. It was noted that healthy bark was growing out over the cut areas.

The trees this year are showing a marked beneficial result from the treatment and the owners are pleased with the improved appearance of their orchard.

The cost of doing this work at that time was found to be 30c per tree for the two years' work.

Severe thinning out of the limbs was practiced where a large area of root systems had been slashed into. These trees were six years old when first treated and should have been examined at least three or four years earlier.

In the light of this demonstration it has been suggested that it would be a wise plan to examine all young trees one year after planting in order to detect any galls growing around the crown. This would be much cheaper than the work necessary later on in the life of the tree. On trees which have survived the crown gall infection until they are twelve to fifteen years old, it is questionable whether an elaborate treatment such as this would be economically practical.

Mr. Richards believes that after examining the position of the galls that much of the infection occurred by plowing too close to the tree and now he only uses the cultivator and harrow near the base of the tree.

An Appreciated Reminder.

An esteemed lady subscriber writes in: "Thanks for reminding me of this the second time (to renew her subscription). We like your paper very much. Wish you would fasten it together so husband could'nt scatter it all over the house." We have other complaints on this score and are trying to overcome this defect—and will ultimately do so.

TO STUDY FINANCES.

The first detailed study by farmers of the funds expended and those needed by the College of Agriculture will be undertaken by representatives of the 25 farmers' organizations which make up the agricultural legislature committee, according to announcement following their recent meeting in San Francisco. "More than a million dollars are being spent in the state each year by various departments for agricultural purposes," said C. C. Teague of Santa Paula, chairman of the committee, "and although we believe this is being well spent, we feel that the farmers should know more concerning what is being done in their behalf."

This Book will raise your profits on fruits and vegetables

The *Sherwin-Williams* Sprayer's Manual is a complete encyclopedia of the newest methods of increasing yield, bettering grade and commanding highest market prices for fruits and vegetables. It was written by a man who is experienced in practical work and is a scientific authority on the subjects covered. It gives valuable charts, schedules and information telling what, when and how to use the most efficient spray for every variety of pest or disease, on all garden, grove, vineyard and orchard growths.

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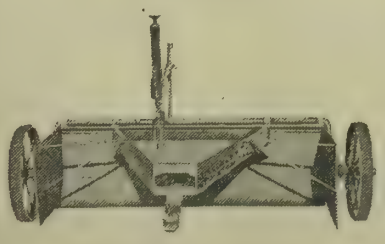

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A Pedigreed Strain of Common Barley

(Written for Pacific Rural Press by Prof. G. W. Hendry, University Farm, Davis, Cal.)
(See illustration on first page.)

Ten years ago the California Experiment Station set out to improve Common California (Coast) barley by selecting from it a pure higher-producing strain. The first work was done at the University Farm, and consisted of selecting from the field thousands of individual barley plants, each of which was given a number ranging from one to about ten thouasnd. Each of these "mother" plants was then threshed separately, and planted in a separate centgener plat consisting of one hundred accurately spaced individual seeds. At harvest time each centgener block was separately cut, threshed and weighed, and it was found that certain ones of them produced more heavily than others. The seed from each was again planted in a centgener plat the following year and again harvested and weighed separately. By continuing this process through several years, it was ascertained that certain individual strains, regularly and consistently produced more than others, or in other words, certain "mother" plants had transmitted the property of high yield to their progeny, and high-producing pure lines had been established. The best strain developed by the process bore the nursery (centgener) number of "Four Thousand," denoting that it had been the four-thousandth individual "mother" plant selected.

Plat Tests.

Several of the best pure-line selections were then advanced to one-tenth acre plats, where they were grown under field conditions for a number of years, and their yields compared with the unselected original seed. The yield data from this series of tests is, in part, herewith, published for the first time.

In this series of plat tests extending over five years, selection No. 4,000 has maintained an average yield of 4.1 sacks per acre above its unselected parent stock, or by the selection process, the productiveness of common barley has been increased by about ten per cent.

Table 1—Comparative Yields Per Acre of Common and Four Thousand Barley in Plats at Davis.

Year	Selected No. 4,000	Unselected common barley
1914.....	38.4 sacks	32.2 sacks
1915.....	26.3 "	25.4 "
1916.....	46.6 "	37.8 "
1917.....	54.0 "	51.0 "
1918.....	44.0 "	42.0 "
Average ...	41.8	37.6

Field Tests at Davis.

Having established the value of the new strain by several years of plat tests, it only remained to grow it on a larger scale and distribute seed for the benefit of the barley industry of the state. This has been done during 1918, 1919, and 1920, and the variety has now gained a limited distribution in the Sacramento Valley, chiefly in Yolo, Solano, and Tehama counties. The yield data from the field increase plantings at Davis, while not so significant, as the more accurate plat data quoted above, is presented herewith as bearing upon the value of the new strain.

Table 2—Comparative Yields of "Common" and "Four Thousand" Barley in Field Plantings at Davis.

Year	Variety	Field No.	Date Planted	No. Acres	Yield Sks. per Acre
1918	Beldi*	2	Dec. 5, '17	8.8	29.0
1918	4,000	2	Dec. 2, '17	9.3	41.4
1918	Beldi*	7	Dec. 6, '17	2.6	25.0
1918	4,000	7	Dec. 6, '17	18.7	26.3
1919	Beldi*	11	Dec. 31, '18	12.7	20.8
1919	4,000	11	Jan. 1, '19	7.7	30.5

*Beldi is a variety similar to common barley, but is slightly more productive.

The field tests quoted above confirm the findings in the plat experiments previously referred to, and the local growers to whom seed has been distributed, report similar increases.

Adaptations of Four Thousand Barley.

Four Thousand barley is identical with common barley in appearance, and cannot be distinguished from it either in the head or when threshed. It ripens at the same time, grows to the same height, and is adapted to the same soils and climates. It is simply a pedigreed strain of common barley bred for higher production.

SULPHUR KILLS SQUIRRELS.

(Written for Pacific Rural Press.)

Carbon bisulphide has always been considered the standard squirrel killer for general use around the farm. Every now and then one hears of some farm operator having 100 per cent results from its use. He may have simply poured it down the hole or perhaps he has found an easy way to light the fumes and imprison them there. Each one of these cases will show a different method of procedure and will have a different set of reasons to go with it. When poor results are obtained by using this chemical, the operator is usually most to blame and not the squirrels or the chemical. He has usually copied some one else and failed to use his own good judgment with such directions and advice. Those who are successful are always found to be partly original but in keeping with a common sense knowledge of the stuff they are handling, and to be relentless and with the patience of Job. When other chemicals are used for this work this truth is the same.

Much has been heard lately about using sulphur for this work. The price of carbon bisulphide is $1.00 per gallon, and powdered selling for $3.00 per hundred. Flowers of sulphur, the best grade, costs $4.00 per hundred, and is no better for this purpose than the $3.00 grade. Two hundred pounds of powdered sulphur will care for about the same number of holes as 5 gallons of the other. This makes sulphur the more expensive of the two and it is a trifle more bother to use, but where conscientiously used, it gives sure results. The best time to use either is when the ground is wet or moist so the fumes will not be absorbed in the open spaces in the soil. Even in the hot days of summer and fall, when the soil is open and porous, and the poorest results are obtained with carbon bisulphide, the sulphur gives good results.

Recently George Kandarian of Fresno county used sulphur with 100 per cent result, after failing with the other. His method is much like that of others, but it is his own. He places a handful of powdered sulphur down a hole and lights it with a wick or paper. A handpower sulphur dusting machine is then used to force the sulphur fumes down into Mr. Squirrel's living room. This is kept up for several minutes. He uses an ordinary hand sulphur dusting machine for this purpose. When done pumping the hole is simply covered with an old gunny sack or cloth to keep in the fumes. This system is the surest there is, but a man can't use it practically when he has hundreds of acres to go over. Where there are valuable trees or vines in danger and immediate positive results are needed, this method is sure.

MUST FINANCE CROPS.

Declaring that "some one" must finance this year's crops, G. P. Hampton, managing director of the Farmers' National Council, has written the Federal Reserve Board, suggesting that, in the event the board decides definitely against making an effort to get its members to discount farm paper and warehouse receipts, the government borrow money and deposit it in national banks to be lent to the farmers at not more than one per cent in excess of the rate the farmers pay. The farmers thus would be able, he said, to hold at least a part of their crops until they can get cost of production plus a reasonable profit or until there is an effective consumption demand.

Approximately 550 carloads of Wenatchee, Washington, pears were sold during the past season, at prices ranging from $70 to $80 per ton.

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George X. Fleming of 430 J street, Sacramento, California, "The Best Posted Man in California on Sacramento Valley Lands," writes under date of October 16, 1920:

"Answering your inquiry about the Giant Leveler we purchased from you last February.

"We had occasion to use the Leveler considerably on our 3,000-acre ranch in Yuba County during the present season and used it after trying out several other leveling devices and it did far better work, much faster and much cheaper than any other device which we ever tried.

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Significant Agricultural Pointers

Northern Tomato Shipping Closed.

The shipping-tomato season in northern California will be practically closed when this reaches our readers. Tomatoes, as this is written, the last of October, are coming to San Francisco from Alameda county only. Santa Claras seem to be past. Heretofore, canners have bought tomatoes in the city wholesale district, but this season they have not only stayed away but have actually consigned surpluses that their factories could not handle. Prices range from 75 cents per 40 pound lug to $2, the latter being for pinks, which will keep a while yet. Ripes seen on the street are punky and watery.

Alfalfa Seed Market Outlook.

In the Middle West and Rocky Mountain alfalfa-seed producing states the offers for clean seed recently have ranged from $16.25 to $21.25 per hundred pounds, as reported by the U. S. Bureau of Markets. This is about a 25 per cent reduction from bids of the same time last year. A great many of the growers are holding for better offers. Since the normal crop of California is around 1100 tons and is probably a little greater than that this year, and our normal consumption is about 750 tons, the price of all is naturally regulated by the price of the surplus which must and does go to mid-western markets. Their dullness pulls down the price of our own seed. The great bearing feature on prices is the club used from time immemorial by dealers in farm products whose producers are unorganized—the holdover. This year's holdover of American seed is not serious, but the holdover of something like 10,000,000 pounds of foreign seed brought into the country at prices around 17 cents wholesale, is a club that weighs heavily. Some of this seed retailed as high as 45 cents in the United States last season, but the holdover has dropped back close to its wholesale price in the effort to induce farmers to plant it. Since a great deal of it is retailed as domestic seed, the price of all domestic seed is held down. Meanwhile, there are some signs which justify firmness in growers' demands. Imports, July to September, 1920, were only 171,500 pounds, as compared with 2,911,000 pounds in the same period last year. There has been considerable fall planting this season, and we believe that the rise in prices of hay, which must shortly begin and proceed through the spring will create a desire in the minds of many California ranchers for more alfalfa of their own. So the spring planting in this state may be extra heavy. It would have been much heavier last spring for the same reason had not the drouth prevented a great deal of planting. This year, with early rains and so much snow in the mountains already that many cattle had to be abandoned for sheer inability to get them out, there will likely be no restriction of planting from drouth reasons. Also the continued good prices for dairy products encourage more dairying and probably a greater demand for hay next season. This fact should encourage planting.

Alfalfa-Johnson Grass Mixture.

Alfalfa and Johnson grass mixed made such a good pasture for cattle belonging to Babbitt & Cowden near Tollesen, Arizona, that the cattle had to be turned onto stubble to take off some of the fat so they could endure the heat of August. L. T. Leatherman of that ranch says the Johnson grass grew higher in places than a man's head and so thick you couldn't rope a calf grazing in it. The combination was a winner for feed; and apparently Johnson grass reduced the danger of alfalfa bloat. Don't plant Johnson grass in California; but if you have it you might as well get some benefit from it.

Mariout on Southern Coast.

Reports on Mariout barley yields in San Diego county have been received by Prof. Geo. W. Hendry of University Farm from fourteen growers located all the way from Fallbrook and Del Mar to San Marcos, Bonsall, and Potrero, representing all altitudes and distances from the coast to the interior agricultural parts of this county. The average per acre reported for 1920 by the growers were 22.8 sacks per acre for Mariout barley and 16.6 sacks for common barley, giving Mariout 37.4 per cent advantage. Le Roy Brown at Fallbrook got 13 sacks per acre greater yield from Mariout than from common. Chas. Kelly of Carlsbad on the coast got 10.5 sacks increase, while C. Nelson in the mountains near Potrero got 11.1 sacks better yield from Mariout than from common.

Good Hope for Wheat Prices.

On October 1, 1920, there were 608,000,000 bushels of wheat in the United States held by farmers, elevators, mills, etc. On the same date a year previous, 747,000,000 bushels were so held. Moreover, farmers of the country marketed during the three months ending October 1, 1920, less by 129,000,000 bushels than they did in the corresponding period last year. With a short crop, short stocks on hand, and a plain disposition of farmers to hold for better prices, the future looks good for him who holds fast.

Flax May Come Back.

An experimental plot of twenty acres of flax is to be planted during the coming season by the California Experiment Station in Sutter Basin, twenty miles northeast of the University Farm at Davis. Professor George W. Hendry of the Agronomy Division at Davis is in charge of the project. Because of the high market price of linseed oil, Professor Hendry states that there is excellent promise of a revival of flax growing, which at one time had a definite place in California's agriculture. The planting of twenty acres is to be made in co-operation with the Sutter Basin Company.

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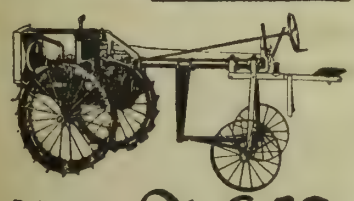

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Have tried the One Man Kirstin Stump Puller and it works fine. My little boy 10 years old can pull a good size tree with it. F. G. Pyle, Aberdeen, Md.

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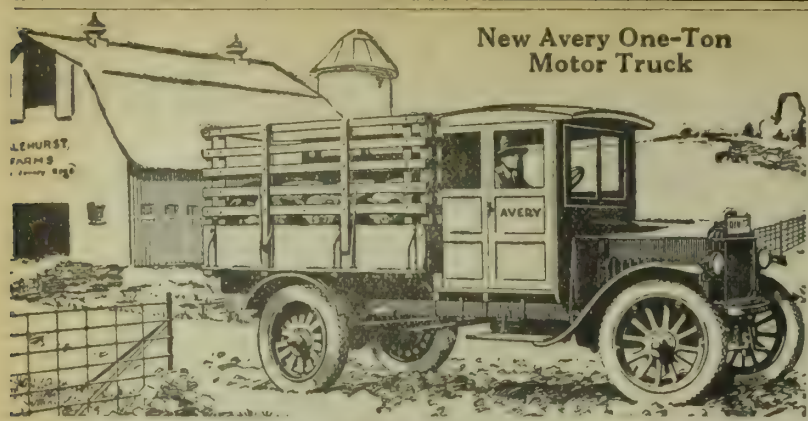

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FEDERATION OF AMERICAN FARMERS.

Meetings of farmers are being arranged in many counties of the state for the purpose of forming units of the Federation of American Farmers. Alameda, Contra Costa, Butte, Fresno, and Kings counties are all lined up awaiting the coming of state organizers to put them on the roll of the federation.

The known fact that it was through the efforts of this federation that the suits against the milk-producing associations were quashed for the time being and the Attorney General of the State of California put on the defensive, has been again brought into prominence by the present prosecution of the Raisin Growers. This is not the first time that these raisin growers have been attacked but the present suit is looked upon as a big gun in an aggressive campaign of the great private, profiteering organizations of middlemen to put the co-operative marketing organizations out of business once and for all.

This suit brings forcibly to the minds of the membership of these marketing organizations the fact that they cannot lack for support in their troubles to other similar associations, for they all have something to sell and are tied up to their money interests—they have troubles of their own and fear that at any time they also may be attacked and thus have more. Realizing their need for powerful support and succor, the raisin growers are turning to this organization and many letters have been received asking for information and for the formation of units of the federation in the raisin sections.

Ownership of Sacks.

The suit instituted by this Federation to determine the ownership of the sacks used as containers in the handling and delivery of grain is arousing great interest, not only among the grain farmers but among all who are engaged in essential production and marketing. Daniel V. Marceau is the attorney for the plaintiff, and the complaint is a very plain and unvarnished statement of facts. It alleges that, in accordance with an agreement, plaintiff delivered to defendant 2,097 pounds of wheat in sacks owned by the plaintiff, the sacks being of the value of $3.40. Following the delivery, plaintiff demanded the return of his sacks, but to this demand defendant has failed and neglected to accede. "Wherefore, plaintiff prays judgment against said defendant in the sum of $3.40 and for costs of suit incurred herein."

That there can be two opinions on the merits of the case is unbelievable That a man may be deprived of property for which he has paid and the title to which he has never voluntarily assigned, without due process of law, is impossible under our form of government. That "custom" can be pleaded to excuse the violation of property rights no man believes Therefore a verdict for the plaintiff is confidently looked for.

The fact that the Federation of American Farmers is backing and financing this suit for the benefit of the grain farmers of the state is a concrete demonstration of the value of the organization to the farming industry, and in this connection it must not be forgotten that this organization saved to the farmers of the state over $800,000 last year by securing from the U. S. Grain Corporation an advance of two cents on the rebate on sacks allowed by the Corporation. This rebate on sacks was an acknowledgment of the farmers' propery right in the sack and this concession has been further confirmed by the action of grain buyers in inserting in their contracts for the purchase of grain clauses to the effect that "sacks become property of the buyer."

West Side District.

At the last meeting of the board of trustees of the San Joaquin county unit of the Federation of American Farmers, complaints were received from several members, who are far-

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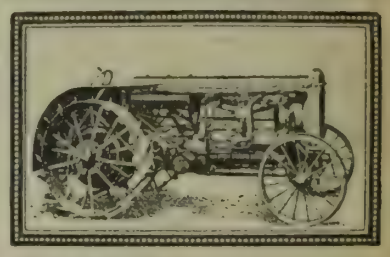

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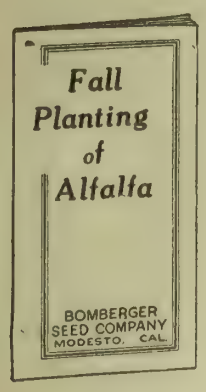

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mers in the West Side irrigation district near Tracy, that the Pacific Gas and Electric Company had served notice upon the officers of that district that, in obedience to the orders of State Power Administrator H. G. Butler, the company could not supply electric power for the irrigation pumps of the district for the flooding of their lands in preparation for the next year's crop.

As the West Side is a section of scanty rainfall, this flooding is absolutely necessary and if the water can not be had on or about October 15th, there is no use to spend money in the preparation of the lands for seeding for a crop cannot be grown and the lands are thrown out of the productive column.

Acting on the instructions of the board of trustees, Secretary Riddell immediately got in touch with Power Administrator Butler, thoroughly explaining the situation to him and asking that his order forbidding the use of power and water on cropped lands or in preparation for the next year's crop, be modified for this section of scanty rainfall to the end that this land, approximately 10,000 acres, may be made productive for the coming year.

In reply to this letter Mr. Butler wrote that he was in entire sympathy with the federation's wish in this matter and asked the secretary to take the matter up with W. W. McLaughlin, who meanwhile had been appointed power supervisor of the district from Sacramento to Merced with headquarters at Stockton. This was done at once an Mr. McLaughlin listened carefully to the details of the farmers' needs. He stated that he would see Mr. Butler the next day and would take the matter up with him and would call the secretary up as soon as he returned.

At the next meeting he repeated that the power administration recognized the importance of this irrigation and advised the secretary to take the matter up with the Pacific Gas & Electric Company and to inform them that the power administration would do everything possible to assist in the furnishing of power for the relief of the West Side farmers and their thirsty acres.

Current Provided.

Manager Fagg of the Pacific Gas & Electric Company, after listening to a statement of the case and the message from Supervisor McLaughlin, said that the irrigation of rice would cease about October 1st and the company would certainly try to so arrange matters that current could be provided for the service of the West Side farmers' needs. The efforts of the power company, backed by the power administration, will undoubtedly result in a supply of electric power for this essential purpose and will prevent a shortage of approximately 200,000 bushels in the grain crop of 1921.

A legislative committee, composed of two members from each county unit of the Federation of American Farmers, will soon be formed to have charge of all legislative matters in which this organization is interested, at the coming session of the state legislature. Of this committee State Chairman McDonald will be chairman.

Many assemblymen and state senators who have given unsolicited pledges to this federation of support for several measures in which the farmers of the state are vitally interested, will receive the backing and assistance of this committee in endeavoring to secure for the essential producers of the state that recognition never heretofore accorded them and a voice in all measures relating to matters purely agricultural.

Among other measures which will receive hearty support from this federation, in common with all farmers of the state, will be a pure seed bill, for the lack of which legislation the state has suffered great losses. Other organizations are also deeply interested in this proposed measure and there is every likelihood that such a measure, carefully drawn and closely scanned by competent, practical farmers, may become the law of the state.

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Few tractors can be operated successfully on sidehill slopes. The Fageol will walk straight up and down the steepest slopes, and across them if desired, working close to trees or vines with no side slip.

It requires but little upkeep and operating expense, is easy to operate, and an inexpensive annual overhaul will keep it in condition.

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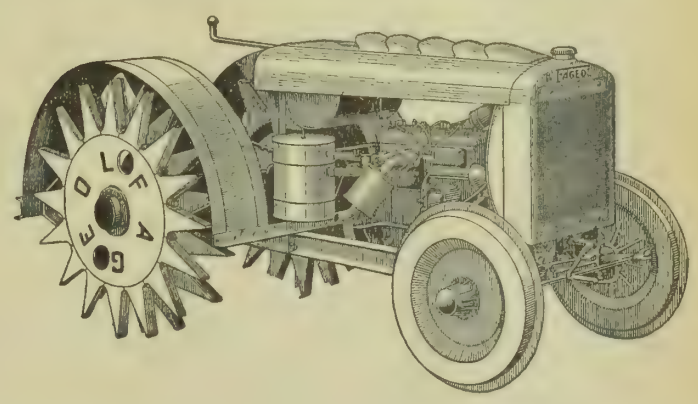

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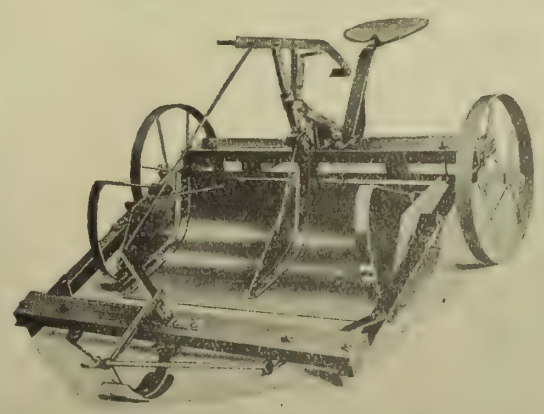

The above is a cut of the Famous Miskin Scraper, which in operation, easy draft, greater capacity, and better work has many advantages over the common Fresno and wheel scrapers now on the market and is guaranteed to take twice the dirt per trip with the same horsepower.

Made in 2-horse, 3-horse and 4-horse sizes. Can be operated by small tractors from the tractor seat by the tractor driver.

Send for descriptive circulars, with prices, or ask your dealer to send for one on approval. We pay the freight.

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What does an hour saved each morning mean to you during the busy season?

Grease cups have been almost eliminated in the Best Tracklayer. Lubrication has been simplified by running wearing parts in baths of oil and by using anti-friction bearings. Truck rollers and drive sprockets are oiled by special pipes running direct from the black-oil tank. Instead of spending an hour each morning filling and turning down grease cups, you are off for the field in 10 minutes.

This feature of the Best Tracklayer is just one of the many developments resulting from long years of tractor-building experience. The Best is not a new tractor. Every piece of its mechanism has been an evolution. Design, choice of materials and workmanship of the Best Tracklayer have been time-tried, and this tractor is famous for its power, endurance, reliability and economy of operation.

Tracks are made of manganese steel. Powerful heavy-duty engine is simple in design, with all parts enclosed. 36 Timken and Hyatt bearings used throughout. Working parts entirely housed. Three-point suspension relieves engine, transmission and frame of injurious jolts and twists. Independently operated tracks enable tractor to turn in its own length. Non-friction, greaseless rocker joints for track links double life of track. No belts or chains. Every working part instantly accessible.

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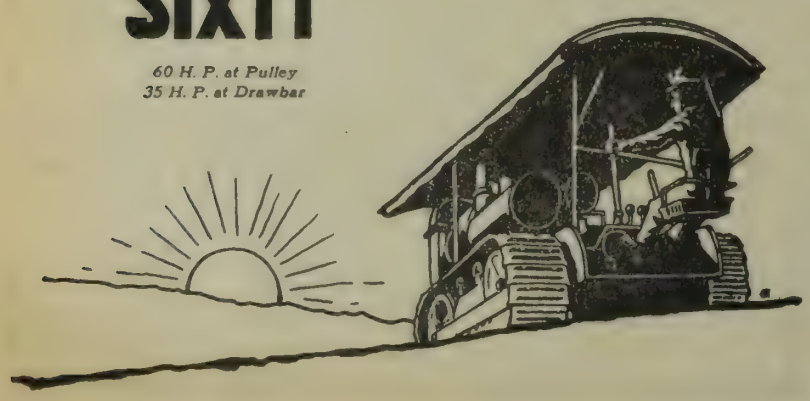


MANURE SPREADER DOES BETTER WORK.

"We have worn out two manure spreaders and are now hauling with the third one," said Supt. R. C. McGill of the McNally ranch in Los Angeles county recently in commenting on the satisfactory performance of the machines. Much finer and superior distribution of manure by the spreader in the citrus and olive orchards and greater economy of unloading are the advantages mentioned by Mr. McGill for manure spreaders. Manure is hauled on this ranch during three seasons of the year. This fall about 600 tons are being applied on the orchard from his own corrals and from those within hauling distance. Half of this is being hauled with the spreader, the rest being hauled by wagon because the spreader is not figured to be economical for more than a half-mile haul, and it could not haul more than 300 loads within the desired time.

The flatbed wagon carries twice as much as the spreader, but it requires three men, including the driver, to unload it economically and with much coarser, poorer distribution than the machine gives. Two of these men are idle, going back and forth. The driver alone unloads as much from the spread as two men could from the wagon. It takes four horses to pull the wagon; and the same number pull the spreader when the ground is soft. The amount hauled per day by the spreader depends on distance and rapidity of loading. With two spreaders working and one man constantly at the manure pile to help the driver load, the spreaders hauled two loads per hour two seasons ago.

Commercial fertilizer, tankage, etc., are loaded onto a thin layer of manure in the machine and then distributed satisfactorily.

Why Dump Manure in Piles?

All over the country we have observed piles of manure dumped by motor trucks at the edges of orchards, there to heat and lose value until used, and to be expensively pitched onto wagons or spreaders later for distribution. "Why," said Mr. McGill, "do not the orchardists avoid that extra work by having the manure dumped on a paltform whence it could be loaded into a spreader by gravity with a scraper through a chute?"

Engine Would Save Horses.

An improvement desired by this rancher is a lower gear on the machine to save power pulling it in the orchard. Perhaps a better proposition would be a small engine hitched to dump the manure while horses merely haul it with no unloading gear attached to the wheels. This would eliminate two horses and would probably make it possible to use the spreader on softer or wetter land than where the beaters and apron are operated from the rear whels.

MANGANESE STEEL TRACKS.

Manganese steel for tractor tracks has almost universally been adopted and is one of the strong talking points of dealers in track-type tractors. Its advantages are pointed out by various tractor men, who realize that one of the greatest objections to track machines is the cost of maintenance and frequent replacement of tracks. Advantages of manganese steel have forced most manufacturers to adopt it within the past three or four years; and probably more adopted it last year than in any two years before. A manganese steel casting is so hard that one tractor on exhibit, which had worked a year and a half, was not worn at all noticeably. A file or a drill or a lathe cannot touch it; and sand does not wear it out. Friction simply brightens and polishes its surface, which does not get rough with any amount of wear. The only way it can be worked to shape is by grinding with emery or by bending. A bar half an inch thick can be bent over an inch pin until the ends touch without fracturing at the bend. It can be straightened cold, but to heat it for working destroys the temper and this must be avoided. The easy way to determine whether any steel is manganese steel is to test it with a common magnet. It does not respond, though all other common steels and iron do. It contains an extra high percentage of carbon (about 1.2 per cent), which would make it brittle were it not for the ferro-manganese to the extent of 12 to 14 per cent incorporated with it. Manganese steel has been manufactured in America 28 years, but it widespread adoption for tractor track links, pins, pinions, gears, chains, etc., began only a few years back.

SEVEN-FOOT MELILOTUS PLOWED UNDER.

About 1500 acres of melilotus alba are being plowed this fall by the American Beet Sugar Co. in San Bernardino county, and they are planting 2,500 acres more, half of which is the new annual white sweet clover and half alfalfa, according to their local agricultural adviser A. V. Riggins. The melilotus alba was planted a year ago last spring, and pastured with hogs the first year. Last spring the hogs were taken off so the clover might make maximum growth to turn under.

Right royally did the clover perform its duty! Seven and eight feet tall it stood when plowing commenced; and so thick that we could not see light through the narrow strip that remained as the tractors were finishing the plowing of one field! A marvelous job of turning it under was being performed by several 75 horsepower tractors pulling four-gang disk plows. Sunflowers in other fields, as tall as the clover in this one proved easy to turn under in comparison with the tough sweet clover. Rolling, disking, dragging only made it worse. Several kinds of plows were tried. All moldboard plows failed to scour in the light but sticky soil. Disk plows generally couldn't cut the clover and turn it under; but finally one was found on which the disks could be adjusted practically vertical and about 30 degrees off the line of draft. The plows are built for heavy tractor work and needed no weights. Neither had disks been sharpened though 160 acres had already been plowed when the writer looked at the job. It is admitted that some of the sweet clover branches projected above furrow edges, and the dense mass of nitrogenous vegetable fertilizer covered up so shallow could only be worked into a good seed-bed by disk pulverizers because drags and harrows would pull out too much of it. But wait a few weeks until that clover has rotted and its roots have left multitudes of open channels into the subsoil—that sticky stuff will have become more mellow and far richer for succeeding crops. And meanwhile, picture if you can, what a job of plowing could have been done with horses!

MOTOR TRUCKS HAUL ORANGES.

Two motor trucks are kept busy nearly every day of the year hauling oranges and lemons to the packing house of the Whittier Select Citrus Association, according to Manager C W. Hightower. So many fruit growers use tractors now that a considerable proportion of them would have to hire their fruit hauled anyway. For this reason, the Association operates the trucks at a fixed charge, according to mileage, etc., the charge being designed to just cover costs of operation and depreciation. Any balance on the motor truck account is distributed annually. J. Rodrigues, one of the drivers, tells us that the five-ton truck often carries 200 to 216 boxes, grossing 65 pounds each, and hauls a three-ton trailer, carrying 150 boxes or nearly five tons. The ordinary total load is about 330 boxes and the speed with such a load is fourteen miles per hour. Ten gallons of gas and a gallon of oil run it a regular twelve-hour day. Not a day's lay-off has been necessary in fifteen months to repair the truck, an overhauling having recently taken two days at a slack season.

IS OIL NECESSARY TO CALIF.

Is it to the best interests of California (1) to permit exportation of oil and gasoline to the Orient; (2) to withhold water power from production of electricity; (3) to permit continued use of high-powered pleasure automobiles; (4) to construct oil road where concrete or asphalt are possible; (5) to permit foreign ships to fill their bunkers with American oil, while the foreign nations under whose flags they sail place restrictions against supplying American ships in foreign ports; (6) to permit foreign oil companies to develop American oil land and export the oil; (7) to lend money to foreign nations without demanding the right for Americans to develop oil abroad? These are pertinent questions asked by W. W. Woods of the First National Bank of Los Angeles after pointing out the grave danger facing us in the reduced proportion of production to consumption.

POWER NOTES.

Sugar beets are loaded onto a motor truck in the fields of H. N. Edwards near Santa Paula in Ventura county and hauled direct to the sugar factory at Oxnard, special allowance being made to him for freight charges saved.

A new fast speed motor truck, designed for loads up to one ton and speeds up to the legal limit, is being tested under load over the eastern hills by the Gramm-Bernstein Motor Truck Co. in preparation for regular production to begin about January 1, 1921.

A float 30 feet long and eight feet wide is pulled by an 18-30 track-type tractor over freshly disked sandy ground in the Shell Ranch date orchard superintended by J. E. Pippin in the Coachella Valley of Riverside county.

The San Joaquin Light and Power Company, which has been so much short of the power desired by its patrons, now has more than it needs and is negotiating to sell some to the Pacific Gas and Electric Co. Completion of the Kerckhoff power plant in Fresno county, recent rains, and reduced demand for irrigation power make the difference.

Several changes are noted in the latest model Emerson-Brantingham 12-20 tractor. The speed is increased from 1.87 miles per hour on high to 2.77 miles per hour and a second speed is provided. The belt wheel is at the rear under the platform for convenient connection to stationary machines. A differential joint is provided on the back of the clutch to connect with the main drive-shaft elastically so a slight mis-alignment will not be injurious. The cylinder-block cap is made detachable to permit easy grinding of the valves.

All restrictions on use of electric power have been removed by State Power Administrator H. G. Butler. More or less of restrictions on use of power have been in effect since last June. Recent rains relieved the strain, but do not remove the necessity for power companies to continue running their steam plants.

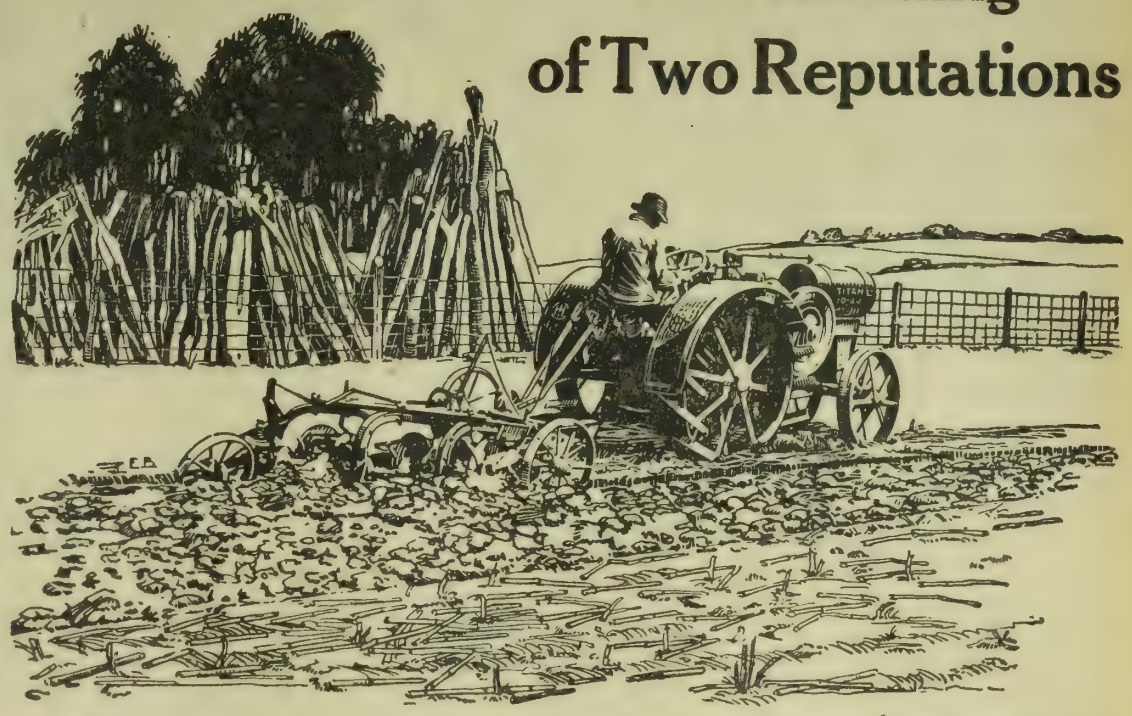
A motor truck milk route from Los Angeles to the upper end of San Fernando Valley is proposed by E. D. Hall in an application to the State Railroad Commission for permission to establish it.

Five million dollars of first preferred capital stock is to be sold by the Pacific Gas and Electric Company in order to carry out its extensive plans for construction of additional power houses.

The Moline Plow Co. is putting onto the market their new motor truck, especially designed for farm trade. It is of 1½ tons capacity, uses the Moline tractor motor, pneumatic tires, and Torbensen internal gear final drive.

A motor-truck driver in Alameda county has been found guilty of violating the State law regarding loads over 800 pounds per inch width of tire. A case in Visalia recently was contested on the ground that the law contemplated only the truck in its provision of 800 pounds per inch.

The Blending of Two Reputations



AWAY back in the beginning of modern American farming the pioneer builders of farm machines began their work. For more than three generations the genius and skill of good plow makers at Canton, Illinois, ran parallel with the skill and genius of good farm machine builders now united under the name of the International Harvester Company.

From the pioneer days down to date these industries were intent on providing the farms with quality machines. They were ever on the alert for improvement and progress.

When, fifteen years ago, this Company began putting practical tractors on the farms, the Parlin & Orendorff plow makers began the development of a superior line of tractor plows. As the **International Tractors** developed into popularity, so did the sterling worth in **P&O Little Genius** win its way into leadership.

It was fitting, therefore, that eventually the International Harvester Company should join together the extraordinary success of **P&O Plows** and **International Titan Tractors.** For a long period now these reputations have been blending. P&O Plows are a part of the International line. International Harvester Tractors and P&O Plows have long been working together efficiently.

Many thousands of new owners of these long-famous plows and tractors, who are turning soils with them in every corner of the land, know that this close and necessary association of power and plow is making for better plowing and more completely successful tractor farming. P&O Plows and Titan and International Tractors recommend themselves.

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OF AMERICA
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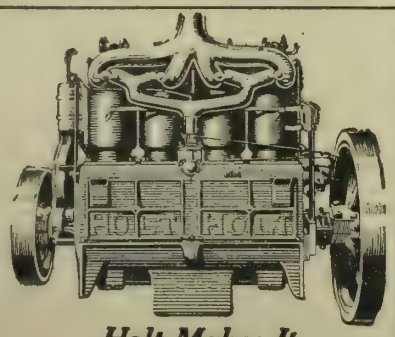

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Built by Holt, and safeguarded by standards detecting errors of a 100,000th of an inch, the "Caterpillar" Motor is built for a long life free from trouble.

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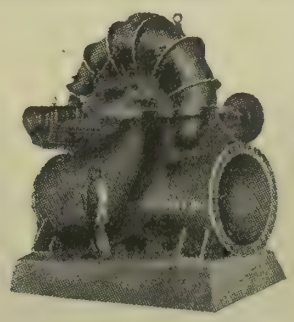

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Regarding the Appetite of a Dairy Cow

(Written for Pacific Rural Press by Thos. F. McConnell.)

The title of this article would lead readers to think the dairyman would be the only one whose wants were to be answered here, but an attmpt is to be made to supply the needs of several who have written us during the past two months. Sometimes the answer to a very simple question, especially along stock-feeding lines, developes into such a prolix writing as to exclude it from the "queries" column. Therefore we will try to answer in a general way several questions on feeding not only dairy cattle but other classes of livestock as well inas much as the principles underlying all stock-feeding are much the same.

We speak of the dairy cow as a "milk machine," which is no more true than a hog or beef animal is a "meat machine," or a horse or mule a "work machine." What will produce milk in the first case will also produce the desired results in the other cases and in many instances very economically. Experts and practical men as well have been studying balanced rations and the digestibility of stock feeds for years with but little attention to other important details.

What, then, is necessary in order to get maximum results in milk, meat and work? First, a machine or animal that will eat the requisite amount. For these results we must have material that the animals like, that appeals to their sense of taste, which in turn will excite the necessary glandular secretions that will act upon the feed and extract from it what is necessary to build up tissue or inject into the blood stream the constituents of milk. In other words feed that tastes so good that the animals will eat all they can hold.

Judicious Feeding.

If now we have them eating all they can hold of certain palatable feeds, it must be of such material that it is easily digested, that is, torn down and built up again into an entirely different substance by the processes in the animal's digestive tract. Feeds that taste good are palatable and are usually easy of digestion if taken in reasonable quantities. Grains rich in starchy constituents, concentrated feeds, have to be fed with care or more will be taken into the digestive tract at one time than it can handle. Serious results may follow; in fact, are almost certain if such feeds are not fed judiciously and in conjunction with some coarser material, such as grain or alfalfa hay, shredded corn fodder, silage or pasture.

Many times the dairyman or feeder wants to know what to feed in connection with alfalfa hay to improve results. If the alfalfa hay is of first quality it is somewhat difficult sometimes to get enough better results to make it pay. However, with the ordinary run of alfalfa, when it is bringing $20 to $25 per ton in the field and barley is not more than $40, an addition of one pound of the ground barley for each 5 pounds of milk given daily will be a profitable addition. Where grain hay is the roughage some cocoanut meal of good quality or cottonseed meal at the rate of 1 pound per head daily will be of value. Chopping the alfalfa hay or the grain hay either, for that matter, will more than pay if power is available at reasonable rates.

We have used barley as a concentrate as it seems to be as cheap as any available grain just now, but a mixture of rolled or ground barley or ground milo, cocoanut meal and dried beet pulp in the proportions of 1:1:2 is a good one according to Prof. F. W. Woll of the University Farm.

This mixture to be fed in the proportion given for the ground barley alone, and probably with somewhat higher production, although cost must be taken into consuderation. All these concentrates contain almost the same proportion of digestible nutrients with the cocoanut meal having from two to four times as much protein as the others.

Other available sources of protein are cottonseed meal, soja meal and peanut meal cake, but it is probable that alfalfa hay is the cheapest and best source we have with cocoanut and cottonseed meals in the concentrates the next in line.

Stock Molasses.

A feed that is coming into common use on the Pacific coast is stock molasses, which is a by-product of both the cane and beet sugar factories. The beet molasses is quite laxative and has to be used with care for that reason. The cane molasses has none of this characteristic and may be fed freely. Stock molasses is very high in sugar, bearing a nutritive ratio of 1 to 59.2, according to Henry. This makes it an excellent feed in conpection with alfalfa, beans, or other legumes that are high in protein. It also is coming to be used quite extensively in mixing with feeds that are low in palatability, are not liked on account of their lack of flavor, woodiness or other undesirable characteristics. Many animals will eat almost anything they can masticate if it is mixed with molasses. The old Irish saying, "Stew stones in butter and the broth will be good," is exemplified by the practice of mixing molasses with straw, the molasses is good, but the straw is still nothing but a woody indigestible substance.

Molasses has the characteristic of imparting a bloom or finish to steers or other fattening animals, a tonic property for horses or cows out of condition, and really giving a tempting taste or flavor to many rations, inducing animals to eat more of them without causing digestive disturbance. In this way the molasses is a desirable additon to rations for dairy cattle as the more feed eaten without causing the cows to "go off feed" the bigger returns at the milk pail.

A variety of feed is one of the advantages of a ration composed of several different materials, as the animals do not tire of it so quickly. A composite ration can also be varied from time to time and often with excellent results.

The individuality of the animal has much to do with results as some cows with strong, even appetites will produce better on a simple ration of alfalfa and rolled barley than others with capricious appetites on the most elaborate ration possible. Then, too, some cows will yield more milk on a wide ration than on a narrow one, although the reverse of this is generally supposed to be true. An instance of the wide ration giving maximum results was the case of a cow at the Wisconsin Experiment Station some 20 years ago. She would produce more milk on a ration of sugar beets alone than any other feed. These roots have a nutritive ratio of 1 to 10.7, which is almost double the amount of carbohydrates supposed to be the optimus. Again it may be that some cows will lay on fat if fed anything but the narrowest of rations. The average, therefore, is what should be sought in a large herd, where it is impossible to cater to the individuality of the animals. In feeding for records the individuality of the cow is watched very closely and whatever will produce the most milk is used.

SOME GOOD DUROCS.

O. W. Weidler of Winton has decided to dispose of his herd of purebred Duroc-Jerseys and discontinue raising hogs. While none of his herd has ever been on the show circuit they carry some of the best blood of the breed. His senior herd sire, Western Pathfinder, is a half-brother to Queen of Pathfinders, the great sow owned by the Diamond Bar Ranch, that was grand champion of the breed this year at the California State Fair and Los Angeles Livestock Shows.

There are a number of boars and gilts of his get out of Taxpayer sows; also some of the get of a son of Great Orion, out of Taxpayer sows. Aside from good blood lines the herd is in excellent condition and shows much individual merit.

BEEF MARKETS LOOKING UPWARD.

(Written for Pacific Rural Press.)

Beef market demoralization cannot continue if supply and demand have any effect. This was forcibly brought to the attention of the catlemen at a recent meeting in Los Angeles. The market is now all shot to pieces, as stated by President Bixby of the California Cattlemen's Association. A year ago fresh salted hides sold at 38 cents per pound. Two weeks ago a friend said he had been trying to sell equally good fresh salted hides at seven cents, but the best offer he could get was five cents. At Pasadena T-bone steaks are selling at 75 cents a pound, but H. A. Jastro sold some fine steers recently at 10 cents per pound and the market has dropped since then.

But O. B. Fuller, in opening the meeting, struck the optimistic note that the outlook for catle is better right now than it has been in a long time, and as soon as the Government becomes healthy the cattle business will. Though assessors have been aggressive and lots of people are paying taxes on twice as many head as before, this is misleading if used as a sign that cattle have increased. There is a real shortage of cattle in the United States. One instance is the Babbitt Bros. outfit of Arizona, which normally turns off $500,000 worth of steers in a year, but this season have only $150,000 to $200,000 worth to sell.

H. A. Jastro declared that the calf crop has decreased 30 per cent throughout the country and she-stuff has been killed in appalling quantities. Not a cattle outfit in California has as many head as it had a year ago. One of the biggest outfits which does its own killing has been buying butcher stock for two or three months. Much cattle range has become farm land as is proper, according to Mr. Jastro. Some cattle were shipped out of the state last spring by big outfits, thus relieving local markets for the smaller producers at the time when everybody wants to sell on account of grass drying up.

Mr. Bixby noted that at Phoenix, Tucson, and Globe, Arizona, most everybody had to sell their calves this year. In Nevada the cattlemen have been selling calves and cows, but practically all Nevada stock for sale is out of the way now. He had been boosting for ranchers to put in more hogs and fewer cattle, but is convinced there is a shortage of cattle in the three southwestern states so every man should stay in the business and get some hogs too.

TO INSPECT COUNTRY-BUTCHERED MEAT.

Uncle Sam prevents packers of meat for interstate commerce from selling diseased meat as human food, but California has local butchers in almost every town who kill most any kind of animal and sell its meat without inspection. Where have all the slaughtered tubercular old cows and bulls gone to? Have they graced your table? Their meat is tough, unsavory, and sometimes dangerous unless more thoroughly cooked than much of it is. Because it can be sold for lower prices than the inspected meat of large packers, many people buy it and lose their respect for beef as a food because it is so much tougher than other meat. Thus is consumption reduced, demand falls low, and prices to producers go to disastrous levels. One way to eliminate a great deal of this destructive competition and encourage greater consumption of good healthy beef is to secure passage of a law by the next Legislature requiring adequate inspection of all carcasses to be sold as dressed meat. Such a bill is likely to be presented by the State Department of Agriculture. It should have the support of all cattlemen and meat consumers.

Mr. Dante Carmignani visited the Baywood herd of the Lewis Company and purchased some very choice heifers bred to their herd sire, Ormsby Segis Marie Lad.

THE PACIFIC INTERNATIONAL LIVESTOCK SHOW

PORTLAND, ORE., NOVEMBER 13 TO 20

$400,000 Exposition Buildings.
$75,000 in Premiums.
2,500 head of Livestock.
Dairy Products Show in con-

Daily Auction Sales.
Nationally Known Judges.
Student Judging Contests
Horse Show Each Night.
Reduced Railroad Rates.

SACRIFICE
AT
Private Sale

My Entire Herd of DUROC-JERSEY SWINE

Of Unequalled Breeding and Individuality Will Be Sold at Once.
Included in the offering are:

6 TAXPAYER SOWS, 2 years old. 15 GILTS, 1 year old, sired by a son of GREAT ORION, the 1918 Champion.

Sows are bred to Western Pathfinder, sired by Pathfinder. Western Pathfinder is a half-brother of Queen of Pathfinders, the grand champion Duroc sow at California State Fair and Los Angeles Livestock Show this year.

Also 15 well-developed April Gilts and 6 Boars sired by Western Pathfinder.

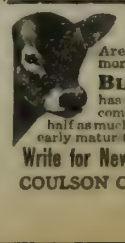
An Opportunity to Acquire the Best, both in Breeding, Size and Conformation.

The Big Kind and Everything Goes

Come and see them.

O. W. WEIDLER
Winton, California
1 mile east of station.

REGISTERED HOLSTEINS
Creamcup Herd offers service bulls and bull calves of 34-lb. breeding. Females offered for foundation stock. Tuberculin tested.
M. M. Holdridge, San Jose, Cal.
R. D. "A," Box 437.
Two miles out North First Street.



CALF PROFITS
Are you getting them? Calf profits mean more to you now than ever before.
BLATCHFORD'S CALF MEAL
has been known since the year 1890 as the complete milk-substitute. Costs less than half as much as milk—prevents scouring—promotes early maturity. Sold by dealers, or direct from us.
Write for New Data *See actual figures showing how to increase your calf profits.*
COULSON CO. - - - Petaluma, Cal.

NEWS NOTES FROM NEVADA.

There is little change in the wool situation. Very little, if any, wool has been sold since last May.

Conferences between the Nevada and California officials looking to an early agreement relative to the storage of water in Lake Tahoe seems quite probable.

The Holcomb Brothers Company of Reno are dredging ditches to drain their low lying meadows and have developed some underflow water for irrigation.

Very few sheep and cattle are being fed in Nevada this year, due to the prevailing high prices asked for hay and the low prices prevailing for beef and mutton.

Reports by William Hanson, manager of the Metropolis Land Company, near Wells, Elko county, are that about twelve new families have settled in that section. About 1500 acres of new land are being prepared for cultivation in this community.

Two light snows have fallen in the higher Nevada valleys and indications point to a heavy snowfall for the season. Lake Tahoe is slowly adding water and power plants along the Trukee are now able to furnish their full quota of power.

D. Quillici of Wells has just purchased a small flock of purebred Hampshire ewes. He has purchased an imported Judd bred ram to head the flock. Mr. Quillici's ranch adjoins that of the Nevada Hereford Ranch, owned by the J. H. Cazier & Sons Company.

Farmers living in southern Washoe county are endeavoring to obtain a modification in the hay quarantine regulations to permit them to ship hay into the lumbering districts in eastern California. No alfalfa weevil has been found south of the Truckee river, and of course no hay is grown in the lumbering districts in the mountains.

Hay movements out of Nevada are slow this season. Very few ranchers have sold their crop. Some potatoes are being shipped to coast points at around $55.00 to $60.000 per ton. Sheep pasture is being sold at one cent per head per day. Some lambs not contracted in the spring have been sold at $6.00 per head net, at the local shipping point. Barley and some oats have been sold at $40.00 to $50.00 per ton.

About a dozen silos are being used in Elko county this year to convert Russian sunflowers into cattle feed. The silos were constructed from a form purchased for $300.00 by the County Farm Bureau. Each silo is part of a unit that may be increased in size as conditions warrant. A fine patch of sunflowers were grown on a city lot in Elko under the direction of Charles B. Henderson.

A number of train loads of cattle and sheep are moving out of the upper Carson valley. Most of the shipments of sheep are moving to eastern markets, while the movement of cattle is for the most part to the Coast. The marketing of cattle is somewhat earlier than usual, no doubt brought about by early roundups and finishing on the hay fields after the second cutting.

A reduction of the wages of sheep herders and camp tenders from $100 and $120 per month to $75 took effect in Elko county, October 1st. The reduction is said to be due to the drop in the price of wool. It is stated that none of the emplyees of the sheep companies left their work because of the wage reduction. In the same county ranch hands receive $50 to $65 per month.

The Merced elevator is almost full of bulk barley whose beards were clipped off by automatic machinery as it was received. Some threshers leave quite a stub of the beard on the grain. This takes much more space in a sample than its own bulk and makes 47-pound barley test out several pounds less. Credit for full weight is gained after clipping.

The State Cattle Protection Board now has over 225 inspectors throughout California and has licensed over 900 butchers.

62 Registered Hereford Females 62

At Public Auction THURSDAY NOVEMBER 18, 1920

Finnell Stock Farm Company has on its ranch over 180 head of registered Herefords, representing the entire herd purchased from Kiesel Land & Stock Co. in Oregon some months ago. This is a larger herd than the ranch will accommodate at present, and this sale is made to reduce the herd to proper size.

This is in no sense a sale of the tail ends, in fact the owners have kept out of the sale list entirely all animals about which there might be a reasonable doubt, or that are badly out of condition, of which there were only a few in the entire herd.

The herd is headed by BEAU BLANCHARD 37TH, a son of the famous Beau Blanchard, and by SIR THOMAS, a proven breeding bull. Both of these sires will be represented in the sale by groups of excellent daughters, and all females in calf carry their services.

Out of the 62 lots of females, 43 WERE BORN IN 1917 OR LATER, the balance in 1913 or later, comprising a most useful herd of young females of substantial breeding and individual merit. Among them are

16 COWS WITH CALVES AT FOOT
25 BRED COWS AND HEIFERS
21 OPEN HEIFERS OF BREEDING AGE

These cattle have been raised strictly under range conditions, are in good thrifty condition, and present an unusually attractive opportunity for investment, either for beginners or established breeders as young, clean brood material.

Every animal sold as a single lot guaranteed to be a breeder; every animal tuberculin tested and individual certificates furnished.

FINNELL STOCK FARM is what was formerly the Henderson Ranch, about 9 miles east and slightly south of Galt, about 35 miles southeast of Sacramento.

SPECIAL NOTICE

The owners have on hand 28 yearling and 2 year-old bulls suitable for range service. None of these will appear in the public sale but may be bargained for at private treaty now or on sale day.

Owners:

Finnell Stock Farm Company

GALT SACRAMENTO COUNTY **CALIFORNIA**

Auctioneers:
COL. BEN A. RHOADES, Los Angeles.
COL. JOHN A. DAVIS, Manteca.

Management
Calif. Breeders' Sales and Pedigree Co.
C. L. Hughes, Sales Mgr., Sacramento, Cal.

ABSORBINE
TRADE MARK REG. U.S. PAT. OFF.

Will reduce **Inflamed, Strained, Swollen Tendons, Ligaments,** or **Muscles.** Stops the **lameness** and **pain** from a **Splint, Side Bone** or **Bone Spavin.** No blister, no hair gone and horse can be used. $2.50 a bottle at druggists or delivered. Describe your case for special instructions and interesting horse **Book 2 R Free.**
ABSORBINE, JR., the antiseptic liniment for mankind, reduces **Strained, Torn Ligaments, Swollen Glands, Veins** or **Muscles; Heals Cuts, Sores, Ulcers. Allays pain.** Price $1.25 a bottle at dealers or delivered. Book "Evidence" free.
W. F. YOUNG, Inc., 86 Temple St., Springfield, Mass.

SHIRE HORSES
For Size, Bone and Quality

More is required of Horses than ever before hence the need of more size, weight and power. Large geldings never were higher. Shire Geldings usually top the market. Use Shires to raise larger and better horses.
For information on Shires, write W. G. Lynch, Secretary, The American Shire Horse Association, Tonica, Illinois.

America's Pioneer Dog Medicines

BOOK ON
DOG DISEASES
And How to Feed
Mailed free to any address by the Author
H. CLAY GLOVER CO., Inc.,
118 West 31st Street, New York

CLARK, HUNTER & CLARK
LIVESTOCK AUCTIONEERS
915 I St., Modesto, Calif.
Registered Hog Sales a Specialty

HILLCREST STOCK FARM

Shorthorn Cattle

Won at Sacramento Both Championships
7 Firsts and 5 Second Prizes

Shropshire and Merino Sheep

RAMS AND BULLS FOR SALE
Single or in Carload Lots

T. S. GLIDE, Prop. DAVIS, CALIFORNIA

ABORTION IN CATTLE

CAN BE TREATED SUCCESSFULLY AND YOUR COWS MADE PROMPT. REGULAR BREEDERS BY

STERILOID

STOP LOSING CALVES

TREATMENT: If STERILOID is used at the first sign of abortion the cow will go her full time and have a healthy calf. If your cows or heifers do not come in season, or fail to get with calf, use STERILOID. Cows get with calf after only one treatment. Write today for **FREE BOOK.** It explains the causes and symptoms of Abortion and tells how to treat Abortion, and make your cows regular, healthy breeders with STERILOID. Also contains letters from breeders who have used STERILOID successfully.

GUARANTEE: We will refund money in every case when STERILOID FAILS to make good. PRICE, $1.00 plus 4c tax. Mailed Postpaid, in plain wrapper.

MARTIN REMEDY COMPANY, Dept. P, 398-408 Columbus Ave., New York City. Reference—Colonial Bank.

THE RECORD OF PRIZE WINNER

Send $2 for the Record of Shorthorn Prize Winners, containing tabulated pedigrees and class ratings of 1,260 show winners for the past twenty years. The volume is cloth-bound, nearly 500 pages, $2 postpaid. It should be in every stockman's library.

AMERICAN SHORTHORN BREEDERS' ASSOCIATION
13 Dexter Park Ave., Chicago, Illinois

Registered Federal-Tested

155-HOLSTEINS-155

AT PUBLIC AUCTION

State Fair Grounds, Sacramento, Calif., November 10-11, 1920

From their richly bred herd of 350 high class individuals, Toyon Farm Association will sell 155 head at public auction, in order to reduce their herds to the present capacity of their Brentwood Farm, upon which their Holstein holdings will be consolidated into one herd.

100 COWS OF MILKING AGE — **30 HEIFERS** BRED AND OPEN — **25 BULLS** MOSTLY READY FOR SERVICE

The female offering constitutes the largest number of yearly record cows and heifers, or such females now on test, and daughters of such dams, ever sold in a public sale in the west. Among the females are

14 DAUGHTERS OF SIR BESSIE FOBES TRITOMIA, who is by Fobes Tritomia Mutual De Kol and out of the world's record Jessie Fobes Bessie Homestead, 34.96 lbs. butter in 7 days as a 4-year-old, 932.74 lbs. butter in one year at mature age, and topped the Detroit National Sale at $4,600.

9 DAUGHTERS OF MUTUAL FOBES LONGFIELD DE KOL, the famous proven bull whose list of tested daughters include several above 30 lbs. butter in 7 days.

4 DAUGHTERS OF SEGIS PONTIAC ACME, whose dam is an 885-lb. 4-year-old daughter of the former world's record cow, Riverside Sadie De Kol Burke.

2 DAUGHTERS OF SIR ORMSBY BURKE SEGIS, sire of the world's record-breaker, Ormsby Segis Marie.

TWO 27-POUND COWS; one made her record as a 4-year-old. **A 24-POUND DAUGHTER** of Sir Korndyke Hengerveld De Kol 31st, with 644.30 lbs. butter in one year as a 4-year-old.

A 23-POUND DAUGHTER of Sir Korndyke Hengerveld De Kol 11th, out of a 26.08-lb. 2-year-old daughter of a 31-lb. cow.

A 24-POUND granddaughter of Colantha Johanna Lad, with 628.60 lbs. butter in one year.

A DAUGHTER of Colantha Johanna Champion, with 568.58 lbs. butter to her credit in 296 days as a 3-year-old.

A 23-POUND COW with 627.50 lbs. butter in one year, again on yearly test with 443.19 lbs. butter to her credit in 198 days.

A 21-POUND 3-YEAR-OLD, with 760.01 lbs. butter in 1 year.

A 19-POUND 3-YEAR-OLD, daughter of Sir Korndyke Pietertje Hartog, with over 760 lbs. butter from over 18,000 lbs. milk in one year.

THESE ARE JUST A SAMPLE of the offering, which includes many more with 7-day records up to over 24 lbs. butter in 7 days and yearly records up to over 700 lbs. butter.

THE SPLENDID FEMALES IN THIS OFFERING ARE MOSTLY BRED TO ONE OR THE OTHER OF THESE FIVE GREAT BULLS

SIR PIETERTJE ORMSBY CANARY, by Sir Pietertje Ormsby Mercedes, out of an 862.88 lb. 3-year-old daughter of a 1009.87 lb. cow.

SIR AAGGIE MEAD, by the 1331-lb. bull Sir Aaggie De Kol Acme, and out of the 1215-lb. strictly official record cow, Aralia De Kol Mead, daughter of the 1,142-lb. former world's record milk cow, Aralia De Kol.

SIR PIETERTJE ORMSBY MERCEDES 43D, by Sir Pietertje Ormsby Mercedes, out of Aaggie Wayne Peep, whose production of 4,992.03 lbs. butter in 5 years is a world's record.

HAZELWOOD DE KOL HENGERVELD, by a proven grandson of Hengerveld De Kol and out of the 83.79-lb. cow Bonnie Lass Pauline, dam of Bonnie Ormsby Lass, Grand Champion cow at P. P. I. E.

NORTH STAR HAPPY BONHEUR, by Johanna Bonheur Champion, out of a 30-lb. dam of notable breeding. Four of the seven nearest dams of this bull have yearly records, including the former world's record 1,247.83-lb. cow, Colantha 4th's Johanna.

THINK! What a wonderful opportunity is here presented to secure highly bred young females of unusually good type, in calf to such bulls as these. Their offspring would do credit to any herd, and please bear in mind that with the exception of fresh cows and open heifers the owners have made an earnest effort to include in the sale list no female that is not believed to be safe in calf.

25 HIGH CLASS BULLS—MOSTLY READY FOR SERVICE

While some of these bulls could profitably be used on registered females, it is a foregone conclusion that most of them will go to head grade dairy herds. This is one of the most attractive bull offerings ever presented to dairymen in California, carrying excellent breeding and most unusual type throughout. And the fact that so many in the list are now ready for service makes the offering doubly attractive.

REMEMBER—That this is the first entire public sale offering of Federal tested and inspected cattle ever offered in California; that every animal is positively guaranteed to be a breeder; every animal with individual Federal tuberculin test certificate and sold subject to retest by the buyer.

IT IS A REAL OPPORTUNITY TO BUY CLEAN, WELL BRED CATTLE!

Owners:

TOYON FARM ASSOCIATION

FARMS: LOS ALTOS AND BRENTWOOD. OFFICES: MILLS BLDG., SAN FRANCISCO

Auctioneers:
COL. BEN. A RHOADES, Los Angeles.
COL. JOHN A. DAVIS, Manteca.

Management
CALIFORNIA BREEDERS' SALES AND PEDIGREE CO.
C. L. HUGHES, Sales Manager, Sacramento, Calif.

JEREY

The Sure Breeders

LOOK at a line of Jerseys and note their *even* conformation. Straight udders, straight teats, good dairy type! Truly, Jerseys are the cows without a fault. 200 years of careful breeding have made them the certain breeders. There are now more bulls owned by cooperative bull clubs than all other breeds combined. Take advantage of the service offered by the Jersey Information Bureau which will tell you about The Profit Breed and of the profits their owners are making with them. Address 324 Y

The American Jersey Cattle Club, 324-A West 23d St., New York

PUREBRED JERSEY BULL

Dropped September 9, 1919
Sire—FINANCIER'S REMUS, 104,413
Dam—ROMULUS LEGACY LORENE, 294,130
Record 457 lbs. butterfat.

T. B. Purvine & Son
Petaluma, California

LEONARD FARM JERSEYS

Bulls for sale from Register of Merit Cows. Write for information.

W. J. HACKETT,
CERES, CALIFORNIA

THE SALE OF PETERPOSTEN'S HOLSTEINS.

(Written for Pacific Rural Press.)

What constitutes a successful sale of purebreds? Isn't it a fair price to a seller, the dispersal of the stock in such a manner as to widen the market for breeders, and the purchase of the stock in such a manner that it will improve other herds and so benefit the whole dairy industry? If success is something like this, then the Peterposten sale at Hughson, October 20, under the management of the Stanislaus County Holstein Breeders' Association, with George A. Gue and Cy. N. Clark as auctioneers, was a pronounced success.

A few well known breeders made purchases, but the bulk of this herd went to new breeders and to dairymen seeking to improve their herds. These men will be back for more.

No sensational prices were secured and no sensational methods to boost prices were attempted. Forty head were sold, ten of them being very young calves, one cow not guaranteed to breed, and another with only two teats. The herd brought $11,940. Eighteen females sold for an average of $455.25.

Jane De Kol of Linwood topped the sale at an even $1,000. She went to the Six Brothers Dairy (Stammerjohans of Turlock). They also bought twin heifers and a heifer calf of Jane's, paying $1,175 for the three. There is a sermon here that should not be overlooked. Here is a cow that for a year has not only paid her board, but, with her milk, has brought her owner a good big profit on his investment. And while doing that, she has also produced $1,175 worth of calves. Suppose she had been a grade! She might have milked just as well—might even have sold for $1,000, but who on earth would have paid $1,175 for three of her calves, none of them over a year old?

[Perhaps there were no sensational prices, but $1,000 for the top and 3 calves for $1,175 are, at times, considered most excellent.—Livestock Ed.]

SAN LUIS OBISPO HOLDS SUCCESSFUL SHOW.

(Written for Pacific Rural Press.)

The Second Annual Livestock Show and Fair held at San Luis Obispo last week was a pronounced success from point of attendance and educational value. Much disappointment was expressed at the failure of two herds of beef cattle to reach the fair.

The California Dairy Council, that has made educational exhibits at 16 fairs this fall, were in evidence with 5 cows, brought up from Los Angeles, to demonstrate the value of the use of purebred sires and cow-testing. Not only were the records in evidence on cards so that even those "who run may read," but twice a day an address was made to assembled dairymen by Sam H. Greene, manager of the California Dairy Council on these subjects.

It is to be noted that this is a fair put on by subscription, with no admission fee charged, and all may go and view and enjoy the sights without cost, the idea being to promote better livestock and agricultural methods in San Luis Obispo county.

NORTHWEST HEREFORD BREEDERS' SALES.

The organization handling the promotion and sale of Herefords in the Pacific Northwest are staging a series of sales at the various livestock shows in Washington, Idaho and Oregon. They will offer a superb lot of cows, bred and open heifers, herd and range bulls. The females and herd bulls are listed especially either for foundation stock in establishing new herds or as additions to herds of other breeders. The range bull offering are a very desirable lot and will sire progeny of improved feeding and killing qualities.

Livestock shows educate those interested in purebred livestock as to what are the correct types and the auctions offer opportunities.

BROWN SWISS CATTLE IN CALIFORNIA.

(Written for Pacific Rural Press.)

In 1914 M. J. Pedrotti was in the dairy business. He is still in the dairy business. He had a good herd then as grade herds go but he wasn't satisfied. He hadn't been satisfied for a long time. Memory carried him back to his boyhood days in his native land and to the Brown Swiss cattle that grazed on the hillside. He had always had a soft spot in his heart for that kind of cattle but he is a practical man. Then along about 1909 the University of Wisconsin put thirty-two cows of all breeds on test and Merney, a Brown Swiss cow showed the greatest net profit.

After all net profit is really what counts in the dairy business so he went back to Wisconsin, visited a number of herds and brought out fourteen of the best he could find. He apparently picked pretty well, for he has a great deal of the same blood that has made the record tests for the breed during the past few years.

For instance he owns a half sister of Betty Lake View who as a two year old made a record of 514 lbs. of butter fat and won grand champion at the National Dairy Show in 1919. Also a bull that is grandson of Swiss Valley Girl 7th, who won grand champion at the National Dairy show in 1918. The eight dams back of his bull, Swiss College Boy bore official records which average 579 lbs.

But to get back to net profit. The man who tries to convince Mr. Pedrotti that any other kind of cattle would show him greater net profit will lay out a full day's work for himself.

MILK PRODUCERS WIN AGAIN.

(Written for Pacific Rural Press.)

In the suit against the Northern California Milk Producers Association, Judge Peter J. Shields has sustained the demurer of the defendants and given the complainant thirty days in which to file an amended com plaint, appeal or quit.

This opinion goes farther than the one which threw the Central Association case out of court. Judge Shields allowed the motion to strike out all reference to a trust or conspiracy saying: "A great industry should not be called upon to defend itself against charges so uncertain and impermanent as the record discloses."

The Judge also maintains that it has not been proved that the Association has capital stock in the sense meant by the law under which the association was organized. He further declares that making dairy products from their own milk is not manufacturing in the strict sense of the word. And finally he declares that the charge that the Association dealt with non-members does not warrant public action as the public is in no way inconvenienced nor its rights transgressed thereby.

THE TOP COW SELLS FOR $1225

(Written for Pacific Rural Press.)

The Kounias Holsteins were dispersed according to program at Modesto Oct. 28. The day was perfect, the attendance good and the selling rapid. About 60 head went through the ring after lunch at the rate of about 20 an hour.

The top cow proved to be Dominita Colantha De Kol 2nd with a fine performance record. Starting with a seven day record of 22.26 pounds butter in her first period she had worked up 28.74 in her third. She went to Gotshall and Magruder for $1225 and will be given a chance to go on up the scale. They bought seven head in all.

Far and away the heaviest buyer was Geo. P. Robinson of Sacramento. He bought 22 head including the second highest cow at $1000 and the herd sire, King Korndyke Aaggie Fayne, at $500.

Sixty-five head were sold, the females averaging about $359 and the bulls $170. The average for the entire herd was about $316.

BETSY LAMB PRILLY

75 Registered Holsteins of Superb Type 75

AT PUBLIC AUCTION

Wednesday, December 1, 1920

WESTLAWN FARMS

Owned by H. E. Vogel

FRESNO, CALIFORNIA

Mr. H. E. Vogel, owner of Westlawn Farms, finds it necessary to reseed most of his alfalfa fields, and for that reason has decided to disperse his entire milking herd of registered Holsteins, selling also a number of bred heifers and a limited number of choice young bulls.

The herd as it stands today is the result of twenty years of constructive breeding, during which production, type, and good health have been maintained in splendid balance in the herd.

In respect to type, this is one of the very greatest herds in the west, and visitors on sale day will find an array of young females with straight top lines, splendid udders, and all around type such as can rarely be found in one herd anywhere.

As to production and pedigree, the catalog pages tell a most interesting and satisfactory story that will interest those who appreciate the better sorts of Holsteins.

This herd has been regularly tuberculin tested for many years, and has always borne an excellent reputation for good health generally. We believe it to be one of the most satisfactory herds in the state in this respect.

Among the females to be sold are

BETSY LAMB PRILLY, 35.03 lbs. butter from 743.3 lbs. milk in 7 days, Grand Champion cow at 1919 San Francisco Livestock Show, and she sells heavy with calf to King Aralia Mead, who is by King Mead of Riverside, out of the 1161.48-lb. cow Margaret Aralia De Kol.

A DAUGHTER OF KING MEAD OF RIVERSIDE, out of a 24-lb. daughter of Ignaro De Kol, that made 762.73 lbs. butter from 18,424.6 lbs. milk in one year.

A 22-POUND GRANDDAUGHTER OF ARALIA DE KOL, with 717.01 lbs. butter from 16,946.8 lbs. milk in one year as a 3-year-old, her dam a 954-lb. yearly record daughter of the 1,085-lb. former world's record milk cow Riverside Sadie De Kol Burke. Her three nearest dams average 1060 lbs. butter in one year.

A 21-POUND DAUGHTER OF PRINCE GELSCHE WALKER, out of De Kol of Valley Mead 3d, 845.11 lbs. butter in one year.

A YEARLING DAUGHTER of the above cow, sired by Sir Aaggie De Kol Mead, who is by Sir Aaggie De Kol Acme and out of Miss Valley Mead De Kol Walker, dam of the $12,000 bull, King Korndyke Pontiac 20th.

A DAUGHTER of Colantha Alcartra Fayne, 33-lb. grandson of Colantha Johanna Lad, with 25.68 lbs. butter from 501.4 lbs. milk in 7 days as a junior 3-year-old.

A 28.36-POUND DAUGHTER of Dutchland Hengerveld Sir Gladi, in calf to a son of Betsy Lamb Prilly.

A 21-POUND GRANDDAUGHTER OF KING OF THE PONTIACS, heavy with calf to King Aralia Mead.

MANY OTHER COWS AND HEIFERS with official records up to over 24 pounds butter in 7 days, some now on yearly test, and all of breeding age in calf to the great Westlawn Farms herd sires.

EVERY ANIMAL POSITIVELY GUARANTEED TO BE A BREEDER; EVERY ANIMAL TUBERCULIN TESTED AND SOLD SUBJECT TO RETEST BY THE BUYER.

CATALOG FREE ON REQUEST.

Auctioneers:
COL. BEN A. RHOADES, Los Angeles
COL. GEO. W. BELL, Tulare.

Management
CALIFORNIA BREEDERS' SALES AND PEDIGREE CO.
C. L. HUGHES, Sales Manager, Sacramento, Calif.

HOLSTEIN BREEDERS' ASS'N STANISLAUS COUNTY
Modesto, Calif.

HOLMES STOCK FARM
Modesto
REGISTERED HOLSTEIN-FRESIANS
Prize-winners at all Shows.
Inspection invited and satisfaction guaranteed. Write for prices.
R. L. HOLMES, Prop.

BRIDGFORD HOLSTEIN CO.
Patterson
THE CHAMPION SHOW HERD
The herd of high records.
STOCK FOR SALE.
Visitors Welcome.

BULLS FOR SALE
From 1000-lb. sire and high-producing dams that carry same blood as Belle Faskie DeKol Witkop, the highest prize winner in the Holstein-Friesian Association of America last year.
FREEMAN (E. E.) & EDWARDS
Modesto, Calif.

HORSES SHOW INCREASED USE.

(Written for Pacific Rural Press.)

The secretary of the Horse Association of America is constantly receiving communication from those interested in the horse business and the manufacture of horse drawn vehicles of a pronounced reversion to the use of the horse in delivery lines, the demand coming from grocery firms to ice companies. This is true after thorough practical demonstrations. No doubt the increased cost of gasoline and the excessive depreciation and wear and tear expense.

Santa Barbara county ranges seem to have plenty of feed to last until December in addition to the green stuff.

60 Registered HOLSTEINS
Fourth Tulare Sale

SALES PAVILION, TULARE, CALIF.

THURSDAY, DECEMBER 2, 1920

There are not many surplus registered Holstein females for sale in the vicinity of Tulare County, and this offering will fill a real need in helping to meet the excellent local demand, as well as to furnish buyers from a distance an opportunity to secure well-bred young breeding females.

Contributors to sale:

GOTSHALL & MAGRUDER, Ripon.
ALEX WHALEY, Tulare.
R. C. STURGEON, Tulare.
H. E. SPIRES, Caruthers.
F. S. BORROR & SON, Tipton.
HARRY HILL & SON, Riverdale
PETER LOWSON, Tulare.
E. D. BARRY, JR., Daggett.

Females of excellent breeding and good type, mostly bred to high record bulls, will feature the sale, including

SPLENDID YEARLY RECORD COWS!
DAUGHTERS OF YEARLY RECORD COWS!
HEIFERS AND COWS IN CALF TO SOME OF CALIFORNIA'S BEST SIRES!

Watch for details of individuals in following issues, but write for catalog now.

Every animal positively guaranteed to be a breeder; every animal over six months old tuberculin tested and sold subject to retest by the buyer.

Auctioneers:
COL. BEN C. RHOADES
COL. GEO. W. BELL

Management
Calif. Breeders' Sales and Pedigree Co.
C. L. Hughes, Sales Mgr., Sacramento, Calif.

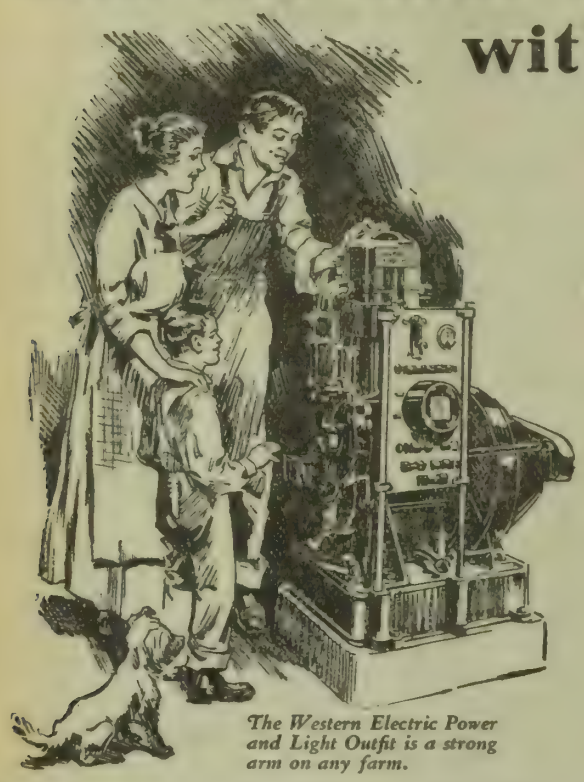
PROGRESS AMONG ASSOCIATED DAIRYMEN.

J. A. Robson, assistant to President Henderson of the Association informs us that all indications point to an early adjustment of differences in the organization with a storm center in Stanislaus county. There has been a meeting called of the members of the Milk Producers' Association of Central California at Modesto, Saturday, November 20th. It is confidently stated that a quorum will be obtained and all doubts dispelled as to how the members of the unit stand with reference to the conduct of business affairs of the organization.

DAIRY AND MILK INSPECTORS' MEETING.

The officers of the California Association of Dairy and Milk Inspectors call attention to the fact that the meeting this year is to be held at Chico, November 8 to 12. This meeting is held in conjunction with the meeting of the League of California Municipalities. An interesting and instructive program has been arranged. A joint meeting for a day has been arranged with the Health Officers' Association. All persons directly concerned with dairy inspection in any of its phases, or persons only indirectly interested in the production and sale of good milk and milk products are invited to be present at this meeting.

"Did the first frost catch you with some corn still out?"



The Western Electric Power and Light Outfit is a strong arm on any farm.

"Harvest is a time of worry and hard work to us farmers — and we don't always get the crops in either. Time is short and help can't be had. Anyway, that was my fix up till this year, when I put in a Western Electric Power and Light Outfit. Of course this outfit doesn't do any field work. But the work it does do saved so much of my time that I was able to get all my corn in before the first frost."

B. B. Griesemer

Editor's Note: *Mr. Griesemer is a farmer near Griesemerville, Berks County, Pa.*

"MAYBE you have done better in getting farmhands to work for you than I could. In recent years I've been a sort of a farmhand and chore boy rolled into one. I was so busy milking cows, grinding feed and pumping water that I couldn't get through all my work in the field.

"Not long ago I began to notice the good work done by an electric farm plant belonging to one of my neighbors. It gave all the light needed, but what I liked even better was that it was a powerful plant, built with the idea of doing a man's work.

The portable motor makes churning easy

An outfit that saves time and labor

"The name of this powerful plant was Western Electric, and because I be ieved it would give me the help I needed, I installed a Western Electric on my farm. The story of what it did may interest you, if you need help too and if you believe an electric outfit should supply power even more than light.

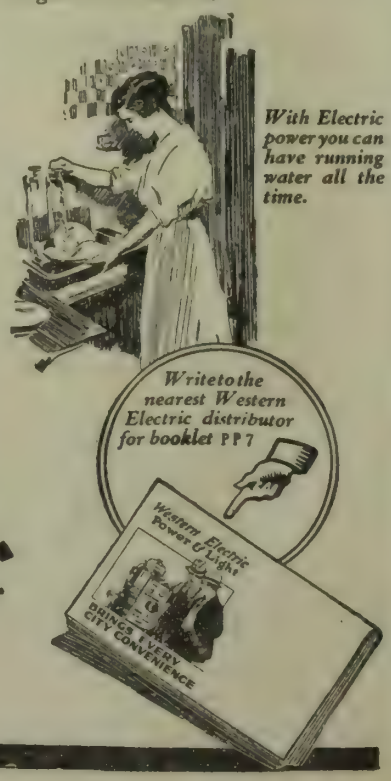
"Western Electric power milks the cows for me. There's half an hour a day saved right there. It also pumps water to my house and barn. Then I have a line shafting belted to the pulley on the engine, and belted to this shafting is a feed-mixer, fanning-mill and grindstone. I tell you, that engine can handle a lot of work. The powerful battery gives all the light needed, and it runs my wife's washing machine and pumps the water.

"So you see, Western Electric power is saving me a lot of time. When harvest came around, I was able to work about three hours more in the field every day. That is why I got all my corn safely in."

The battery lasts longer!

The reason the Western Electric battery lasts so long is that it is charged without stress or strain. As it fills, the rate of flow becomes less very gradually till the current stops by itself. This "tapering charge" means long life to the battery.

For more information about the powerful Western Electric Outfit, send a postcard for booklet PP7. The nearest distributor to you will be glad to furnish it.



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M. A. Moody, Phoenix, Ariz.
Hoeppner Electric & Machine Co., Phoenix, Ariz.
Vyne Brothers Electric Co., Prescott, Ariz.
C. F. Bush, Blythe, Cal.
Sirsen Electric Co., Calexico, Cal.

For territory still available write to Western Electric Co., Los Angeles

Western Electric Power & Light

Makes the Battery last longer

ORMONDALE SHORTHORNS STAND HIGH.

(Written for Pacific Rural Press.)

Located in the Portola Valley, one of the beauty spots of California, is one of the great Shorthorn breeding establishments of the Pacific Coast. A herd of thirty Scotch bred females headed by the noted bulls Golden Goods, Jr., the senior herd sire and Imp. Boquhan Guinea Stamp bull of more recent acquisition.

We judge animals by what they are and what they produce. The senior herd sire, Golden Goods, Jr., is siring winners and therefore he is classed as a great sire. A bull sometimes sires one good animal and from that alone he is placed on the pedestal of fame. How much more secure then in his exalted position is Golden Goods, Jr., when we consider what his daughters have won in the past and are winning again this year. To begin with Little Sweetheart, who was developed and brought out last year by T. S. Glide running true grand championship form from the California State Fair to the Chicago International and this year so far has repeated her performance of last under the same ownership and management, was sired by Golden Goods, Jr. This great cow is in better form than ever and is the dam of a most excellent calf by Diamond Count. In addition to the above Ormondale Maid 2nd, owned by Wm. Bond of Newark and sired by Golden Goods, Jr., was first in class at California State Fair this year but was defeated by Golden Beauty for same place at the Los Angeles Livestock show. This is another daughter by the same sire, owned by the Pacheco Cattle Company of Hollister.

Imp. Boquhan Guinea Stamp, the junior herd sire, was purchased earlier in the year in the east for $12,000. He was 2 years old in January last and is rounding out into a wonderful bull. His calves should be the ultimate in Shorthorn beef form.

Among the young bulls at Ormondale is a son of Hallwood Villager, out of Mayflower 4th, that was first in the junior yearling bull class at California State Fair in 1920

The females in the herd are what they should be in such a herd as they are a smooth, very thickly fleshed lot with lots of bone and substance. Among them is Sweetheart, the dam of Little Sweetheart, Gem's Beauty 2nd, Mayflower 4th and many others of equal note and quality.

This is one of the good herds of Shorthorns in California on both male and female sides and cannot help but continue to produce winners in the future.

CREAMERY OPERATORS' ANNUAL.

Secretary Edw. Hooper, in announcing the dates for the usual yearly gathering, says:

"The California Creamery Operators' Association will hold their annual convention at Hanford, Cal., on November 18, 19 and 20. This will be one of the most important meetings ever held in California. The matters to be presented are of such importance to the members of this organization that your presence is urgently requested. Entertainment for all has been provided for. You certainly will enjoy yourself every minute you are in Hanford.

"Butter-makers cannot afford to miss sending a cube of butter as well as being present themselves. The prizes this year surpass anything you have competed for in the past. If you have not received a program, and desire information concerning this convention, kindly address the secretary, Edw. Hooper, 1810 Polk St., San Francisco. He will be pleased to supply you with all necessary papers."

KERN COUNTY UNION HIGH SCHOOL PIG CLUB SALE.

While not as large an auction as the spring purebred hog sale by the boys, the sale staged by the Boys' Pig Club Saturday was a big success. Col. George Bell of Tulare officiated as auctioneer, assisted by Col. O. S. Grant of Porterville. County Farm

Adviser Myron A. Rice acted as clerk. The boys sold 24 purebred sow pigs, bred sows, bred gilts and open gilts, the total receipts of the sale being $675.

Four gilts divided top honors selling for $100 each. Miss Superba A and Miss Blue Valley W, owned by Allen Watts were bid in by the owner at the above price. Kern Orphan, owned by Everett Mullen, sold to G. B. Davis and Giant Mono, the same owner, went to Wm. Mullen for $100 each.

Most of the pigs sold were Poland Chinas, but one Berkshire sow sold for $75, and was bid in by the owner.—Bakersfield Californian.

TOYON FARM SALE NEXT WEEK.

Many sales of Holstein cattle are booked for California before the holidays, but one of the most important ones is that of Toyon Farm Association, on November 10-11, at Sacramento. No less than 150 head of the beautiful Black and Whites are listed for this sale. The offering will consist largely of producing cows, with a few very choicely bred heifers and young bulls. Surely a great opportunity for some not only better stock but the best stock of its kind in the United States. The sale is managed by the California Breeders' Sales and Pedigree Co.

A SHORTHORN SALE.

(Written for Pacific Rural Press.)

A chance for the admirers of the "reds, whites and roans" to get what they need in the female line. Fifty cows and heifers of excellent type and breeding will pass through the sales ring to new owners when Caledonia Farms at West Sacramento on November 12th make their offering. These cattle have not been pampered, in fact some of them have never tasted grain but show a covering of flesh equal to that of some grain-fed cattle. The herd sires are three of the very highest type and proven prepotency and cows or heifers carrying the service of such bulls as Imp. Caledonia, Gainsford Matchless and Pine Grove King are much increased in value thereby.

The quality and type of the bull offering is right in line with the rest of the list and breeders or range men will find them eminently satisfactory.

W. T. Roberts of Penn Grove is taking over his herd of milking Shorthorns and farm which he has leased for the past few years. He is enlarging his barn and making a number of improvements in his equipment.

The Silent Alamo

—furnishes electric light and power for the country home. Runs without vibration. Write for catalog.

Duro Water Systems

The all-round water system for the household. Furnishes water under pressure at small cost. Send for catalog.

Universal Milking Machines

—enable dairy farmers everywhere to add hours to the day for other duties. Write for catalog.

Pumps

Horizontal pumps, Vertical pumps, Deep-well pumps, Direct-connected Outfits, etc. Write for catalog.

Louden Barn Equipment

Get 25 per cent more milk, save feed, and save labor, by making your cows comfortable with Louden Equipment. Write for catalog.

Gas & Oil Engines

We can furnish you with any kind of an engine in any size you require. Write for catalog.

Name_____

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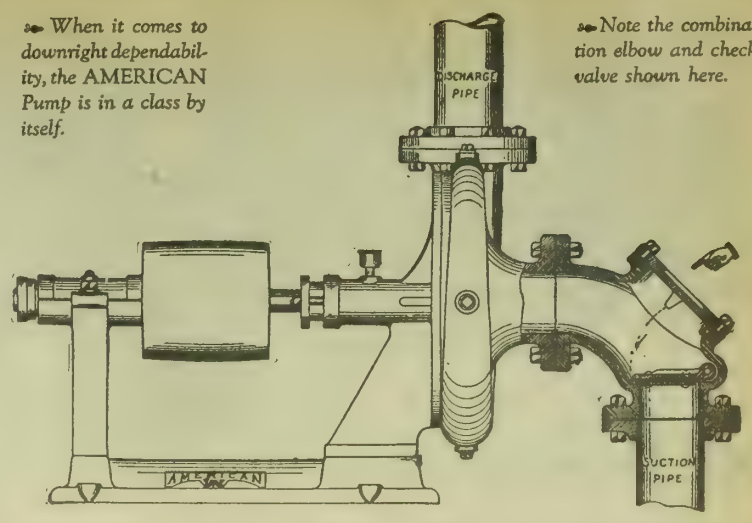
Cut out this ad, sign your name, check the catalogs you want, and mail to us.

When it comes to downright dependability, the AMERICAN Pump is in a class by itself.

Note the combination elbow and check valve shown here.



American Centrifugal Pumps

IT IS A SATISFACTION to buy a pump that is absolutely guaranteed. The AMERICAN is guaranteed to meet all the conditions and to perform the work for which it is sold. The workmanship and finish are guaranteed first class in every respect and fully suitable for the purpose designed. The materials are guaranteed first-class and free from inherent defects.

Send for Catalog

If your water problem can be solved with any pump it can be solved with an AMERICAN. It gets the *most* water at the *least* cost and with the *least* trouble. Put your irrigation problems up to irrigation specialists.

California Hydraulic Engineering & Supply Co.

68 Fremont Street San Francisco

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DO YOUR PLOWING

Cultivating, Discing, Harrowing and All Field and Orchard Work With Your

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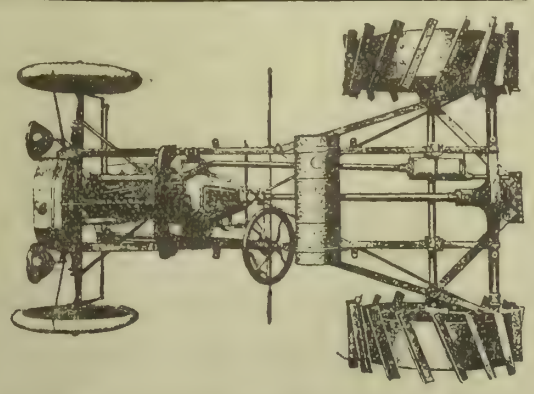

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These goods have been slightly used, but are the equivalent of new, and are guaranteed perfect. Don't forget this is Government stock, and is far superior to anything made for Commercial purposes.

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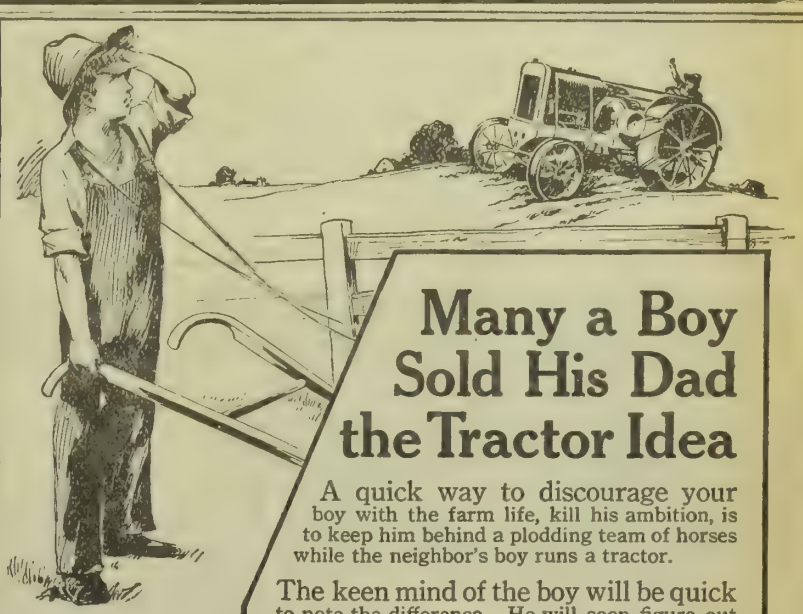

Many a Boy Sold His Dad the Tractor Idea

A quick way to discourage your boy with the farm life, kill his ambition, is to keep him behind a plodding team of horses while the neighbor's boy runs a tractor.

The keen mind of the boy will be quick to note the difference. He will soon figure out the advantages of a tractor, and he will either sell you the idea or lay down on the job sooner or later.

Many Boys are Operating Hart-Parr Tractors

The most enthusiastic letters we get are from the young fellows who are operating the tractor for Dad. The Hart-Parr 30 is a tractor that appeals to the boy because it is so simple for him to understand. The working parts are easy to get at. It doesn't take him long to feel that he's a "full-fledged" mechanic.

You can understand this better when you go over the Hart-Parr 30 catalog and note the simple and accessible construction of this tractor. Write for a copy today.

Many of the old Hart-Parrs that plowed the virgin prairies of the Northwest are still in use today. The great grand-daddy of all Tractors was old Hart-Parr No. 1, built in 1901.

HART-PARR COMPANY

Founders of the Tractor Industry

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A POWERFUL STURDY THREE-PLOW KEROSENE TRACTOR

HART-PARR 30

BUILT BY THE FOUNDERS OF TRACTOR INDUSTRY

Off Summer Pastures

Your animals are coming off summer pastures and going on dry feed. It's a big change. Out in the succulent pastures, Nature supplies the tonics and laxatives to keep animals in condition.

—But unless you supply these tonics and laxatives to your stock on dry feed, you are not going to get full returns from your hay, grain and fodder. Besides, your animals are apt to get "off feed" and out of fix.

Dr. Hess Stock Tonic

Supplies the Tonics—Laxatives—Diuretics

It keeps animals free from worms.
It keeps their bowels open and regular.
It keeps the appetite and digestion good.
It conditions cows for calving.
It helps to keep up the milk flow.
It keeps feeding cattle right up on their appetite.
It keeps hogs healthy, thrifty, free from worms.
It means health and thrift for all animals.

Always buy Dr. Hess Stock Tonic according to the size of your herd. Tell your dealer how many animals you have. He has a package to suit. Good results guaranteed.

Why Pay the Peddler Twice My Price?
25 lb. Pail, $3.50 100 lb. Drum, $12.00
Smaller packages in proportion.

DR. HESS & CLARK Ashland, Ohio

Dr. Hess Poultry Pan-a-ce-a will start your moulted hens to laying.

Dr. Hess Instant Louse Killer Kills Lice

MORE PORK IN LESS TIME

Duroc-Jersey hogs have a tendency to put on great amounts of pork at an early age. They are easy-feeding animals, and raise large families. These hogs were introduced less than 50 years ago, and yet in 1918, 51% of all the hogs marketed in the country were "Duroc-Jerseys." They are uniformly red in color. Increase your profits by raising Duroc-Jersey hogs.

Write for "DUROC-JERSEY HOGS ARE PROLIFIC AND PROFITABLE"—sent free to hog-raisers by the largest swine record association in the world. Over 12,000 members.

The National Duroc-Jersey Record Association. Dept. 120 Peoria, Ill.

Duroc-Jersey Hogs for Sale

BOARS AND GILTS
BRED SOWS
SOWS WITH LITTERS

DIABLO STOCK FARM,
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Danville, Cal.
G. W. EMMONS, Owner,
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They are the large type and the best blood strains to be had anywhere.

HERD BOARS AND SOME OF THE SOWS

Lucy Orion's Model	Prize of Tulare Belle	Twin Oaks Attraction
California's Defender	Pathfinder's Queen	Lady Defendress 70th
Diablo Orion Model	Great Wonder I Am Gano	and 50 others.
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WEANLINGS—$15.00 EACH AT RANCH — A large number always on hand to choose from. Crates $2.50 each, refunded when returned prepaid in good condition.
MAIL ORDERS SOLICITED. SATISFACTION OR MONEY BACK.

WE WANT SIXTY SOWS

Berkshire type, not registered and not necessarily purebred
If you have one or sixty, write
BALFOUR, GUTHRIE INVESTMENT CO.
Attention of Gladstone Reed. BRENTWOOD, CAL.

Future of the Milk Goat in California

(Written for Pacific Rural Press by Albert E. Etter.)

In a recent issue of the Pacific Rural Press I read some lines on the milk goat, prefaced by comments by the Editor. In "butting in" on this subject, I can do so with a lot of experience to back up my comments. When I was two years and a half old I began backing up and was butted into a corner of the corral by an old nanny by the gentle name of Lily. This rude initiation left an indelible impress on my mind. Now that I am living on a milk-goat ranch, I am prepared to speak with just as intimate contact with the subject as I had as a babe in the old corral in Eldorado county.

Flavor Good.

Does goat's milk have a rank, disagreeable odor and taste? I say: no, not naturally. Does ordinary goat's milk have an off taste them? I say, yes, if it is contaminated by careless milking, but not if properly drawn.

As far as the goat herself is concerned, she has no more of a characteristic odor than a cow has, but there are personal preferences of course, just as explorer Stanley's body servant in central Africa told him when he changed sides with Stanley on a hot day's march. When questioned why, he remarked, "Because I don't like the stink of a white man." The cow's big brother always smells bully, and the sire of the milk-goat can readily be located in the dark. But this odor does not extend to the gentler sex.

There is a source of contamination from the brushings of the coat of both the cow and the goat—that is, particles of the internal excretions and the flaking off of the outer skin. Some persons may prefer that of the cow to the goat, and others may not notice anything disagreeable in either.

But as regards the milk as having a natural odor, it is amply answered by the fact that the flesh of the animal has no goaty odor and flavor if the skin is carefully removed and the flesh not contaminated by careless contact with the outside skin and hair. If goat meat from a female goat or a wether has any off taste, it is the fault of the butcher, not the goat. I say this, backed up by years of experience.

But can goat's milk be drawn without disagreeable contamination? Certainly. When one uses a Mason fruit jar, and it is convenient to milk in a jar where one milks with one hand only, there is practically no contamination. Here, where an 8-year-old boy milks thirty goats, he goes at it with more vigor than care, and with both hands, using a 5-quart pail. Even so, this milk makes a butter free of any odor whatever. I presume in cheese making one would have to be somewhat more careful.

Butter Also.

In regard to making butter from goat's milk it is not only possible, but eminently practical. The cream must be separated with a cream separator as in pans it is only about 65 per cent efficient. The butter, though naturally almost white, can easily be colored, just as cow's butter when off color. It is slightly less firm than ordinary cow's butter, but firm enough to meet and requirement under ordinary temperatures. The grain is naturally finer and more easily digestible, and the flavor unsurpassed. The keeping quality of goat's butter, so far as we have been able to determine, is remarkable.

While I must confess I would not know a vitamine from a tubercular germ if I caught them in swimming together, I simply take the scientists statement for it; that when you pasteurize milk you destroy both the vitamines we want and the tubercular germs we don't want.

Since nearly all butter nowadays made from cows is pasteurized to destroy tubercular germs, cow's butter

NOW READY TO SHIP

DRIED BEET PULP

Palatable succulent vegetable feed for dairy cows, beef cattle, sheep and hogs

We can take care of orders from any part of the country

The Larrowe Milling Company
Detroit, Mich. Los Angeles, Calif.

HAVE YOU SEEN THE
Grand Champion Duroc State Fair 1920
HERD SIRE **CHOICE WONDER III** { Mahaska Wonder { Great Wonder / Grand Lady 20th ; Grand Lady 72nd { Grand Model / Rose
Write for yours from the most select herd in California.
Littermate (gilt) topped Ed Kern's Last Sale at $5600
V. F. DOLCINI, JUNE ACRES STOCK FARM, DAVIS, CALIF.

WINSOR RANCH DUROCS

Young boars ready for service; also fall gilts by WINSOR'S GIANT ORION and GREAT SENSATION 3RD. Priced to move.
MORRIS C. ALLEN, Mgr. CARL WOOSLEY, Hog Dept.
Bonita, Calif.

ROYAL I AM

JUNIOR AND RESERVE GRAND CHAMPION
DUROC-JERSEY BOAR
LOS ANGELES LIVESTOCK SHOW
This great young boar is a son of GREAT I AM, Nebraska Grand Champion 1920. A few fall pigs by ROYAL I AM for sale.
GRAHAM-HENSHAW, Lancaster, Calif.

DIGESTER TANKAGE

Send for Sensible Folder on Feeding Hogs
WESTERN MEAT COMPANY
Animal Food Dept. 704 Townsend St., San Francisco

does not contain the vitamines the nutrition experts tell us are so essential to our well being.

Goats Healthy.

The mere fact alone, that the goat is quite free of tuberculosis, and consequently goat butter always will be unpasteurized should appeal to all. On the other hand, the tubercular situation among our cows is one of the most stupendous problems confronting our dairy interests today. To say nothing of the yearly loss in dollars to the dairymen, the more interesting question to answer is: Will we ever be able to eradicate tuberculosis from our cattle so that they can stand the pressure of competition?

In health, the cow has the keenest kind of a rival in the milk goat from an economic producing standpoint. If she must meet her rival burdened by disease that cannot be eradicated, or at least held in better control than has been attained in the past, poor bossy might as well kiss herself goodbye and prepare for the inevitable. There is no disputing the fact that the little nanny goat can successfully compete in production with the cow. She can take a given amount of feed and in contest produce more pounds of milk, butter and cheese than can the cow. When the cow has a rival like that, she has no business to get sick, because economy will batter down any sympathy she may expect through prejudice. The most economic milk-producing machine must eventually win out.

But, can the goat go into the verdant pastures of the cow and make milk there too? Isn't she supposed to eat brush, weeds, rags and the lables off of tin cans, etc? 'Tis true the goat will eat much that the cow will not eat; but the goat we must reckon with in the future as a rival in our dairies is not to be judged by the town goat, who may have a perverted taste like the town cow, and some other things that live in town. The goat, to give her two, four or six quarts of milk per day, must have the rich herbage to produce milk from. But this is not to say she will not also utilize some roughage in certain plants and brush the cow would disdain to consume. A goat, like a cow, is a milk machine, and if there is nothing going in there will be precious little more coming out, that is sure.

As a matter of fact, the goat has everything in her favor in economic production. She cannot only use all that our cows today consume throughout our broad state, but she is eminently and peculiarly adapted to develop and use sources of feed in milk production that the cow never could develop, or use it if it were developed. There always will be a demand in the world for all the dairy products we can produce, and it is idle to say that in a great state like California that with our matchless climate, only their rich lowlands are to be utilized in dairy production, because the cow can't utilize the hills. I think I am entirely within reason, when I say that today there is in our state 100 per cent more raw material the goat could convert into dairy products than what the cow could utilize. And right here allow me to say: I am not theorizing, I am in the game of doing the very things I am preaching of every day in the year, and I have been doing it for the last twenty years.

Range Far.

The very fact that a goat can range four times as wide for her daily sustenance as the more lazy cow, means that she can utilize immense tracts of territory not available to her rival. Again she can utilize the very things this territory is capable of producing in much greater abundance than any herbage the cow would care to use.

As an instance, take our northwestern counties, with all their timber and cut over timbered ridges. Thousands of acres of it, indeed most of it will grow a thrifty black locust tree, and almost any of it would grow an abundance of Spanish broom. Both of these make excellent goat forage to produce milk. The locust is a most valuable hardwood for manufacturing purposes and as post material it has few equals. Above all else, in utilizing the locust as a forage for goats, we also are able to grow a trunk as rapidly as if the tree was not pruned at all. Positive fact here demonstrates not only the practicability of using the locust as forage, but that it makes a very fine quality of butter, second to none.

I think the same could be said of the Spanish broom, though it has not been demonstrated. Both of these would be great sources of honey also, and literally cause the land to flow with the Biblical attributes of a desirable country.

I may be a long way ahead of my time in even dreaming of such a transformation—as far ahead as when the time when women and shildren will be the great milking force, with the goat as the victim, but the time is coming. And when it does arrive, the country and the people will be the better off for it. If this was a vision hatched out over night, it might be treated as a dream, but when it is based upon years of practical work that is proving itself as it goes along, it is worthy of serious thought.

POLAND CHINA BREEDERS' ASSN. PLAN FOR SALE.

The Fresno County Poland China Breeders' Association has made tentative plans to hold a sale at Fresno, January 19, 1921. Alfred Buckland will have charge of selecting the stock and making sale arrangements. They plan to sell from 30 to 35 head of bred sows and gilts.

JAVA COCOANUT CAKE MEAL.
Made where the cocoanuts grow.
Sun-dried—not smoky or rancid.
Carried in modern ventilated steamers. Shipped in solid cakes.
Inspected and ground in San Francisco

Has your past experience in feeding cocoanut cake meal been satisfactory?

We particularly request a trial of our meal by those who in the past have been disappointed.

Your feed dealer may not have our brand in stock but can obtain a large or small lot promptly.

Trade **INSULINDE** Mark

Look for it on the sacks

Java Cocoanut Oil Co., Ltd.
Dept. 10
16 California St., San Francisco
Largest manufacturers cocoanut products in the world.

Llano Vista Ranch Grand Champion Hampshires

JUDITH—No. 126448
Sire: Calif. Lad, 45021. Dam: Mabel, 113078.

This pioneer herd has brought to light the winning blood lines in our big shows and is responsible for the growing interest in the breed. We have furnished foundation stock for many new herds throughout the State. Bred sows, service boars and pigs for sale.

F. A. LANGDON, Mgr.
Perris, Calif.

Livestock and Dairy Notes

SALE DATES.

Nov. 10-11—Toyon Farm Assn., Holsteins, Sacramento

Nov. 12 — Caledonia Farms, West Sacramento; Shorthorns.

Nov. 15th—W. Marshall & Son, Santa Rosa, Poland Chinas.

Dec. 1—H. E. Vogel, Holsteins, Fresno.

Nov. 18 — Finnell Ranch Company, Herefords, Sacramento.

Dec. 2—Consignment Sale, Holsteins, Tulare.

Dec. 16-17—Consignment Sale. Holsteins, Sacramento.

Jan. 19—Stanislaus Co., Duroc Ass'n, Durocs, Modesto.

The Dairy

The H. E. Vogel dispersal sale of Holsteins is definitely fixed for Dec. 1, at Fresno. He will sell every female in milk or bred—74 head in all.

R. L. Holmes, of Modesto, brought home from the Stalder sale a daughter of It and a daughter of King Pontiac Segis 3rd. Both are bred to the Ormsby bull that sold for $3500.00.

Members of the Marin County Farm Bureau, who are interested in dairying are endeavoring to have a cow testing association organized. Heretofore those wanting tests made have joined the Petaluma Assocation.

That Tulare live stock is attracting attention is proven by the purchase of four registered Jersey heifers from A. A. Jenkins, Tulare Cattle breeder, by Warren C. Days, secretary of the San Luis Obispo County Livestock Association.

The Lewis Company of San Jose has sold to Joe Larenzo of Santa Clara County two high class registered Holstein bulls for use on his large dairy which he is establishing on the Ogier Ranch. Mr. Larenzo has many fine animals, having already one hundred milking cows.

E. E. Greenough of Merced, has sold a registered Jersey bull calf to J. R. Denman of Petaluma. At the Medera County Fair Greenough's Jerseys made a killing. He captured first, senior and grand champion bull, junior reserve, senior reserve and grand champion cow beside a number of other prizes.

A recent bulletin from the University of California press entitled, "Heavy vs. Light Grain Feeding for Dairy Cows," and written by F. W. Woll, E. C. Voorhies and C. V. Castle, come to hand with much data on the subject and will undoubtedly prove of great value to the dairymen of the state.

Charles H. Geer, former president of the Milk Producers' Association of Central California and one of the most prominent dairymen of the state, has resigned as director of the above association, according to a recent announcement of the officials. Mr. Geer's services have been of untold value in the promotion of dairy interests and his retirement is much regretted.

Two auctions of importance are offerings of Holsteins on the first two days of December when H. E. Vogel of Westlawn Farm, Fresno, offers 75 head and the Fourth Consignment Sale at Tulare. At the latter sale offerings from some of the best herds in California are listed. Surely a coming opportunity to secure some of the best of the breed.

Robt. Trumbel is building the first unit of a modern cow barn on his farm at Novato. This unit will have room for thirty cows. Since he bought the home farm of the old F. D. DeLong eleven hundred acre ranch, he has been constantly adding to purebred Ayrshires that were on the place until he has the foundation for a good herd.

Jean Marigold of St. Mawes owned and developed by Robert Burkhart of Albany, Oregon, has completed a record of 10,926.5 pounuds of milk, and 666.24 pounds of fat testing 6.10 per cent at the age of 13 years and 4 months. This gives Oregon the world's Jersey record in class 8a, cows above 12 years of age. Oregon now holds six world's records out of a possible nine Jersey classes.

One of the displays at the recent San Luis Obispo Fair that attracted probably more attention than many others was that of Warren C. Day from the Ranchita Lilydale. Mr. Day has a number of Jersey heifers and has been devoting some time to pure bred stock. The fact that he is raising this stock on a five-acre place and producing results is interesting to stockmen generally.

Prof. L. W. Wing, who recently became active manager of the Elkhorn Ayrshire Farm at Watsonville owned by J. Henry Meyer of San Francisco, says they have just completed a modern dairy barn of cement and corrigated iron construction with electric lights, sewerage and running water. It is of 50 cow capacity with calf pens and many other convenient details. Prof. Wing is very much pleased with the outlook for the future of this Ayrshire farm with the new equipment and excellent quality of the cattle in the herd. All state records for the breed are now held by cows in this herd except those of that great 4-year-old Willowmoor Vesta. We can look forward with confidence to many new records in both production on the show circuit under the new management.

Swine and Swinemen

The Duroc-Jersey Breeders Ass'n. of Stanislaus County announce a sale at Modesto of 30 bred sows and gilts and claim the date of January 19th, 1921.

At the recent Pork Day at Hanford, where 15 carloads of hogs were auctioned at top prices, 12 buyers from various packing houses were present.

Duroc-Jersey sales reported by the Diablo Stock Farm of Danville include one Duroc-Jersey boar to James Mc Jever, Truckee; one boar to L. M. Mix, Vacaville; one boar to V. Nagranti, Cayucos.

The California Berkshires have made another invasion of the East. Castleview Ranch of Santa Rosa on Oct. 27th shipped a boar and two sows out of Achiever to Chas L. Schroeder of Home City, Kansas. Castleview Berkshires are good enough to go anywhere.

Success of the Farm Bureau market hog auctions at Davis and Durham recently has encouraged hog raisers to arrange another series for this month. The dates are as follows: Sacramento, Nov. 16th, Woodland, Nov. 17th and Willows, Nov. 18th. Swine raisers in these localities should list their fat hogs with the officers of the Farm Bureau as early as possible.

Poland China breeders should not forget the sale of Big Type swine of this breed at Santa Rosa next week. In this sale is the great sow Polly a full sister to the Gatewood top sow. Four litter sisters of Headlight, the herd sire, farrowed 40 pigs as gilts. There are ten thousand less brood sows in California than there were in April 1919. It looks like a good time to buy hogs.

Grand champion boars and sows at the National Swine Show, Des Moines, Iowa, are as follows: Duroc Jerseys—boar Pathmaker, J. C. Droz, Fairfield, Ia.; sow, My Lady Friend, Ira Jackson, Tippecanoe City, Ohio. Poland Chinas—boar Liberator Leader, Glover & Winn, Grandview, Mo.; sow, Giant Maid, T. J. Conrad, Melbourne, Ia. Berkshires—boar Epochal Prime Minister, Gossard Breeding Estates; sow Mt. Brilliant Queen 5th, Mt. Brilliant Farm. Hampshires; boar, Royal Cherokee, Hanna & Sons, Harvey, Ia.; sow, Cozy Lookout 1st, F. W. Timmerman, West Liberty, Ia.

Fine weather, following the storms of the mid-month, allow stockmen to rapidly bring out the rest of their herds, snow-bound during the recent heavy storm in the high Sierras. Many cattle were without feed for a week, but being in fine condition no losses are reported.

THOS. HARRISON DISPERSAL SALE.

California is about to lose one of her principal and leading Milking Shorthorn herds. On Saturday, November 20th, at the Pacific International Livestock Exposition, 31 head of prize-winning Milking Shorthorns will be offered at public sale. There are many producing cows in the list with records behind them and also many that are on test. This is the

Second Public Sale

Caledonia Farms Shorthorns

West Sacramento, Cal., Friday, November 12.

60 Scotch and Scotch Topped Shorthorns

IMP. CALEDONIA

GAINFORD MATCHLESS

THE OFFERING

30 Cows Fifteen of them will sell with calves at foot, and a large proportion of the balance are heavy in calf. Practically all the calves and services are by Imp. Caledonia, Gainford Matchless and Pine Grove King. The females are by such noted sires as Glenbrook Marquis, Pine Grove King, Imp. Champion of Scotland, Fond Lavender, College Count, Whitehall of Orange, Lavender Viscount and others. Few offerings have included more of the blood of Whitehall Sultan.

20 Heifers The heifers, most of which are well along to their first service, constitute a wealth of desirable herd material. In breeding they carry many of the best blood lines and individually they are correct type. These young things can be taken into any herd with full assurance that they will grow into most profitable investments.

10 Bulls Among the ten young bulls are several of excellent Scotch breeding while the others are well bred American sorts. Men in need of moderate priced herd bulls can buy here to advantage and the man who is interested in the better sort of range bulls cannot afford to overlook this sale. The bulls are well grown and of the type that will surely please. They will not be presented in extreme high condition.

GET THIS VALUABLE BLOOD!

Think what it means to have an opportunity to add such notable breeding to your herd. No better breeding is available to western buyers.

Imp. CALEDONIA is not only one of the richest bred and most desirable types that have been brought to America in recent years, but he is proving to be a sire of rare ability. Calves by him in Eastern sales have averaged as high as $1500, and a number have stood well in the larger shows. Caledonia was added to this herd at a very long price and it is certain that his influence on Western Shorthorns will be great. Sons and daughters will come to have high values.

GAINFORD MATCHLESS is a son of the noted sire Gainford Marquis—winner of the get of sire class at the Canadian National for the last ten years—and out of a richly bred dam. He was first as a senior yearling at the International and was grand champion at the San Francisco show in 1919. He is a bull of commanding scale, extremely thick fleshed and boasts of rare quality. His worth is unquestioned.

PINE GROVE KING, son of King Cumberland, has by sheer ability been rated as one of the most impressive bulls owned in the West. Calves by Pine Grove King will be found in many of the best herds in California and in every case they are conceded to be right in every way. Pine Grove King blood is worth as much as any available in the entire West.

Every animal is guaranteed to be a breeder. Every animal over six months old sells tuberculin tested.

Auctioneers:

COL. BEN A. RHOADES, Los Angeles

COL. JOHN A. DAVIS, Manteca.

Catalog will be mailed on request to the management.

California Breeders' Sales & Pedigree Co.

C. L. Hughes, Sales Manager, Sacramento, Cal.

noted Harrison herd of Santa Rosa, which Mr. Harrison has taken great pride in selecting and breeding. Those interested in this line of stock should write for catalogue and if they cannot attend send in bids by wire or mail.

LIVESTOCK DIRECTORY.

Rate, 4c. per word. Cash must accompany all orders.

SWINE.

Duroc-Jerseys.

DUROCS—BIG-TYPE—HIGHEST QUALITY—popular blood lines. Herd headed by Johnson's Defender, Jr., and Western Pathfinder Bred sows and gilts and young boars for sale at moderate prices. Greenwood Farm, Witherow & Stafford, Live Oak, Cal.

BRED SOWS AND GILTS and young stock. Pathfinder and Great Wonder I Am breeding. Monthly payments, if you wish. Derryfield Farm, Capital National Bank Bldg., Sacramento.

REGISTERED DUROC yearling boar and seven August weanling pigs for sale. H. I. Wilson, Route K, Box 163 A, Fresno Ten miles west between Belmont and McKinley avenues.

BOYANNA BIG-TYPE DUROCS—Breeding stock; priced right for sale. Inquiries invited. Satisfaction guaranteed. J. Boyd Harrold, Dixon, Cal

BIG-TYPE DUROCS—Herd headed by California Orion King. Am offering excellent young boars at right prices. Inquiries invited. Harvey M. Berglund, Dixon, Calif.

LAMB'S DUROCS—Seven good sows with litters, weaned pigs and choice open gilts ready to breed Priced right to close out the herd. Elmer Lamb Ceres, Calif.

GOOD SPRING AND FALL GILTS—Strong in Pathfinder blood, sired by Pathfinder Wonder. Hamlin Farm, Box 697, Sacramento.

WINSOR RANCH DUROCS—Young boars and some top gilts bred to WINSOR'S GIANT ORION—Morris C Allen, Mgr., Bonita, Cal.

REGISTERED DUROCS — Choice gilts and weanlings, either sex. Breeding and satisfaction guaranteed. H. E. Boudier, Napa.

BIG-TYPE DUROCS — Gilts and boars of Great Orion Sensation breeding. Falfadale Farm, Perris, Cal.

FOR THE BEST in Durocs, write June Acres Stock Farm, Davis, Cal.

JACK LONDON RANCH, Glen Ellen.—Exceptionally good weanlings. Bred sows and gilts. One good yearling boar and one fall boar. Prices reasonable.

Poland-Chinas.

AN OCTOBER YEARLING BOAR out of the 1920 Grand Champion Sow. Two March Boars, one by Long Big Bone Jr., out of the 1919 Reserve Grand Champion Sow. He headed the 3rd prize litter Sacramento this year. One by The Westerner, out of the 3rd prize Junior Yearling Sow this year. These are tops, priced low, to move them. Alex D. McCarty, Route C, Box 338, Modesto, Cal.

POLAND CHINAS—Some promising young boars; also 2 yearling boars, 300 lbs. Big-bone type, excellent breeding and 2 bred sows, farrow in November. Pedigree on application. Edward A. Hall, Rt. 1, Box 39, Watsonville, Cal.

ELDERSLEY AND SHADY BROOK Farms big-type Poland-Chinas that make money for the Feeder, the Farmer and the Breeder. Prices reasonable. J. H. Ware, Brown's Valley, Calif.

THE PACIFIC HERD of Polands—I Am King, herd sire. Weanlings for sale. Satisfaction guaranteed. Nettie E. Andrews, Modesto, Cal.

TOHOQUA POLAND-CHINAS—A good tried boar and some choice young breeding stock for sale. Ferguson & McKaig, Orland, Cal.

WAUKEEN HERD POLAND-CHINAS — Home of King's Big Bone Leader. A few service boars for sale. Les McCracken, Ripon.

LAKESIDE STOCK FARM—Large, smooth and big-boned Poland-Chinas. Geo. V. Beckman & Sons, Lodi, California.

POLAND-CHINAS—Strictly large type. J. F. Lehman, Lodi, Cal

REGISTERED POLAND-CHINA SWINE — Prize-winners. Finest stock in the State. Bassett Bros., Hanford, California.

REG. BIG-TYPE POLAND-CHINAS—Service boars; weanling pigs. J. H. Cook, R. 4, Chico.

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Orland, Calif.
HERD BOARS—STAR LEADER, Junior and Reserve Grand Champion of the World. The Grand Champion carload of barrows, over all breeds, at the San Francisco Live Stock Show, was sired by a son of Star Leader, NATOMAS BARON DUKE, grand champion of California. For sale, bred gilts, open gilts, young boars and weanling pigs. Write for booklet, prices and list of sows.

BRED GILTS.
Sired by Mayfield Rookwood 2d, a Grand Champion Boar, out of 600-700 lb. sows, and actually bred to "ACHIEVER," our English Blood Boar, the Sire that puts more bone and pork-making qualities into his pigs.
Priced reasonably and absolutely guaranteed.
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The only herd of English Berkshires in the West. Bigger, better, stronger litters. More pounds of meat for less feed. Weanling pig, $35 Satisfaction guaranteed or money refunded at once. Sandercock Land Co., 703 Market St., S. F. In charge Natomas Land Sales.

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Registered Holstein Cattle
Bulls, Heifers and Calves
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Young bull, sired by King Abbekirk Johanna 24th, and out of a dam making 24 lbs. as a 4-year-old

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PUREBRED JERSEYS from Register-of-Merit dams. Purvine & Son, Petaluma.

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ALAMO HERD REGISTERED HEREFORDS (founded by Governor Sparks). Herd and range bulls. Reasonable prices. W. D. Duke, Gazelle Siskiyou county California.

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Seventeen mature cows. Most of them have records and now on Official Test.

Ten bred heifers, four bulls and five calves.

Most of the females are bred to Count Tickford, winner of five Junior Championships. He is included in the sale.

The Herd will be exhibited at the PACIFIC INTERNATIONAL LIVESTOCK EXPOSITION, and will be sold at Public Auction at the Union Stockyards, at North Portland on

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Pure bred Ayrshires for sale at reasonable prices. Our herd is founded on imported Canadian stock.

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F. A. MECHAM ESTATE, Petaluma, Cal—Breeders and importers of Shropshire, Rambouillets and American Merinos, both sexes. Also Red Polled cattle. Take electric car at Petaluma or Santa Rosa for Live Oak Ranch.

FOR SALE—Rambouillet rams and ewes—purebred; the very highest grade of large smooth body; heavy shearers; the wool and mutton type. Immediate delivery of individual or carload lots. You can find none better or of higher grade. Address Glenn, Cal. Location, 8 miles south Hamilton City, 1 mile west Ordbend. Windell Orchards Co.

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J. R. BLOOM, Dixon, Calif.—Twenty-five years breeder of purebred Shropshire sheep. Rams for sale. Single or carload lots.

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MISCELLANEOUS.

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SHORTHORN CATTLE, SHROPSHIRE Sheep , Berkshire Hogs, Shetland Ponies, Bronze Turkeys, White Plymouth Rocks. Stock for sale at all times. W. B. Dwyer and W. S. Guilford, Box P, Butte City, Glenn county, California.

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REGISTERED BROWN SWISS, carrying best blood of the breed. M. J. Pedrotti, San Rafael, Calif.

Livestock Queries and Replies

Cocoanut Meal.—I will thank you for some advice in regard to feed for dairy cows, particularly as to the comparative value of cocoanut cake meal. It seems to me that this article is the cheapest rich concentrate on the market at present, and to me it seems very desirable unless there is some peculiar reason why it should not be fed in large quantities.—Reader, Melrose, Alameda County.

Cocoanut cake meal is a rich and wholesome material for feeding dairy cattle if it is sound and sweet, but like all concentrated feed stuff there is a limit to the amount that may be safely fed. The nutritive values and physical properties of the ingredients fed in combination with it must also be taken into consideration. We are informed that a number of dairymen are successfully and, in their opinion, economically feeding their milking cows with a mixture composed of one-third each cocoanut cake meal, ground barley, and dried beet pulp. The table of comparative values stated hereunder shows the approximate value of cocoanut cake meal as compared with some other concentrates that are commonly fed. These figures are obtained by averaging a number of tests. Different lots of these feeds often vary very much. In estimating these values the protein and fat contents are converted to their relatively higher value per unit or quantity as compared to that of carbohydrates. according to the following: one pound of protein as having the feeding value of 3 lbs. of carbohydrates and 1 lb. of fat that of 2 lbs. of carbohydrates.

Approximate Feeding Values (averages of numerous tests)—Cocoanut Cake Meal, 119.8 units; Feed Barley, 107.7 units; Feed Corn Meal, 103.9 units; Mill Run (good quality), 113.2 units; Bran (average quality) 93.8 units.

Dairy Production.—Which is the banner dairy county of California? Which are the highest counties in dairy production and in respective order? What is done with the milk? Is it manufactured or is it sold whole?—C. A. D., Salida.

Stanislaus is credited with being the highest in dairy production, Humboldt second, with Imperial third and Tulare, Merced and Fresno approximately in the order named. This placing is based, not on milk production, but on the amount of butter and cheese manufactured in these various localities. The figures on the butter and cheese production can be obtained by writing to the State Department of Agriculture at Sacramento for a copy of the 12th Biennial Report of the State Dairy Bureau. In the six counties mentioned the milk is nearly all separated on the farms and the cream collected by the cream trucks sent out by the various factories.—Livestock Editor.

Grain for Dairy Cows.—I am using beet pulp as a base for grain feed. Can I add bran and ground barley and get good results? Alfalfa hay is fed for roughage. How much grain should be fed, using amount of milk produced as a base of determination?—W. B. C., Inglewood; N. S., Turlock.

We infer you are using dried beet pulp. This combined with bran or cocoanut meal and ground barley in the proportions of 2:1:1 by weight and fed at the rate of 1 pound for each 5 pounds of milk produced, should give excellent results. At present San Francisco prices we would advise the use of cocoanut meal in place of the bran. We will say in conclusion that the grain feed may be increased up to 1 pound for each 4 pounds of milk produced, especially if the yield of butter fat exceeds 1 pound per day.—Livestock Editor.

Value of Skim Milk.—Will you please tell an amateur as to how many gallons of skim milk—fed in connection with grain so as to make a balanced ration—it will take a produce 100 pounds of pork? Is it better fed sweet or sour?—G. A. B., Modesto.

According to Henry in "Feeds and Feeding," "when properly combined with concentrates, from 475 to 600 lbs. of separator skim milk has a feeding value equal to 100 lbs. of corn or other grain." Therefore, if it takes 400 lbs. of grain, on the average, to produce 100 lbs. of pork, five times that amount of skim milk will grow the same weight of hog or aprpoximately 20 lbs. of skim milk will grow the pound of pork. Experiments have shown that about 3 lbs. of skim milk with 1 lb. of grain produce the best results. Henry also quotes the Gurler rule of many years ago for determining the value of skim milk. "The value of 100 lbs. of skim milk, when fed along with corn to fattening hogs, is half the market price of corn per bushel." This at the present price of cracked corn in San Francisco would put a value of $1.12 per 100 lbs. on the milk. With barley only $40 per ton, however, we cannot accord the milk so high a place. Its value is not just its mere nutrient content, but it appears to affect the digestibility of other constituents of the ration in a way so as to get much better results. Authorities differ as to the comparative feeding value of sweet and sour skim milk. It should never be allowed to become putrid. Probably fed warm from the separator in the proportions mentioned above would produce maximum results.—Livestock Editor.

Garget.—A cow that recently freshened gives stringy milk out of two teats, but the other two are all right.—J. R., Hanford.

Inflammation of the udder of a cow is often a sequel of freshening. If it is much swollen and hard a gentle massage and bathing for 20 minutes with hot water, two or three times a day will help. This should be followed by the application of a 10 per cent boracic acid ointment well rubbed in. As a general treatment give 1 pound Epsom salts once a week, followed by 2 drachms potassium iodide dissolved in water and mixed with the feed. Irrigate the affected quarters once daily with a saturated solution of boracic acid. This may be done by connecting a milking tube to a fountain syringe with a piece of rubber tubing, all of which should be thoroughly disinfected every time used. After the solution has been injected it should be milked out clean.—Dr. E. J. Creely.

Cheap Pig Feed.—Please tell me what to feed pigs to make them grow without costing more than they will sell for.—J. S., Lakeside.

Surely an important question and sometimes difficult to answer favorably. Pasture on alfalfa, as soon as they are old enough with a little barley and molasses until they weigh 150 pounds. By a little barley and molasses—we mean, say 1 pound barley and ¼ pound molasses—to each 100 pounds weight of hogs daily. After they weigh 140 to 150 pounds, then feed all the barley and molasses they will eat until they weigh 175 to 185 pounds. It must be understood that the alfalfa pasture should be good and that any of the grains, like Egyptian corn, milo maize, Indian corn, etc., may be used in place of the barley if they are as cheap. Some other green feeds may be used in place of alfalfa pasture, but hardly anything is really as satisfactory. Tankage in very small quantity may be used, say one-tenth of a pound to each pound of the other mixture. This last ingredient is especially useful if alfalfa is not available. When alfalfa cannot be had the grain mixture will have to be increased and the margin of profit will

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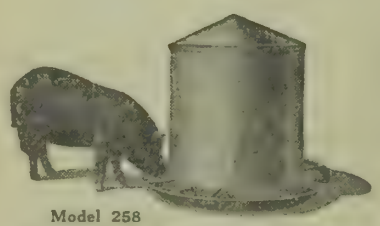
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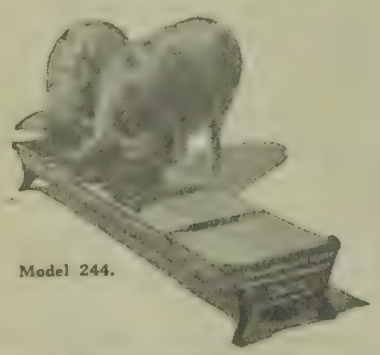
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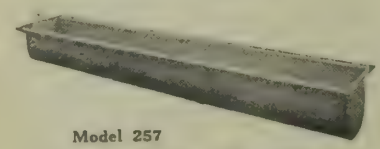
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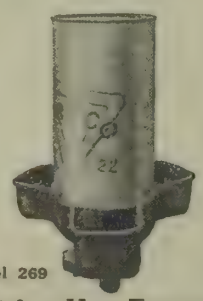
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Calco Self-Feeders for Hogs are made in capacities of 2½ to 14¼ bushels. Give automatic supply of clean fresh grain, no waste, long service.

Calco Hog Troughs—for healthy hogs—are made in sizes from 24 to 120 inches in length. Armco American Ingot Iron and Cast Iron construction throughout. Safe. Clean. Durable.

Calco Sheep Troughs—made for sheep. These troughs with capacities from 51 to 131 gallons, ready to go on supporting frame.

Calco Stock Watering Troughs are made for cattle and horses. Built ready to go on supporting frame. Capacities from 18 to 153 gallons. Right prices.

Calco Automatic Hog Watering Fountains give constant supply of fresh water. Clean, durable and give long service.

These products are profit producing, long service, all metal farm necessities.

Write today for price list.

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BERKELEY — 406 Parker Street

calco products

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be reduced accordingly.—Livestock Editor.

Mange in Horses.—Is creosote a cure of mange in horses?—McT., Thermal.

There are a number of different kinds of nearly microscopic acari or mites causing mange in horses. They can all, however, be destroyed by the application of tobacco water, made by boiling 1½ ounces of tobacco in 1 quart of water, or some of the cresol dips. The scabs should be removed by scrubbing with strong soapsuds. Then apply the tobacco water or other dip, rubbing in thoroughly and using plenty of the material, both elbow grease and liquid, as the mites burrow beneath the skin. The treatment should be repealed in 15 days. It is also very important to thoroughly clean harness, blankets, stables and corral fences with which the animals have come in contact. Whitewash the stables and corral fences being sure all cracks are filled. A thorough cleaning up is of utmost importance.—Livestock Editor.

Skim Milk Substitute.—What is the best skim milk substitute for swine feeding? Is there a powdered skim milk on the market? Would it pay to buy middlings at $85 per ton, or linseed oil meal to mix with ground barley at $45?—E. B., Wasco.

We have heard swine breeders recommend some of the prepared buttermilks very highly and some are not certain, but have never heard any one condemn them. It is very difficult to find anything "just as good." Powdered skim milk is being put on the market as a human food, but so far has all been taken by bakeries and large hotels and restaurants to use in cooking. A small amount of oil meal and middlings might be mixed with the ground barley, but it will cause the feed bill to soar. For the young pigs up to 3 months of age a mixture of 20 lbs. ground barley, 10 lbs. middlings, 2 lbs. oil meal and 2 lbs. tankage will bring them along nicely. As they get older the oilmeal and most or all of the middlings may be left out and the tankage increased to 10 per cent of the grain ration. Some creep arrangement should be made so the young pigs can have access to the above mixture undisturbed by the old sows.—Livestock Editor.

After the smoke of battle had cleared away a perusal of the winnings of the Diamond Bar Ranch at the various fairs and livestock shows cannot help but impress the reader with the very high quality of the "red hogs" owned and exhibited by this establishment. None better anywhere.

SECOND ANNUAL KINGS COUNTY PORK DAY.

(Written for Pacific Rural Press.)

Altogether fifteen cars fat hogs were sold. Each farm center furnished car load of seventy hogs. The sale was conducted by California Farm Bureau Marketing Association. Prizes total $1750 for best car load, best ten hogs in any car, and best single hog in whole lot. The placings follow: Corcoran car 1st, Hardwick car 2nd, Stratford car 3rd, Lemoore car 4th, Hanford car 5th.

Prof. E. H. Hughes, University judge.

The Pig Club car sold for $13.80.

The First Prize car (Corcoran) brought $14.80 which was 80 cents over Chicago market for same day.

Records on pig club car show, for all the swine "dumps" the boys average a net profit of $3.73 per hog.

Roy Filcher, a nine year old boy carried off first honors. He won: $25, best single hog; $5, 1-70 of best car load; $10, one of best ten in any car.

Breeders are more enthusiastic than ever over Poland Chinas and the boys pig clubs and Farm Bureau Auctions.

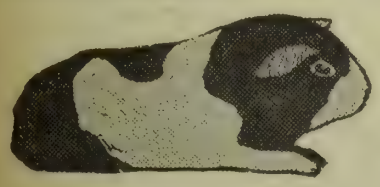
SWINE AND SWINEMEN NOTES.

D. J. Bastanchury of La Habra has no hog stock now except registered Berkshires. All of the grade stock was sold off last August. They now have about 60 sows and over 400 pigs.

Farm Bureau Hog Sales at Fresno last week were another demonstration of the advantage of this method of selling market hogs. Prices obtained were the equal of San Francisco quotations of the same date.

J. E. Thorp of Lockeford sold at the Los Angeles Livestock Show a Duroc boar pig and sow pig to Green & Graham of the Elwood Ranch, Santa Barbara, who are Poland China breeders. Mr. Thorp reports that registered hogs have been selling readily because he prices them to secure general distribution. The same is true of all the registered Jersey females he can spare.

"Any number of people at the Los Angeles Livestock Show have told me they wouldn't buy a hog to breed or raise at any price. But it is always darkest just before dawn," said F. L. Hall of Perris, Riverside county recently. "Two or three months ago you could buy feeders easy anywhere in Perris Valley; but now anybody who buys feeders here must pay more than pork prices. Even at that, they can't get many, because there aren't many in existence."



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GUINEA PIGS

In order to supply our ever-increasing demand for cavies (guinea pigs) for use in hospitals, laboratories, etc., we have opened a California branch. Few industries offer such profit at such slight investment of money and time. Foundation stock can be purchased for only a few dollars and cost of raising is only about 5 cents per head. We agree in writing to purchase all the cavies you raise from stock purchased from us or their descendants and will pay $1.20 a pair for animals weighing over 8 ounces delivered. Even a few pens should pay you well. Send for booklet about breeding, care and money-making opportunities raising cavies. You can get started raising cavies on an investment as low as $5.00.

THIS HAS NOTHING TO DO WITH VIVISECTION

Ten Guinea Pigs Should Earn $100 a Year; 500 Guinea Pigs Should Earn $5000 a Year.

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Enclose this adv. and 25c for booklet on "How You Can Make $2,000 a Year"

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FEED FOR SWINE, STOCK AND POULTRY

ASK YOUR DEALER

DISPERSAL SALE

45 REGISTERED HOLSTEINS
25 GRADE HOLSTEIN COWS AND HEIFERS
60 HEAD FEEDER HOGS
ONE FINE TEAM HORSES

SMALL RANCH, FRESNO, CALIF.

Tuesday November 16, 1920

The owners have decided to plant their ranch to vineyard and will make a complete dispersal of their dairy herd.

The foundation of this herd was purchased in the Stevens Bros.' dispersal sale at Liverpool, New York, and contains animals of most substantial breeding, including a great young cow with an official record of over 26 lbs. butter in 7 days as a 3-year-old.

The herd sire is IT SNOWBALL, a son of It, out of a 24-lb. 4-year-old daughter of King of the Pontiacs, and the sale list includes 17 of his young daughters.

Among other choice things in the offering are:

A DAUGHTER of the 31-lb. son of King of the Pontiacs, King Pontiac Diona Pietertje.
FIVE DAUGHTERS of the 32-lb. bull King Pontiac Pietertje De Kol.
A DAUGHTER of King Pontiac Ormsby Pietertje, who is by King Korndyke Hengerveld Ormsby, out of a 27-lb. daughter of King of the Potiacs.

PLEASE NOTE—The necessity for getting these cattle off the land in order to prepare for the vineyard this fall does not give us time to prepare the usual catalog. We will have ready by sale day a list showing the breeding of the various animals, and an extended pedigree of each animal will be furnished the buyer.

These cattle will be presented in ordinary working condition, every registered animal guaranteed to be a breeder, but no tuberculin test certificates will be furnished as the herd has never been tested.

THE 60 HOGS range in weight from 80 to 180 pounds, and are a good bunch for feeding purposes

THE GRADE COWS AND HEIFERS include 13 cows, 5 two-year-old heifers, and 7 head of heifers from six months to one year old.

SALE BEGINS AT 10 A. M. on above date, on the Small Ranch, about 12 miles southwest of Fresno, 3 miles north of Caruthers, on Dinuba Avenue, between Marks and Valentine.

Owners: SMALL & DAVENPORT, Fresno, Calif.

Auctioneer — COL. BEN. A. RHOADES, Los Angeles

Management — Calif. Breeders' Sales and Pedigree Co. C. L. Hughes, Sales Mgr., Sacramento, Calif.

Dissolution Sale

50 POLAND CHINA SWINE

Entire herd owned by the well known firm of Wm. Marshall and Son of Sebastopol will be sold at Santa Rosa, November 15th. The offering includes:

HEADLIGHT, 1st Prize Junior Yearling and Senior Reserve Champion at the California State Fair, 1920.

MOUW'S SPECIAL 7TH, 5th in Aged Boar Class without fitting at Sacramento, 1920.

2 March, 1920—Sons of Headlight.
12 Tried Sows—8 bred, 4 open.
8 Fall, 1919, Bred Gilts
10 Spring Open Gilts
16 Fall Weanlings, Both Sexes

SIZE, PROLIFICACY, PROFIT

SALE ON THE COUNTY FAIR GROUNDS

Lunch at 11:30 a. m. Sale starts 12:30 p. m.

Write for Catalogue

WM. MARSHALL & SON

Sebastopol.

COL. GEO. W. BELL, Auctioneer.

GUASTI BERKSHIRES

Weaned pigs, both sexes, from sows that farrow large litters and raise them. Priced reasonable — they are money-makers.

ITALIAN VINEYARD COMPANY

ALEX. M. WILSON, Supt. Guasti, Calif.

Poultry for Profit

FEEDING FOR CAPACITY EGG PRODUCTION.

A splendid article on this subject has recently come from the pen of F. D. Fletcher of Los Angeles. He says:

"The average hen is hatched with a laying capacity of from 700 to 800 eggs, but seldom produces more than 550 by modern methods of feeding, in the time allotted. By the old method of letting the hens 'shift for themselves' an average hen would produce about 180 eggs in her lifetime, whereas, under modern methods of feeding laying mash, the average hen produces, with correct conditions and feed, from 500 to 600 eggs in two and one-half to three years, and is then 'culled' and fattened for market. The advantage of feeding an egg mash is explained as follows:

"If whole grain is fed, the hen gathers it, together with grit, shell or lime, green feed and water, and stores it in her 'storage bin,' called the crop. At night when she goes on the roost this material enters the 'mill,' known as the gizzard, and, with the grit acting as 'grinding burs,' is ground into pulp. The following day the pulp is digested and that night it is assimilated; the surplus which is not utilized for the requirements of the body, in replacing the waste of flesh, bone, plumage and vitality, goes toward developing the egg.

The Advantage of the Mash Ration.

"A review of the above process shows that it takes approximately forty-eight hours before the feed gets any direct action in the egg development, and also by this method there is generally very little left for the egg after meeting the requirements of the body, unless there happens to be an abundance of feed on the range.

"By feeding mash, which is more or less what might be termed a 'predigested ration,' the feed passes through the crop and gizzard with little or no delay and goes almost directly to assimilation and egg development and requires very little grit to accomplish preparation for those purposes; hence the increased egg production.

"Sight must not be lost of the fact, however, that if this 'mill,' or gizzard, is not kept in operation to a certain extent it is liable to become sluggish and perhaps diseased; so it is advisable to feed a certain amount of whole grain, or, preferably, scratch feed, in the afternoon before sundown. The fowls are assured the necessary material for the night's 'run,' which not only keeps the 'mill' in order, but also serves to generate warmth for the body and stimulate circulation during the period of inactivity while the fowl is asleep.

The Necessary Ingredients.

"Assuming that all requirements bearing on the care of the fowl have been properly observed, to stimulate egg production to the highest degree the mash must be composed of pure, clean, wholesome and nutritious ingredients which will be readily eaten by the fowl and which are easily digested and assimilated. The proportionate elements of food value must be graduated in order first to satisfy the requirements of the fowl as to flesh, bone, blood and plumage and to bring its vitality to the maximum. Then are added the ingredients known to contain the proper elements which go to make up the egg.

Keep Strangers Out of the Pens.

"Care must be exercised to prevent frightening of the egg-producing fowls, for the very ones which are the most nervous and flighty are the ones which are producing the most eggs. It is a very common error in the poultry business to allow a stranger who is not familiar with the temperament of your best-laying fowls to go into a pen and frighten the birds so they go across the pen and against the wire in a panic, for every time such a thing occurs the owner suffers a loss of eggs, according to the size of his flock.

"One's flock even becomes so accustomed to the clothing worn that a feeder by changing his hat can notice a marked difference in the demeanor and attitude of the fowls toward him —and by an entire change of apparel it is necessary to 'court' your flock and gain their confidence all over again.

The Mash Made the Scapegoat.

"The writer has found that egg mash is in the same category as flour. No matter what is the real cause of bad luck with the bread, flour is generally held to blame. It is largely the same with an egg mash; if the flock gets roup, chicken-pox, limber-neck, coccidiosis, or any of the dozens of ailments common to poultry, or if there is a halt in the egg production, which might occur from any number of reasons, too many times the mash is blamed as the cause."

THE FOWL TICK SCOURGE.

To the Editor: I write in regard to chicken ticks. Our fowls are about 100 young spring ones and 18 two-year-olds. We set and raised them in rabbit pens, kept free from lice. Unfamiliar with ticks, yet we saw something wrong—little round blood blisters or knots on the skin of the chickens, but found no lice on them. Then at night we discovered what we judged to be ticks on the fowls and pens. Destroyed all pens, except those atually needed, and used Pratt's liquid lice-killer, and spots disappeared from chickens, and thought all trouble was gone. What shall I do? Do those ticks stay on the chickens, or will I have to dip them? I could never find them on the fowls in the day time. What would be the easiest and most effective way of destroying these ticks in the houses? Would powder or dip be better for fowls or necessary?—R. K., Banning.

The Federal Government has expended quite a sum of money in an effort to supply poultrymen of the southwestern states and California with reliable information regarding the fowl tick and its satisfactory and economical control. These ticks are spreading in California and every keeper of poultry should be prepared to immediately exterminate them when they first appear on his premises. To this end, every one interested should send at once to the Department of Agriculture, Washington, D. C., requesting Farmers' Bulletin No. 1070, entitled "The Fowl Tick." It is mailed free on request. The introductory statement in this bulletin follows: "The chicken tick, fowl tick, or "blue bug" is a serious pest of poultry in parts of the southwestern states. Chickens are often killed by it and no flock can thrive properly where ticks are present in any numbers. The great majority of the ticks are to be found in cracks about the chicken house.

A tick in the first or seed-tick stage, however, attaches itself to the fowl and will remain there sucking blood for from three to ten days. The older ticks feed only at night. The ticks may live over two years without food and are difficult to kill. It has been shown, however, that they can be completely eradicated from premises without great expense by following the suggestions given in this bulletin. Spray the house thoroughly with carbolineum or crude petroleum. Construct roosts supported from the floor, not touching the walls, and easily removed for treatment. The same idea should be used in building the nests. Make all fowls roost in chicken houses. One to three treatments will kill all the ticks." While our correspondent is awaiting the arrival of the bulletin we offer some addilonal suggestions. These fowl ticks are so resistant to ordinary insecticides that any destructive agent sufficiently powerful to destroy the ticks will also seriously injure the fowls, and result in no benefit. If carbolineum, or crude petroleum, is used for spray, it is advisable to thin by using one part kerosene to two parts of the other material. This will more readily permit driving the spray directly into every crack in the sides, roof and floor of the houses. Nests, base boards of runs, and similar places where the ticks may hide should be treated. All rubbish should be raked up and burned. When the fowls roost in trees the ticks are usually found in great numbers under loose bark and in the crevices of the trunk and limbs.

POULTRY PRATTLE.

Recently the Globe Cotton Oil Mills tendered an informal supper to the executives, directors and sales force of the Globe Mills, manufacturers of Globe A-1 Food Products. Every article served was a Globe Mills product. Even the chicken had been fattened on Globe Mills Poultry Feed. Interesting addresses were made by the officers.

When feeding new grain, be sure that it is well dried out and not musty or moldy, for musty and moldy grain will cause digestive troubles which may develop serious trouble.

Ducks and geese will still pick up considerable feed around the farm if allowed free range and will not suffer from the cold as long as there is no snow on the ground.

Healthy Hens

is the answer to heavy egg production, and in LACTEIN Condensed BUTTERMILK, the hens not only receive the tonic which keeps them in the highest state of health, but a REAL FOOD which supplies the elements of egg-making material in a scientifically processed, concentrated form. LACTEIN Condensed BUTTERMILK supplies all elements most economically.

Builds Feathers—Revives After Molt

Molting time is feather-renewing and body-reviving time for the hen—and as much food or more is required for this work as that of producing eggs. LACTEIN enters into the aid of nature with a stimulation and vigor that has built it recognition as supplying tonic and body and feather-building elements better and more economical than any other food or compound.

LACTIEN CO. Main Office and Factory at Modesto, Cal.

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YOUR LACTEIN INVESTMENT WILL PROVE PROFITABLE FOR ALL YEAR FEEDING—IF YOU ARE NOT SUPPLYING YOUR POULTRY WITH IT. MAKE THE START NOW—YOUR POULTRY SUPPLY DEALER SUPPLIES LACTEIN.

How To Get More Eggs and Save Feed! How to tell slackers and poor layers; how to feed to double egg yield; how to keep flock healthy, ventilate houses in winter; get good hatches, strong chicks—1,000 poultry secrets made plain in 3 lessons. Recommended by 25,000 students. Guaranteed to double profits. FREE BOOK, "Dollars and Sense," gives all the facts. Write today.
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Dept. 1466 Kansas City, Missouri.

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FULL PARTICULARS IN OUR FREE BOOK "CHICKENS FROM SHELL TO MARKET"
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PETALUMA, CAL.

Poultry Breeder' Directory

Rate, 4c. per word. Cash must accompany all orders.

BARRED PLYMOUTH ROCKS — "Nothing Better in Poultry." Wonderful layers. Choice hens and pullets for sale; also fine cockerels that will improve your flock. Now booking orders for hatching eggs. I have made a specialty of Barred Rocks for over twenty-two years. That's why our birds win at all the leading shows. Catalog free. Chas. H. Vodden, Box 3, Los Gatos, Calif.

RAISE FALL CHICKS—They are profitable. Write for circular. See why they pay. Chicks every week. R. I. Red. Barred Rock, White Leghorn. Also booking for spring delivery. Order now and get a desirable date. Safe arrival guaranteed. Stubbe Poultry Ranch and Hatchery, P. O. Box 67, Palo Alto.

PETALUMA HATCHERY — Established 1902. If you want good fall layers, get chicks in the fall. We guarantee satisfaction. There will be but few chicks hatched this fall. The wise ones are buying. Send for prices. L. W. Clark, 615 Main St., Petaluma, Cal.

WHITE LEGHORN BABY CHIX from heavy-laying Hoganized Stock. Safe arrival of full count, live, strong chix guaranteed. Price list and interesting literature on application. The Pioneer Hatchery, 408 Sixth St., Petaluma, Cal.

ATKINSON'S PEERLESS ANCONAS, lay more and eat less than other breeds. 50 big husky cockerels, $5 and up; 200 pullets, trios, and pens for sale. Hatching eggs. Catalogue free. J. W. Atkinson, Box B, 130 Willard St., San Jose, Cal.

BARRED ROCKS, White Orpingtons that win and lay. 1 Special, 8 Firsts, 3 Seconds, 1 Third at Sacramento, 4 Firsts, 3 Seconds, 1 Third at Fresno. Special prices on old and young stock. R. P. Lutsi, 1450 23rd Ave., San Francisco.

WATCH US GROW—"Quality Chicks" We are now booking orders for the season of 1921. White and brown Leghorns, R. I. Reds and Barred Rocks. Order early. E. W. Ohlen, Campbell, Cal.

BABY CHICKS — White Leghorns — 10s, 100's, 1,000's—hatched right in $60,000 brick and concrete hatchery from our selected heavy layers. Pebbleside Poultry Farm, Sunnyvale, Cal.

GOLDCROFT BUFF ORPINGTONS, Columbian Wyandottes and White Leghorns. Heavy laying strains. Breeders and young stock. Samuel Abrams, Box 13, Los Altos.

PULLETS, $2.00 Cockerels, $5.00 each and upward; White Leghorn, Brown Leghorn, White Rocks. Mahajo Farm, P. O. box 597, Sacramento, Calif

HART'S MAMMOTH BRONZE TURKEYS—Large, well-marked, year-old hens. Thrifty young stock of both sexes. Albert M. Hart Clements, Cal.

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CHICKENS, DUCKS, GEESE, GUINEAS, Pea Fowl, Pigeons. Wm. A French, 545 W. Park St., Stockton, California. Stamps.

WHITE INDIAN RUNNER DUCKS for sale, matured and young stock. John Fransen, Box 168, R. R. No. 1, Orland, Calif.

MAMMOTH OREGON BRONZE Turkeys for breeding. Gobblers, $15; Hens, $10. Mrs. Coghlan, Concord, Cal.

ROUEN DUCKS for sale. Fine stock—all prize-winners. Emma V. Miller, R. R. 2, Box 534 Santa Cruz, Cal.

BOURBON RED TURKEYS—Buff Orpingtons. The Ferris Ranch, R. 2-144D, Pomona Calif.

WHITE HOLLAND TURKEYS—Breeding stock. H. H. Buhring, Concord.

THE PUP.

He tore the curtains yesterday,
And scratched the paper on the wall;
Her rubbers, too, have gone astray,
Ma says she left them in the hall.
He tugged the table cloth and broke
A fancy saucer and a cup;
Though Bud and I think it a joke
Ma scolds a lot about the pup.

The sofa pillows are a sight,
The rugs are looking somewhat frayed
And there is ruin, left and right,
That little Boston bull has made.
He slept on Buddy's counterpane,
Ma found him there when she woke up.
I think it needless to explain
She scolds a lot about the pup.

And yet he comes and licks her hand
And sometimes climbs into her lap,
And there, Bud lets me understand,
He very often takes his nap.
And Bud and I have learned to know
She wouldn't give the rascal up.
She's really fond of him although
She scolds a lot about the pup.
—Edgar A. Guest.

BLAZING STAR, "MENTZELLA LINDLEYI."

Not all the interesting wild flowers are found in that part of Spring we call "wild flower time." Some occur even in midwinter. One tiny polygonum, sometimes flowering in winter, has, under the lens, as much beauty as a Bridesmaid rosebud. One late bloomer among our California labiatæ, also under a lens, equals some orchids, not only in beauty of color, but also in wonder of form. For those who hike with seeing eyes, September displays charming flora.

One of the most thrilling late year finds is "Blazing Star." The saunterer may run unexpectedly across it in dry, gravelly stream beds in Sierra Nevadan or Coast Range foothills. Even valley folk may find it this month along sandy water courses where last winter's freshets washed down its seeds from the hills. This fascinating plant, with large, rich golden bloom, appeals to the poet that is in all of us. The experience of first finding it is something like coming unexpectedly upon one's first wild Matilija poppy bloom. The name, "Blazing Star," is not inappropriate, although the mass of stamens, resembling poured molten gold, do give one rather the impression of rapid motion—therefore more that of a meteor or than a "fixed" star.

The "Blazing Star" belong to a restricted family, the Loasaceæ. This clan appeals to the fancy as being rather patrician, as compared to some of the widely-flung protelariat families like the composites. There are some 3,000 kinds of compositæ, while the Loasaceæ number few more than one hundred species. The latter are doubly interesting, in this day when our attention is turned to Americanization, because all these species are, with one exception, American. This small family of plants of graceful bloom thus, in some ways, remind one of the fine old aristocratic families of Virginia or South Carolina, offspring of the best race strains of England and France.

The scientific name of "Blazing

Blazing Star. "Mentzella Lindleyi." Photograph courtesy of Theodore Payne.

Star," is Mentzelia, which, as Professor Jepson reminds us, is the cognomen of a German botanist. Its godfather forunately lived in the 17th century, a day when Germany, not yet become saturated with Hohenzollern materialism, was contributing splendidly to the world's culture, instead of trying to force, upon an unwilling humanity, as it did later, its kultur.

The leaves of Mentzelia, when dry, cling tightly to clothing by means of barbed hairs. Lindley's Mentzelia is called by the Spanish Californians, "buena mujer," or "good woman," because the leaves stick thus so tightly to one. Dr. Jepson's "Flora of Western Middle California," which tells this, should be in the hands of all students of high school age. It can be had from many California County Library branches.

Barbs, such as those of the buena mujer leaves, are not uncommon in plant life, where they are of assistance, for example, in seed distribution, as in the cockleburr. Searching in field, then under microscope, for such barbs satisfies the child hunger for exploration. Seeing eyes find thus a "circus land" at the very threshold. —From California Nature Study League, care of C. M. Goethe, 720 Capital National Bank Bldg., Sacramento, Calif.

THE NOTABLE TRIO.

The Good Citizenship Club was entertaining a former French poilu and the chairman, whose memory was none of the best, wished to say something handsome of French military genius. As a reminder he wrote the names of Foch, Joffre and Petain on a slip which he pinned to the inside of his coat.

All went well in the early part of the speech and the orator worked himself and his audience up for the climax.

"And consider, gentlemen," he bellowed, "consider all we owe to those three great warriors who led the forces of France to a glorious victory. I refer, gentlemen, to those three wonderful men—"

Here he hastily consulted the coat lining.

"Those three wonderful men—Hart, Schaffner and Marx!"

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Home Circle Department

SAN DIEGO FARM WOMEN STAGE A FINE SHOW.

(Written for Pacific Rural Press.)

Before the moth balls are applied to County Fair reports and they are stored to await another season, one more story is well worth the telling. Before we begin, though, let it be recorded that the Farm Bureau has come to the forefront in this fair business. In many places it is being learned that when you want to put over a really successful fair, the first organization to appeal to—and the best—is the Farm Bureau. In nearly all the county fairs this fact has cropped out, and in some counties, notably Shasta and San Diego, the shows were staged entirely by the Farm Bureau.

Furthermore, it must be remarked that the Home Demonstration Department of the Farm Bureau is no sideshow. What the women are doing in the Farm Bureau is just as important as what the men are doing.

At the San Diego Farm Bureau Fair the Home Demonstration Department was not the whole show, but it was a very important part thereof. Nor was the idea to "make a show." It really was a demonstration of what the farm women of the county are doing day by day. These women have adopted and are putting through three main lines of work: Poultry raising, clothing and food presentation. And their part at the fair was to demonstrate what had been done along these lines and to inspire others to join them.

Poultry Possibilities.

The poultry exhibit brought out the fact that careful culling, scientific breeding and feeding, together with careful record keeping, is bringing success to the women poultry keepers. The records show that Home Demonstration hens have produced 125,000 dozen eggs in a year down in San Diego county, and one woman proved "by her books" that her flock has netted a profit of $1.50 per hen in five months. Asked who pocketed the money from all these eggs, the reply was an emphatic declaration that that little detail is attended to by the women themselves.

The display of canned and dried fruits, vegetables and meats would make anybody's mouth water, but what the department was after was not wagon-loads of canned stuff to make a showing—they say you can get that in the alcohol jars in the chamber of commerce—but such application of principles to home work as will develop better methods of preserving foods and a better quality of food.

Real Artistry in Dress Designing.

But that clothing project! It has been projecting around the county for two years and the business men of San Diego say you can pick out the farm women on the street now by the fact that they are more becomingly dressed than the city women. They must be right, for the city women are beginning to clamor for some of the instruction the farm women are getting. After gazing, awestruck, at a large room piled full of a wonderfully beautiful and useful array of garments, from union suits and nighties to school dresses and evening gowns of bewitching design and enchanting blending of colors, every one of them designed and made by a farm woman out of flour sacks, I cornered the Home Demonstration agent and asked her how on earth it was done. She straightway laid down the basic principles. Farm women are not given to snobbishness. In their life on the farm they are all the time dealing with the great, fundamental realities, and these are always simple and frank and natural. It is easy, therefore, to get them to forget style, which is usually atrocious, and to concentrate on suitability which is always becoming. There you are!

In San Diego county—probably in the other counties as well—the work of the "agent" is not to play dressmaker, nor yet to be a guide to a woman who wants to make a dress. Her work is to ground women in the principles of selecting and using material and color schemes in such a way as to achieve suitability and a becoming effect. Will this be in style? Who cares a whoop whether it is in style or out, if it is suitable for the occasion and harmonizes with my style of beauty! That's the idea, and in working it out they are developing originality in clothes, genuine beauty—and they are putting it all over the poor city woman who must wear some hideous thing—hideous in itself and doubly so on her—because she might better be dead than out of style.

A Wedding Dress Creation.

Exhibit A. is here introduced to prove the contention. A member of one of their "centers" was to attend a fine wedding in Los Angeles. Some of her co-workers joined her in "getting up" a costume. The material was bought at the five and ten-cent store at a cost of $7.50. Out of this, with an old sash added, using the principles in which they had been grounded, they evolved a gown that could not have been purchased under $100 in which the lady in question was a dream, and wearing which she was as well dressed as any woman attending the wedding.

What is true of dresses holds good for hats also. Many women can choose a dress, but how many go down under an unbecoming "lid!" These women are learning the principles that will enable them to create their own hats to suit their needs and to look well on them rather than in a store window. Incidentally they are saving lots of money too. I saw one hat made out of beautiful material at a cost of $6.50. It could not possibly have been bought in a shop under $35.

That there is much interest in what these women are doing is evidenced by the fact that, at the fair, a demonstration was given in making a dress form. Over 400 people watched it from start to finish.

Feminine Financiering.

Here was one fair that, along with its other good points, actually made money. A year ago they borrowed $3,000 to stage their first Farm Bureau fair. When it was over they returned the $3,000 and still had $5,000 in the treasury. This year the county supervisors appropriated $2,000 and now that it is all over this $2,000 may be returned and they will still have $9,000 for the next fair. Better keep your eye on San Diego.

San Diego County Farm Bureau women making an individual dress form. Over a very tight undervest, strips of paper are glued. The first course is laid on diagonally. Then a second course is applied with strips running the opposite way. When "set" the form is split down the back, carefully removed and the split glued together again. It looks easy but you better get some expert guidance in making the first one. See your County Home Demonstration Agent. If you haven't one in your county you are out of luck in more ways than one.

BACK TO NATURE.

"Mandy," said the philanthropic visitor as he put a two-dollar bill in a little black hand, "your little girl looks hungry, so I'm giving her some money so that she can get a nice chicken for your dinner."

"Mandy, Jr.," said her mother as the door closed behind him. "Yo' gimme dat two dollahs. Now yo' go get dat chicken like de kind gemmun told yo', only yo' get it in de way what God meant yo' to."

PSYCHOLOGY.

Small Boy: "Father, what is psychology?"

Father: "Psychology, my son, is a word of four syllables that you ring in to distract attention when the explaining gets difficult."

The ONE thing that agrees with all the family and that all the family agrees on

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MORE COLOR FOR THE COUNTRYSIDE.

(Written for Pacific Rural Press.)

What is here said applies especially to the interior valleys where, perhaps because of the dry heat, color-bearing plants are more difficult to grow than along the coast.

As you drive along these valley roads, especially at this time of the year, you feel there is something lacking, even about well-kept places. Something of the mood of the poet who referred to the fall months as "the melancholy days" possesses you. What is wrong? Well, isn't it the scarcity of brilliant color? The evergreen trees stay green. The lawns are still green (where there are lawns), and many of the roofs even are green. The leaves of the deciduous trees, having served their day and generation, just dry up and are a mighty poor excuse for color in the eyes of those who have known the flowers on the eastern hillsides where their beeches and alders and hard maples have been touched by the first frosts. The roses, that early in the season covered many fences and porches with a riot of vari-colored blooms, are dormant, except for an occasional one that only serves to remind you of a departed glory. Little color left just now save the green, grateful enough in the summer glare, but a bit somber under a subdued sun.

I tried it out the other day over a ten-mile stretch of highway lined with orchards, alfalfa fields and cozy-looking farm houses, mostly modern and well groomed. It was just one stretch of green until it became monotonous. Only once in ten miles was that stretch of green broken, and then so strikingly that the spot was like an oasis in a desert.

All along the fence that kept the farm crops from encroaching on the home yard somebody had planted cosmos. It had shot up its slender stalks and spread out its delicate leaves during the summer till the fence was completely hidden. And then, when other blooms failed and but for them the yard would have settled back to monotonous green, it had unfolded its innumerable blossoms, making a hedge of gorgeous white and pink—a mass of glorious color from top to bottom—solid color except for the splendid plumes of foliage here and there breaking through to wave you a welcome. And so it will continue until the heavy frosts stop it. It changed the road. It changed the day. It changed the travelers' mood. It changed everything and everybody within the sphere of its influence. If every home-owner along that ten miles of highway had planted cosmos last spring, the sight this fall would have been worth traveling miles to enjoy.

Perhaps, though, ten miles of cosmos, gorgeous as it is in full bloom, would grow monotonous even as the green does. There is no doubt, though, that it could be far more widely used than it is, without becoming tiresome, to brighten up the yards and roadsides at this season of the year.

DAILY CARE OF CARPETS AND RUGS.

For the daily care of woolen or cotton rugs or carpets, a carpet sweeper is very good because it takes up lint and coarse dirt without raising dust. For more thorough cleaning, some other appliance must be used, as the brushes of the carpet-sweeper do not go deep enough into the carpet to remove the dirt. A vacuum cleaner is excellent, but if that is not available, effort should be made to find some other thorough but comparatively dustless process. Using a dampened broom and scattering moist tea leaves or bits of crumpled dampened newspapers helps to prevent dust from flying. These dampened materials must be used with caution, however, or stains will result, especially on delicately colored carpets. Wiping a carpet with a dampened cloth after sweeping removes more dust and freshens the carpet.

Small rugs should be cleaned out of doors, preferably on grass. They should be placed right side down, beaten with a flat carpet-beater, swept, turned over and swept again. Hanging over a line while they are being cleaned, or holding them from the corners and shaking them, strains them badly; it may break the threads or loosen the bindings and cause the ends to ravel.

Rag rugs may be washed like any other heavy material, but they must be rinsed thoroughly. Sometimes it is easier to rinse a heavy wet rug by fastening it to a line or on a clean lawn and using the hose.

Fine, smooth mattings should be swept with a soft brush and dusted with a dry mop, or if necessary, they may be washed with a cloth tightly wrung out of warm water and wiped dry with another cloth. All grass and fiber floor coverings should be taken up occasionally to remove the dirt which sifts through in spite of frequent cleaning.

For the daily care of linoleum, oil cloth or cork carpeting, an oiled mop or soft brush may be used. When very dirty they may be washed with warm water and mild soap, rinsed and wiped dry. Only a small space should be wet at a time and care should be taken to prevent the water from getting underneath. Scrubbing linoleum or using strong soap, or too much water, will ruin it in a short time.

THE STILLED SMALL VOICE.

Judge Gray, down in Mississippi, was about to adjourn court when an old colored man of his acquaintance moseyed in, his countenance showing worriment.

"Jedge," he mumbled, "mah conscience done trouble me. Is yo' got a charge against me?"

"Why, no, uncle. I haven't any charge."

"Jedge, mah conscience suttinly am disturbin'. Yo' ain't missed a couple of yo' chickens, has yo?"

"No, uncle, I haven't, but even if there were a couple gone I wouldn't know it. I never count them."

"Don' nebber count 'em? Mah-h-h goodness! Mah conscience am appeased. Good day, suh, good day."

PLEA FOR HELP.

Editor Home Circle: Can you tell me what will remove sticky fly-paper stains from a wood flooring? I have tried gasoline, lye, water and hot soap suds without success.—C. A. P., Visalia.

Do any of our readers know by experience what would be satisfactory to use in a case of this kind?—Editor.

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WAYS WITH APPLES.

The apple is called "King of Fruits," and so it truly is, but very few housewives realize the many delicious dishes which can be made with apples. Here are a number of different ways in which the apple can be transformed to the most appetizing dishes to please the most exacting tastes.

Baked Apples—Core tart apples; fill the holes with chopped nuts, raisins, brown sugar, a little lemon peel, a dash of nutmeg and a dot of butter. Place in baking dish and pour over them one-half cup of water and sprinkle with brown sugar. Bake in a slow oven until they can be easily pierced with a fork. Serve hot with cream or sauce.

Escappoled Apples.—Pare, core and slice six large apples and put in an earthenware dish, alternating with one scant cup sugar, a little lemon peel and dash of nutmeg; add one-fourth cup water, cover the dish and bake in moderate oven. Serve with cream.

Apple Charlotte.—Soak one-half box gelatin in one-half cup of cold water for twenty minutes. Whip one pint of cream and set to chill; add one-half cup of powdered sugar, a tablespoonful of lemon juice and two good-sized apples finely grated. Dissolve the gelatin over hot water and strain into mixture; stir quickly and pour into mold. Set to chill; serve with plain or whipped cream.

Coddled Apples.—Take tart, ripe apples of same size; remove the cores. Place fruit in bottom of a porcelain kettle, spread generously with sugar; cover the bottom of the kettle with water and let the apples simmer slowly until tender. Pour the syrup to which has been added a little lemon and serve either hot or cold.

Apple Chutney.—Pare and core twelve large apples. Peel one medium-sized onion. Remove seeds and stems from three peppers, one of which should be red. Chop onions, apples, peppers and one cup of raisins very fine; add the juice of four lemons, one pint of cider vinegar and half cup of currant jelly; let simmer very slowly for one hour, stirring frequently. Add one pint of cider vinegar, two cups of sugar, one tablespoonful each of salt and ground ginger and one-fourth teaspoonful of cayenne; cook for one hour more, stirring constantly. Seal.

Apples Fried with Onions.—Peel onions and slice. Fry in hot fat until tender and brown; drain on paper. Fry unpared sliced apples in the fat left from the onions. Arrange apples in border on a platter; fill the center with the friend onions and serve hot.

Apples with Oatmeal.—Core apples leaving large cavities. Pare and cook in a syrup made by boiling one cup sugar with one-half cup water for five minutes. When apples are soft drain and fill cavities with hot, well-cooked oatmeal and raisins and serve with cream and sugar.

Date and Apple Pie.—Line a pie-plate with a rich crust; fill it with a mixture of chopped dates and apples; sprinkle over half a cup of sugar and one teaspoonful of cinnamon; add two tablespoonfuls of water, cover with top crust and bake about one-half hour.

Apple and Cabbage Salad.—Shred cabbage fine and soak for one hour in celery water, made by adding one teaspoonful celery salt to a quart of water. Drain and dry on soft towel. Add an equal amount of apple cut into shoestrings; mix with boiled dressing. —Contributed by Mrs. L. E. E., Bishop.

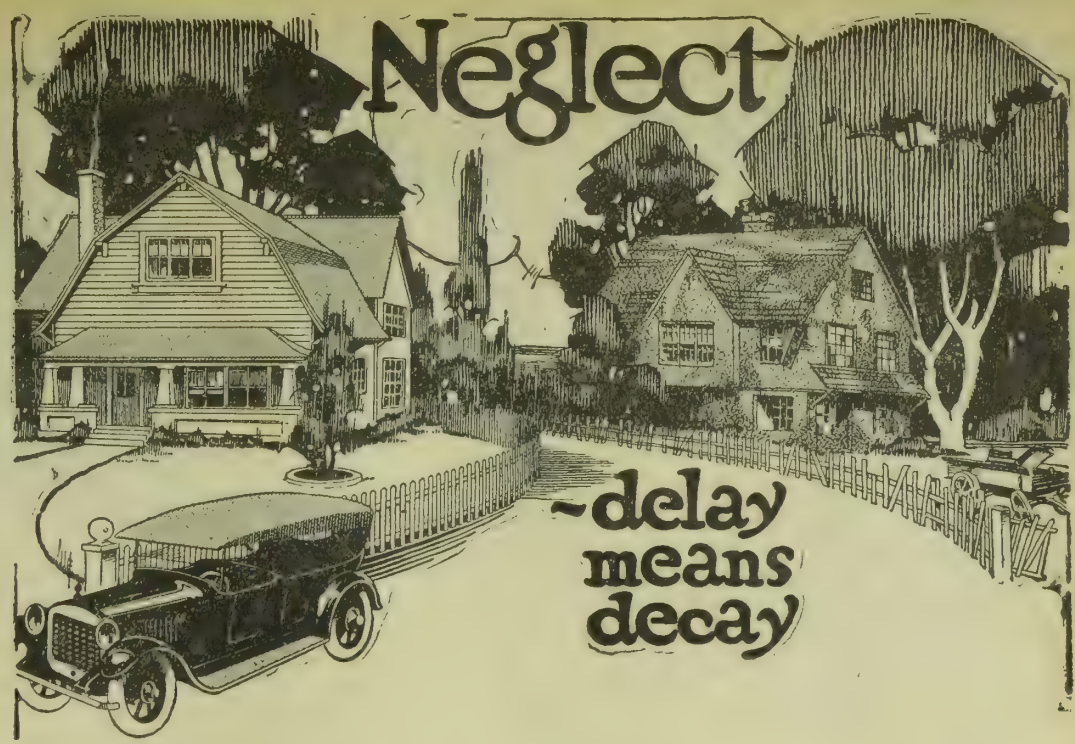
PRACTICE MAKES IMPERFECT.

"What crime did you commit to be in here?" inquired the prison visitor.

"I guess it must have been because I attended too many weddings."

"I see. You stole the gifts or drank too much champagne?"

"No, it was just because I was always the bridegroom," answered the arch-bigamist.



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THE MARKET REPORTS

SAN FRANCISCO.

San Francisco, November 3, 1920.

WHEAT.

Activities in the wheat market are at a low ebb with very few deals consummated. Prices quoted are unchanged and most of the trading has been of a very limited character.

Wheat ..... $3.75@3.90

OATS.

No transactions have been made in the oats market on which to base prices which are nominal. There is scarcely any demand at all for seed or feed oats.

Red Feed, ctl. ..... $2.35@2.40

BARLEY.

The market is firmer in tone and transactions have been heavier during the past week. Although quotations are the same, a strong demand was asserting itself at the close of the week. Brisk trading is also reported on the call board.

Feed Barley, ctl. ..... $2.10@2.15

CORN.

The market is dead. Although fairly large quantities of corn are arriving, offerings are few and transactions almost negligible. Cracked corn has been offered during the week at $2.70 with no takers.

Egyptian, white ..... Nominal
do, brown ..... $2.50@2.60
California ..... $3.00@3.10

FEEDSTUFFS.

The rolled barley price continues to climb influenced by the strength of the barley market but other feedstuffs hold but a quiet market. Activity on the whole is less than that of last week. Mill runs in good quality are quoted at $56 to $60. Bran is scarce at $60 to $62.

Rolled Barley ..... $46.00@48.00
Rolled Oats ..... $50.00@55.00
Alfalfa Products ..... $39.00@40.00
Cracked Corn ..... $80.00@81.00

HAY.

Prices are the same as quoted last week and a quiet market prevails with normal receipts and sales about balancing. Last week's hay receipts of 1,411 tons were slightly in excess of the previous week's arrivals, which amounted to 1,347 tons.

The large bulk of the hay crop still remains in the hands of the farmers and barns and public warehouses are most all full. The producers seem to feel that they must carry their product and appear to be able to do so for some time to come. It is thought that a wet or rigorous winter or early fall may have a tendency to advance prices still further. Buyers are still purchasing on a hand-to-mouth basis and a continuance of the deadlock appears probable for some time. With these condition prevailing it would appear that prices may remain stationary for awhile until new developments arrive. The market is steady and firmer than many other markets. Alfalfa continues to be the strongest grade in demand.

Wheat, hay, new ..... $28.00@29.00
Tame oat, new ..... $24.00@27.00
Wild oat, new ..... $18.00@20.00
Barley ..... $17.00@20.00
Alfalfa, 2nd cutting ..... $22.00@25.00

RICE.

The market is not steady but quotations remain the same on all grades with predictions for both advances and declines being made by responsible parties. No accurate forecasts can be made.

California fancy $7.25
do Choice $7.00
Southern Honduras, long grain $12.00
China, No. 1, double mat $11.00
Blue Rose, fancy $10.00
Fancy Head (Philips & Co.), 10 lbs. $13.00
California Japanese, No. 1 ..... $7.10
do, No. 2 ..... $6.75

FRESH FRUITS.

(Wholesale prices paid by commission houses.)

Blackberries are practically off the market. Prices on other berries have declined with a very poor demand, although receipts of strawberries and raspberries have been very light with smaller quantities for next week predicted. Plums and peaches are about finished with lower figures quoted on pears. Apples are plentiful and a good demand continues. Jonathans have advanced a little and Gravensteins are off the market for the season. Ten cars of cranberries arrived from the East for the Thanksgiving trade.

Apples: Wagner's $2.00
do, Spitzenberg ..... $2.00@2.50
do, Jonathan ..... $2.50@3.50
do Bellflowers ..... $1.15@1.60
do, Rhode Island Greenings .. $1.50@1.75
do Virginia Greenings ..... $2.00@2.25
Pears ..... $2.00@3.50
Strawberries, 6 12-oz. boxes ..... $1.00@1.50
Casaba, crate $1.00
Raspberries, drawer ..... 60@75c
do, 8-oz boxes ..... 30c@40c
do, 8-oz. boxes ..... 40@50c
Cantaloupes, Standard ..... $1.50@2.00
do, Flats ..... 50@75c
Watermelon, lb ..... 1@1¼c
Persian Melons, lb. ..... 2@3c
Grapes, large box ..... $2.00@3.50
do, crates ..... $1.50@3.00

POULTRY.

The market is firm with heavy arrivals from the East. Local receipts are falling off very fast. Turkeys are still moving slowly.

Broilers, small ..... 55@60c
do, large ..... 47@50c
Hens, mixed color ..... 35@38c
do, Leghorns ..... 28@33c
Roosters, young ..... 32@35c
do, old ..... 20@22c
Fryers ..... 35@38c
Squabs ..... 70@80c
Geese ..... 30@35c
Ducks ..... 30@35c
do, old ..... 28@30c
Belgian Hare, live ..... 20@25c
do, dressed ..... 21@25c
Jack Rabbits ..... Nominal
Turkeys, young, large, lb. ..... 50@55c
do, old ..... 50@55c
do, dressed, lb. 60c

BUTTER.

Firsts are again on the market with an active trading. The general market, however, continues very weak with a decline in prices at the week's close. Trading was active on one or two days during the week. Dealers are looking to New York as a probable outlet for New Zealand butter as the market here is well supplied. Large quantities have been moved into storage.

	Thu.	Fri.	Sat.	Mon.	Tu.	Wed.
Extra	52½	52½	..	53	..	51½
Prime 1sts	50½	50½	..	51	..	51
Firsts	..	..	..	49	..	49

CHEESE.

Increased activity has featured the week's cheese market after a dull period for several weeks before. Prices have advanced some with the firmer tone. Full cream Jack is still in good demand at 27 to 29 cents. Storage holdings show a slight increase and receipts have been lighter than heretofore.

California Flats, fancy 24½c
do Firsts 18c
Oregon Triplets 26½c
do, Y. A., fancy 32½c

EGGS.

The market has advanced in prices. This situation is, however, thought to be temporary. Dirties are practically off the market with nominal prices. Large eggs are still moving east with local hotels still using pullets instead of the ranch varieties. This tends to steady the market. Local receipts are light and becoming less.

	Thu.	Fri.	Sat.	Mon.	Tu.	Wed.
Extra	74	79½	..	80	..	80
Ex. Pullet	63½	66½	..	68½	..	68
Dirties	66½	..	..	..	..	..
Undersized	55	55	..	56½	..	56½

HONEY.

Price quotations have materially declined with an extremely weak market prevailing. Heavy receipts continue to flood the already overstocked market.

Water White (extracted) ..... 18@20c
White and White Orange 17c

Comb honey (2 doz. in case):

White water ..... 25@28c
Light Amber ..... 23@28c

POTATOES, ONIONS, ETC.

(Wholesale prices quoted by commission houses.)

The potato market is very poor with heavy arrivals which are moving slowly. Prices on potatoes are the same. The same condition prevails in the onion market. Vegetables arriving in many cases are showing the effects of frost. Prices have risen in some instances with the paucity of receipts. Tomatoes are moving but for lettuce and other local vegetables a good demand prevails. Southern truck will soon be on the market it is thought.

Turnips ..... $1.25@1.50
Beans, green ..... 8@10c
Carrots, per sack ..... $1.25@1.50
Lettuce, local, doz. ..... 25@30c
Cucumbers, Alameda, lug box .. $1.00@1.25
Tomatoes, Alameda, large box .... 75c@1.50
Summer Squash, box 35-40 lbs. .. $1.00@1.50
Egg Plant box ..... 75@90c
Potatoes, New River, cwt. ..... $1.25@1.90
Onions, yellow, sack ..... 40@60c
do, Red ..... Nominal
Green Onions, box, 25 lbs. ..... $1.50@1.75
Celery, crate ..... $3.00@3.25

BEANS.

Limas are a little off, with other varieties a shade firmer and at higher prices. The market presents a good demand, but is quite normal for this season of the year. Some business is being done throughout the United States, which shows that the trade is beginning to turn its attention to beans. Most of the white bean business is being taken by Michigan on a basis of $4.50 to $4.60 for Michigan points. On account of the lower average freight rate this makes Michigan beans lower, delivered here than the California product.

Bayos ..... $9.00@9.25
Blackeyes ..... $5.75@6.00
Cranberries ..... $6.00@6.25
Red Mexican ..... $6.00@6.50
Pinks ..... $5.40@5.65
Large Whites ..... $4.25@4.50
Small Whites ..... $4.40@4.60
Limas, S. F. prices ..... $7.35@7.50
do, Baby, S. F. prices ..... $6.85@7.00

DRIED FRUITS.

The market remains absolutely inactive, with prices the same as quoted heretofore.

There are no changes in prices and the market continues exceedingly quiet. No intterest is evidenced on the part of either buyers or sellers.

Apricots.

Extra fancy Moorpark lb. 30c
Fancy Moorpark, lb 23c

Growers Quality.

Growers' quality—Fancy, lb. 26½c
do, lb. 24½c
do, Choice lb. 22½c
do, Slabs, lb. 20c
do, Standards, lb. 18c

Raisins—The following prices have been established as the opening prices of the California Associated Raisin Company for the 1920 crop of raisins.

Muscat, Sun Maid seeded, pkg. 36-16s .. 21c
do, Fancy 36-16s 21c; 48-12s 16¼c
Bulk, seeded, Baker's Sun Maid, 25-lb. bx. 20c
do, Fancy Sun Maid, 25-lb. boxes 20½c
Loose, 1-crown, recleaned lb. 20c
do, 4-crown, recleaned, lb. 24c
Layers, 3-crown, flat pack, 5-lb. box .. $1.30
do, 3-crown, flat pack, 5-lb. box .. $1.30
Clusters, 4-crown, flat pack, 20-lb. box $4.70
do, 4-crown, flat pack, 5-lb. box .. $1.40
Sun Maid, 100-lb. boxes $21.00
Thompson Seedless, Sun Maid, recleaned, lb. 20½c
do, Sun Maid, bakers, lb. 21½c
Sultanas Sun Maid, recleaned, lb. 20½c
do, Sweat-box, layers, lb. 19c

..Figs—Following prices have been established as the opening prices for the 1920 crop of dried figs.

White Adriatic, 12-10 oz. $1.25; fancy, $1.30
do, 12-8 oz. ..... $2.00; fancy, $2.05
do, 50-6 oz. ..... $3.10; fancy, $3.20
do, 70-4 oz. ..... $3.30; fancy, $3.40
Adriatic, bulk, Standard, 50-lb. boxes, lb. 9c
do, bulk, fancy, 50-lb. boxes, lb. 13c
Black Mission, Standard, 50-lb. boxes, lb. 7c
do, Fancy, 50-lb. boxes, lb. 12c

Prices f. o. b. Fresno.

Peaches.—Following prices have been established as the opening prices of the California Peach Growers for the crop of dried peaches.

Yellows, Standard, lb 15½c
do, Fancy, lb. 17½c
do, Extra fancy, lb. 18½c
do, Slabs, lb. 15¼c
Muirs, Standard, lb. 15¾c
do, Fancy, lb. 18¼c
do, Extra fancy, lb. 19½c

The above prices are bulk basis.

Shipment: September, October, November. Seller's option. The above prices are guaranteed against Association decline until January 1, 1921.

Prunes—Following prices have been established as the opening prices of the California Prune and Apricot Growers, Inc., for the 1920 crop of Prunes.

Sunsweet Brand, 20-30s, flat, lb. 25c
do, 30-40s, bulk, lb. 16c
do, 40-50s, bluk, lb. 15c
do, 50-60s, bulk, lb. 12c
do, 60-70s, bulk, lb. 11c
do, 70-80s, bulk, lb. 10c
do, 80-90s, bulk, lb. 9c
do, 90-100s, bulk, lb. 8½c

First half September shipment, ½c premium; last half September shipment, ¼c premium. The above prices apply only to contracts already issued.

SPECIAL CITRUS REPORT.

Los Angeles, November 3, 1920.

The California Fruit Growers' Exchange reports that there are approximately 125 cars of Valencia oranges left in the state, which will be shipped within the next two weeks. This will wind up the season, which leaves a clean market for the incoming crop of Navels, which the Exchange claim to be a bumper one—an increase of 40 per cent over last season. It is expected that the first Navels for the season will go from Tulare county about November 8. For the first week shipments will naturally be light. New York market, $6.15 to $12.65; majority of sales, $10 to $11. Lemons weak, $3.20 to $4.80.

Special Livestock Market Report

San Francisco, November 3, 1920.

CATTLE—There is still a bearish feeling to the market; however, the results are slow to materialize. Feed in the hills is coming on, and with added rains to push it along, it will continue to create a stimulating effect on cattle values.

Steers, No. 1, 1000-1200 lbs. ..... 9 @ 9½c
do, 1200-1400 ..... 8½ @ 9c
do, 2nd quality ..... 7 @ 7½c
do, thin ..... 5½ @ 6c
Cows and Heifers, No. 1 ..... 7½ @ 8c
do, 2nd quality ..... 6 @ 7c
do, thin ..... 3 @ 4c
Bulls and Stags, good ..... 4½ @ 5½c
do, fair ..... 3½ @ 4c
Calves, lightweight ..... 10 @ 11c
do, medium ..... 8 @ 9c
do, heavy ..... 7 @ 8c

SHEEP AND LAMBS—The market shows no signs of material weakness. Lambs are steady at prices quoted. Feed is now getting far enough along to be of some benefit to the sheep-raiser in sections where the recent rain fell in any quanity.

Lambs, milk ..... 9 @ 10c
do, yearling ..... 7½ @ 8c
Sheep, wethers ..... 7 @ 7½c
do, ewes ..... 4½ @ 5c

HOGS—Continued liberal receipts of hogs have had a tendency to depress the market, consequently the packers want to buy cheaper. The market is one cent off from last week.

Hard, fat, grain-fed, 100-150 lbs. 13c
do, 150-225 lbs. 14c
do, 225-300 lbs. 13½c
do, 300-400 lbs. 12½c

Los Angeles, November 2, 1920

CATTLE—Choice steers are still very scarce and they have been for several weeks past. The market is steady on them. Light steers are plentiful with a good demand for both light and choice steers. Cows remain dull with plenty to be had. Prices unchanged.

Per cwt. f. o. b. Los Angeles.

Steers, prime to choice, 1050-1000 lbs. ..... $10.00@10.50
do, good to prime steers, 900-900-1000 lbs. ..... $8.50@9.00
Prime cows and heifers ..... $8.00@8.50
Good cows and heifers ..... $7.00@7.50
Canners ..... $4.00@4.50

HOGS—Demands in this market are only fair and then for only such as needed for the fresh meat trade. Receipts are ample to supply it at the steady prices. No buying at present for curing. All prices remain unchanged from last week. Per cwt f. o. b. Los Angeles.

Heavy, averag'g 275@350 lbs. $10.00@11.00
do, 225@275 lbs. ..... $12.00@12.50
Light ..... $13.00@14.00

Rough docked 20 lbs. piggy sows 40 lbs. and stags 40 per cent.

SHEEP—There are no changes to report in this market since last week, both as to price ad market conditions. Lambs and yearlings continue steady and in fair demand, while ewes and wethers are steady but a dull tone.

Prime wethers ..... $6.00@7.00
Yearlings ..... $6.00@7.00
Prime ewes ..... $5.00@6.00
Lambs ..... $10.00@11.00

LOS ANGELES.

Los Angeles, November 2, 1920.

BUTTER.

The market today is up 1 cent on extra creamery and the demand for this grade is very good. Very light call for low grade butter, the report being slow sale with price unchanged. Receipts for the week were fairly heavy, being 390,900 lbs. These prices are paid the producer. We quote:

California, extra creamery 55c
do, prime first 52c
do, first 51c

EGGS.

Receipts in this market continue to be very light. There is a good demand for all that is coming in, even at the high prices, which show a further advance this week, over last. Receipts for the week ending today were 397 cases. These prices paid the producer. We quote:

Fresh ranch, extras 79c
do, case count 78c
do, pullets 69c

WALNUTS.

The walnut market continues steady with a fair demand being felt all throughout the week, and at present quotations. The Walnut Growers' Association says that shipments continue to run about 40 cars a day. Today's Association prices are:

No. 1 ..... 22½c
No. 2 ..... 16½c
Fancy budded 25½c

Orchard run from independent growers selling at 12@14c a pound.

FRUITS.

There is no noticeable change in this market from last week. All choice offerings reported to be in good demand and at last week's quotations. Receipts only fair but sufficient to meet present demands.

Figs, lb. ..... 8@15c
Grapes, Malaga, lb. ..... 8@10c
do, Muscat, lb. ..... 8@10c
do, Cornechons, lb. ..... 9@10c
do, Tokays, lb. ..... 9@10c
Apples: Bellflower, 4 tier ..... $1.50@1.65
do, Delicious, lb. ..... 5@6c
do, Jonathan, packed box .. $2.75@3.00
do, Newtown Pippins, 4 tier $1.75@2.00
Pears, lb. ..... 5@10c

VEGETABLES.

Potatoes continue to come in quite freely while buyers are holding back under a lower market and stocks are accumulating. Onions, like potatoes, are in oversupply, slow sale and have a weak tone. Lettuce is higher today and in fair demand. Cauliflower quite dull and sharply lower. Summer squash and cucumbers quoted higher and both in fair demand. Peas and string beans in good demand and the same can be said of tomatoes. We quote from the grower.

Potatoes, local, cwt. ..... $1.75@2.00
do, Northern, cwt. ..... $1.65@2.15
do, Idaho Russett, cwt. ..... $1.65@2.15
Sweet Potatoes, lb. ..... 3@3½c
Cauliflower, large, crate ..... 60@75c
Onions, Stockton, white, cwt. ..... $1.35@1.60
do, yellow, cwt. ..... 90c@1.00
do, Australian Brown, cwt. .. $1.05@1.10
do, local, crate ..... 40@50c
Lettuce, crate ..... $1.40@1.50
Rhubarb, per 30-lb. box ..... 80@1.00
Peas, lb. ..... 12@14c
Carrots, bunches, ... 30@35c
Summer Squash, local, lug ..... $1.00@1.25
String Beans, green, lb. ..... 8@9c
do, wax, lb. ..... 8@9c
do, Kentucky, lb. ..... 9@10c
Cucumbers lug ..... $1.50@1.75
Tomatoes, home-grown, No. 1 lug .... 60@70c
do, No. 2 ..... 25@35c
Bell Peppers, lb. ..... 3@4c
do, Chile, lb. ..... 3@4c
Celery, crate ..... $4.50@5.00

POULTRY.

This market was steady all during the past week. A good demand was felt for broilers. Frjers are slow sale but prices steady. Hens coming in very slow with a good demand for them at firm prices. Turkeys arriving more freely but slow sale just at this time. Ducks in good demand with firm prices.

freely and the market is slow at old prices.

Broilers, 1 to 1¼ lbs. 38c
do, 1¼ to 1¾ lbs. 42c
Fryers, 2 to 3 lbs. 34c
Hens ..... 30@35c
Roosters (soft bone) 3 lbs. and up 34c
Ducks ..... 24@25c
Turkeys ..... 40@44c
Geese 25c

BEANS.

The bean market is very much the same as it was a week ago. Still dull and only a few blackeyes moving. However, prices remain unchanged.

Limas, per cwt. $6.00
Large white, per cwt. ..... $4.50@5.00
Small white, per cwt. ..... $3.00@3.25
Pink, cwt. ..... $6.00@6.25
Blackeyes, cwt. ..... $5.00@5.25

HAY.

Receipts have been good but with the cooler weather and the scarcity of green feeds the demand has been exceptionally good. The tone of the market, however, shows signs of weakness, still prices are holding steady.

Barley hay, ton ..... $21.00@24.00
Oat hay, ton ..... $24.00@27.00
Alfalfa, Northern, ton ..... $25.00@27.00
do, local, ton ..... $28.00@32.00
Straw, ton ..... $9.00@11.00

CALIFORNIA FARM BUREAU MARKET ASS'N.

Tulare, October 26, 1920—59, 251, $13.70, Joe D. Biddle; 70, 218, $13.65, Bortrum Bros.; 51, 189, $13.60, Joe D. Biddle; 60, 253, $13.60, Virden Packing Co.; 83, 194, $13.60, Virden Packing Co.; 81, 160, $13.05, H. A. Frame; 24, 130, $12.05, H. A. Frame; 16, 332, $11.10, Joe. D. Biddle; 1, 470, $11.10, Allen Thompson. Six cars, 30 consignors.

Visalia, October 27, 1920—69, 224, $13.55, Western Meat Co.; 76, 197, $13.45, M. L. Pattison; 80, 222, $13.20, Western Meat Co.; 86, 201, $13.20, Western Meat Co.; 34, 167, $12.55, H. A. Frame; 3, 353, $11.55, H. A. Frame; 13, 144, $11.55, H. A. Frame; 11,

306, $10.55, H. A. Frame. Five cars, 1f consignors.

Hanford, October 28, 1920—69, 229, $14.30, Joe D. Biddle; 70, 229, $14.00. Western Meat Co.; 70, 200, $13.95, E. B. Miller; 70, 247, $13.80, Wilson & Co.; 70, 244, $13.75, Cudahy Packing Co.; 71, 200, $13.70, Wilson & Co.; 128, 190, $13.00, E. B. Miller; 89, 195, $13.55, Joe D. Biddle; 71, 211, $13.30, Cudahy Pkg. Co.; 77, 204, $13.10, F. D. Campbell; 85, 202, $13.00, E. B. Miller; 60, 155, $12.60, E. B. Miller; 16, 128, $12.55, E. B. Miller; 29, 399, $12.00, E. B. Miller. Thirteen cars, 101 consignors.

SPECIAL DECIDUOUS REPORT

Sacramento, November 3, 1920.

With the exception of a few cars of Winter pears leaving San Jose, the deciduous shipments are confined entirely to grapes and apples, an occasional car has a few quinces pomegranates and persimmons. The grape market in the east is holding up remarkably well, where quality and condition are good. Tokay, $2.15 to $4; Emperor, $2.25 to $2.55; Cornichon, $2.60 to $4.25; Persimmons, $3 to $3.50.

MARKET COMMENT.

Hide Market at Low Ebb.

When one purchases a pair of shoes they naturally think that the hide market is still booming, but not so. The market seems to be in such an unsettled condition that the tanners have withdrawn their quotations temporarily, therefore the rancher who has a hide that will stand the delay had better house it in and await a demand.

Winter Pears Going Forward.

Several cars of winter pears are being shipped from the Santa Clara Valley weekly. The major portion of this stock is being stored in the eastern markets; however, what is being sold on arrival is commanding fair prices. B. Clairgeau, $4; Winter Nelis, $5.15; E. Buerre, $3.90.

Wind Injures Apples.

Owing to heavy winds that swept the Watsonville district last week, the apple crop was seriously damaged. Thousands of boxes were blown to the ground, which of course, makes them either a cull or a poor B and C grade. Much of this fruit, however, will probably be packed, while certain proportions will be used for cider, and some dried. Indications point to a scarcity of Watsonville Newtowns, with a preponderance of the lesser grades.

Alfalfa Market Improving.

The improvement in the demand for alfalfa, mentioned last week, showed further progress this week. There is practically no speculative buying; the widening of the demand and stiffening of prices are altogether the result of more general buying for immediate wants only, made necessary by the very light supplies in the hands of most dealers and users. This character of the buying makes the improvement appear all the more substantial, as it promises a continued lively and healthy demand.

Oroville Ships First Car of Oranges.

The first car of Washington Navel oranges to be shipped for the season of 1920-21 left Oroville November 1, being shipped by the Stewart Fruit Co. to Winnipeg. It is reported that the fruit was of good color and fine quality. The sugar content is said to be exceptionally high this year. As a rule, these early shipments are sweated, but this car was tree ripe. This shipment was five days in advance of last season.

Were Implement Prices Unfair?

Were prices charged to farmers for farm implements so high as to interfere with the farmers' making fair profits? This is one question which the United State Senate directed the Federal Trade Commission to investigate for the six years beginning in 1914. The Commission not long ago reported (1) that the increase in prices of farm products was greater than the increase in prices of implements; (2) that the prices of all commodities other than agricultural implements affecting farmers' profits and purchased by farmers for farm operations increased in greater percentage than the price of farm implements. Farm implement prices increased 73 per cent; other commodities increased 98 per cent. The manufacturers also state that during the same period metal prices increased 150 per cent, lumber over 100 per cent, and labor over 100 per cent.

Was there any evidence of unfair trade practice among manufacturers of farm implements or any illegal combination among them to restrict production or control prices? This question is pretty well answered in the findings of the Federal Trade Commission relative to the first question; but two activities of the National Implement & Vehicle Association were considered; the Association's efforts toward standardization of implements, and their study of uniform and adequate cost accounting methods whereby something fair and definite and comparable might be learned regarding costs of producing implements. Both of these activities were undertaken at the expressed wish of the Federal Trade Commission. The Commission later reversed its position regarding cost accounting and this activity was discontinued.

41 DELHI FARMERS AWARDED.

Twenty-six former service men and fifteen civilians were recently awarded farms by the State Land Settlement Board in the second unit of the soldiers' settlement at Delhi.

Of those awarded farms averaging thirty acres, three are Berkeleyans, one from Alameda and two from Oakland, with twenty-eight from other sections of the state and seven from other states.

The average capital of those warded farms was $4,994, according to Dr. Mead.

Farm laborers' allotments—Norman S. Wood, Concord, Mass.; Francisco Dobales, Madera; Arvid Kruth, Turlock; Ed. O'Donnell, San Francisco; James Peterson, Livingston; Arthur L. Gibbs, El Centro; Frank C. Voorhees, Hughson.

Following are those awarded land:

Farms—Clyde Chappelle, Turlock; A. T. Vierra, Delhi; S. F. Linsley, Berkeley; Arthur L. Epstein, Oklahoma; Jos. N. Plate, San Diego; Robert J. Smith, Vallejo; H. L. Miser, Manteca; George Pope, Sacramento; P. H. Lake, Parlier; C. C. McCaleb, San Francisco; Floyd and Harlan Brown, Wrights; J. L. Davies, Patterson; W. J. Graham, Oakland; Hans C. Anderson, Turlock; Robert A. Wagner, Ashland, Ore.; John C. Kern, Vallejo; Chas. J. Lindstrom, Mora, Minn.; Dallas C. Bache, Campbell; J. E. Gore, Van Nuys; Paul Dougherty, Davis; Ralph B. Doughty, Berkeley; Albert E. Beatty, Honolulu; Fenley Robinson, Turlock; Oscar W. Shattuck, Oakland; Francis Bernard Davies, Porterville; Eugene E. Owen, Los Angeles; W. T. Carruthers, Los Angeles; David C. Peters, Denver, Colo.; D. S. Shuman, Berkeley; J. S. Malloway, Delhi; Ora Carr, Merced; Ferdinand Kretz, Alameda; E. L. Waddelou, Turlock.

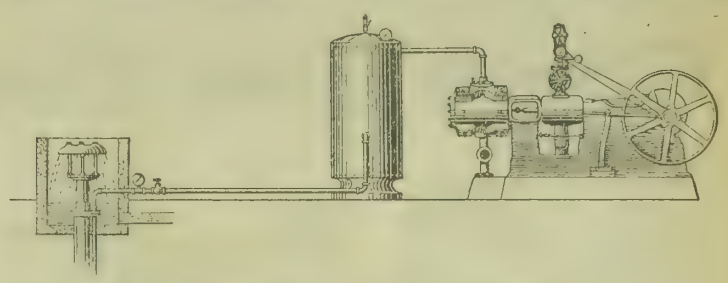
MAY NEED UNITED STATES NURSERY STOCK.

The English Ministry of Agriculture reports that some 10,000 acres in apples, pears, plums, cherries, etc., will be required to be planted in England to bring the area of productive fruit plantations and orchards back to the pre-war acreage. In soft fruits there was in the same period a reduction of 18,139 acres. Owing to the fact that supplies of fruit trees are short, it is not likely that any progress can be made in the immediate future. In view of these facts American nursery stock should find a good market in Great Britain.

The Water Question Solved

—BY—

Air Lift System of Pumping



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Investment can be made as work progresses, along with other attractive features.

Present owner qualified and willing to carry on the work.

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Last year's income $2,810; on paved state highway, electric cars pass; gas, electricity, city water, telephone; 4½ acres rich level fields, ideal poultry; 350 pounds apricots last year, also walnuts, grapes; good 6-room bungalow, piped water, gas, beautiful shade trees, magnificent view; barn, brooder house, garage, many other buildings; owner unable care for it; includes lot farm implements, tools, some household furniture; everything $3,300, only $1,000 cash, balance easy terms. Details this, many other farms California, 32 other states, page, 91, Strout's Big New Illustrated Catalog Farm Bargains. Copy free. STROUT FARM AGENCY, 503FA Wright-Callender Bldg., Los Angeles, Calif.

MEXICAN LANDS—400 acres in American colony near Hermosillo and Southern Pacific Railway. Rich river bottom land; will grow anything; two crops each year. Investigate this opportunity to start big farming at small cost. Owner, 329 Ochsner Bldg., Sacramento, Cal.

FOR SALE OR EXCHANGE for Valley property, fine stock ranch of three hundred and sixty acres, ten miles from Placerville, Cal. Nine-room house, two barns, forty-eight ton silo; ten living springs, irrigating ditch across place; stock and tools. What have you? A. E. Millar, Placerville, Cal.

FOR RENT—80 acres dairy and alfalfa farm. All under irrigation. 24 cows. Full equipment farm machinery. Cash or shares. Write or call on J. F. S., Box 96, Gazelle, Siskiyou Co., Cal.

FOR SALE—160 A. deep level loam, will grow anything. 70 miles from San Francisco. Reasonable terms. A. M., Box 2230, Pacific Rural Press.

WANT TO HEAR from party having farm for sale; give particulars and lowest price. John J. Black, Press St., Chippewa Falls, Wisconsin.

MISCELLANEOUS.

WANTED BY DECEMBER—Competent married live wire working orchardist, who can handle men and horses on 90 acres five-year-old almonds, peaches and Thompsons. One who is apt and willing in modern pruning, orchard and vine care and will qualify by his brains, hands and feet to become working foreman from the horse plow up. There are "no chief talkers or favorite sons" here; so unusual opportunity for permanence, promotion and experience awaits the right man. Personal interview preferred, or write with reference, encumbrance, nationality, age, and what you can and will do and wage wanted first letter. J. B. Hall, Winton, Merced Co., Calif.

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Grown from State Universiay Farm Stock

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Reference, L. E. Cline,
U. S. Dept. of Agriculture, Fallon, Nevada.

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All sizes standard pipe and wrought iron screw casing. All kinds of fittings. Guaranteed good as new. Write for prices. Weissbaum Pipe Works, 160 Eleventh street, San Francisco.

WANTED TRACTOR AND IMPLEMENTS by private party for 600 acres of diversified farming. Will pay all cash. Holt 45 or 75 tractor preferred. Describe fully and state price. Walter W. Atkinson, 845 So. San Pedro St., Los Angeles, Cal.

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CITRUS EXPERT for South Africa. Must be familiar with all phases of the industry. Salary, £800 per annum, three years' contract. Fare both ways. Address F. T. Bioletti, Berkeley.

ALL SIZES OF PIPE and screw casing, both new and second-hand, dipped and undipped. Guaranteed. Prices right. Shecter Pipe Works, 304 Howard St., San Francisco.

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Big stumps! stumps and trees with deep tap roots! any stump that can be pulled with the best inch steel cable! you *alone* can pull with my "K" Hand Power Stump Puller--*without digging and without the expense of teams and powder.* We guarantee it. We refer you to U.S. Gov. officials. We give highest banking references. If you have stump and, the cheapest way of clearing it is with the

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The "K" works on the leverage principle of the ordinary lifting jack, except that the power is applied on a cog-wheel instead of a standard. 100 lbs. push on the lever develops a 48-ton pull on the stump—all an inch steel cable will hold. One man operates it alone—no teams to pay for—no walking.

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H. Sinclair of the Dept. of the Interior, a U. S. Gov. official, writes: "The stump puller is a wonder."

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VOL. C—No. 20 Fiftieth Year

THE PACIFIC RURAL PRESS

SAN FRANCISCO NOVEMBER 13, 1920 LOS ANGELES

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IS THIS THE RESULT OF OVER-INDULGENCE IN LONG PRUNING?

WHY did this peach tree break down in this distressing fashion? Was it simply a case of falling apart because of its brittle wood under too great stress of gravity or of wind, to both of which the peach is liable, even when pruned most rationally? Or was it pruned too long—so that, in the absence of propping or cross-tying, it could not carry its load? The picture does not show enough of the tree to definitely answer these questions. This pomological disaster should be thought about in the terms of its relation to the tendency toward long pruning which a number of California growers have practiced for some time and which the University pomologists have been advocating on the basis of their research and experence. Dr. Whitten says: "The best continuous system of pruning for mature peach trees is not yet known." Presumably he is still hunting for it. Perhaps peach growers can help him, themselves, and all the rest of us if they will study the calamity in this picture. It might be partly due to lack of thinning, although most of the fruit is of good size. It was not neglect of pruning, so as to get enough new wood, for there must have been plenty of new wood to bear all those peaches. Was the tree not cut back sufficiently to get that weight of fruit attached to a branch strong enough to hold it up? If not, then long pruning, for the peach at least, is under indictment for misdemeanor. All those who are turning from the old system of short-pruning the peach should get busy with thought and observation based on their own experience. Must it still be the straight and narrow way with the peach, or shall we take to the broad road? So far as this picture goes, it surely looks like perdition—for the peach!

Every Hen Advertises

THE hen that is fed on SURELAY advertises her appreciation by giving you a uniform, profitable egg-production. She is happy on her job—and she makes good! Just so, the hen that does not give you a uniform, profitable egg-production advertises her need for a balanced feed like SURELAY.

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If you want to see why SURELAY has won a host of friends who advertise its profit-producing power—if you want to see how this uniform quality-feed "makes your hens pay by making them lay"—send for our booklet, "Makes Hens Happy."

Your copy is waiting for you —all you need do is to fill in the coupon and mail today!

SURELAY

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General Agricultural and Horticultural Review

HORTICULTURAL JOTTINGS.

A 42-acre ranch at Centerville has been sold Joseph Santos for $17,000.

The Villa Vesta grove near Lincoln, Placer county, has made its first shipment of oranges for the season of 1920.

Libby, McNeil and Libby's first year's operation at Gridley shows an output record of 1,000,000 cans of peaches.

The recent favorable weather is coloring the Emperor grapes in the Exeter district of Tulare county. Picking and packing is being rushed in order to save the crop now on the vines.

The total shipment of grapes from Escalon, San Joaquin county, amounted to 365 cars. For the district the 1920 shipment of grapes will be approximately 600 cars.

The Farmington grape season has closed and the growers are well satisfied with results. Next in order will be pruning of grape vines, which will begin as soon as vines are dormant.

Several cars of loose apples are arriving in Los Angeles weekly from Idaho and Utah. Jonathans fancy bring $3 to $3.25 and Delicious, fancy, $3.25 to $3.75.

The Porterville orange season will open about November 15. The fruit is not coloring very fast. The general prospects for a crop are the best since the freeze a few years ago.

Already the cantaloupe growers of Turlock are arranging for the next season. Some 45 growers met with J. W. Falk last week to formulate plans for handling the crop next season.

The Lodi Shippers Association have telegraphed the car service commission at Chicago that there is urgent need of 125 cars daily for the next two weeks to move the grape crop still on the vines.

During the past week, grape shipments have been the heaviest on record, at prices higher than ever before, from Concord, Danville and Meinert. The entire output will be cared for during the next few days.

The highest price paid for land in Stanislaus county has been recorded by Edward Ealey of his 20-acre ranch for $35,000, or $1,750 per acre. There are 19 acres of one-year-old Thompson seedless grapes planted.

Returns of Riverside citrus growers for the season of 1918-19 just closed are estimated at $5,310,000. There were 2,830 cars shipped. The crop for the coming season is estimated at about 4000 cars.

The leading vineyardists and winemakers of Napa county met recently with Farm Advisor H. J. Baade to discuss ways and means necessary to retain the viticultural experiment station at Tokalon vineyard, Oakville.

B. L. Carmen, manager of the Ashley and Brown Packing company at Escalon, San Joaquin county, reports the closing of the plant this week. During the season this company shipped 50 cars of Escalon grapes, mostly Tokays.

Members of the California Fruit Distributors predict that the end of the wine-grape deal will bring prices equal to $400 a ton for some varieties. Recent auction sales in New York show they went as high as $300 to $350 per ton.

The first Imperial Valley grapefruit for the season of 1920-21 has been placed on the market by J. W. Reed. The fruit is fully one month ahead of last year. Last season's crop amounted to 12 carloads; it is estimated at 40 cars for this season.

The Oroville Orange and Olive Exposition will open on November 15, continuing to the 20th. The Oroville Chamber of Commerce has the matter in charge and it is their intention to make this the best show of the kind ever held in Butte county.

It is said that the world's largest stock of pear seedlings of a wild blight-resisting variety found in Manchuria, is located on the Loma Rica ranch near Grass Valley. The young trees are from seed brought directly from China and number about 100,000.

Oregon is experiencing some of the unpleasant climatic difficultes that California did in 1918, when millions of dollars of prunes, grapes and raisins were lost by early rains. It is estimated that 60 per cent of the prune crop around Salem has been ruined by recent rain.

Oranges in the Springville district of Tulare county are beginning to color and picking will soon be in full swing in the foothill district. There has been no frost; neither is the fruit troubled with "splits." It is estimated that the citrus yield will be heavier than usual.

Seven Japanese grape growers of Martinez were arrested last week by Deputy Horticultural Commissioner Macdonald of Alameda county. Three hundred and fifty boxes of grapes were "topped," which is contrary to the fruit standardization act. The grapes were sized and dumped, and the shippers are held to answer.

A record season marked the closing of the Walnut Creek cannery last week. The pack included 20,000 cases of peaches, 600 cases of apricots, 4000 cases of pears, 5000 cases of cherries and 800 tons of canned tomatoes. Also small amounts of berries.

The Riverside Fruit Exchange—the mother of them all, organized in 1894—and the Arlington Heights Fruit Exchange have consolidated and will hereafter be known as the Riverside-Arlington Fruit Exchange. This organization will handle the marketing for eight local associations in that district.

The Santa Fe railway system is receiving 30 new refrigerator cars daily and delivery by the manufacturers at that rate will be kept up until the middle of January, 1921, when 2,500 cars will have been received. The manner of construction makes it possible for these cars to have an increased loading space from 20 to 25 per cent, when the cars are used for products which do not require refrigeration.

AGRICULTURAL NOTES.

A thousand-acre tract in Sutter Basin is now all ready for alfalfa seed.

The grain growers around Farmington, San Joaquin county, are seeding and putting in their summer fallow.

Celery shipments from the delta district are moving freely, and will increase materially within the next few days.

In Moraga Valley, Contra Costa county, there will be 150 acres planted to cauliflower. The ground is now ready for planting.

Daily shipments of artichokes are being made from Santa Cruz to New York and Chicago. The shipments are going under the Halfmoon Bay brand.

The total yield of sugar beets for the year will be 8,812,000 tons, compared with 8,970,000 last month and 6,421,000 last year.

The first rice grown in the vicinity of Red Bluff has been stored in local warehouses. In a short time all storage space is expected to be utilized.

Upward of 7,000 tons of sugar beets from the new Eastbay districts passed through Oakland during the past week en route to the sugar refinery at Alvarado.

Alfalfa weevil, having appeared in Washoe county, Neveda, that county has recently been quarantined against shipping alfalfa into California, where no weevil is known to exist

The first navel oranges of this season's crop greeted the buyers in the San Francisco markets last Tuesday. The fruit came from Porterville and was of good quality.

The Department of Agriculture announced the following weights per measured bushel: wheat, 57.4 pounds, compared with 56.3 last year; oats, 33.1, compared with 31.1, and barley 46.0, compared with 45.2.

Gridley has become a heavy rice shipping point, the Sacramento Valley Rice Milling Company having shipped during the past season over 200 carloads of rice to eastern markets.

Flour dropped forty cents a barrel, according to an announcement made by the wholesale houses. This is probably due to the weakness in the wheat market and also for the lack of export demand.

About 4,000 acres of asparagus are being planted on the old Sargent Canal ranch and on Tyler Island in San Joaquin county's rich delta section. The land is owned by Libby, McNeil and Libby.

Rice mill operators of Arkansas have been summoned to Little Rock by J. P. Wooten, U. S. District Attorney, for a conference to discuss rumors of an agreement to hold rice from the market to control prices.

Formation of a $12,000,000 foreign trading corporation under the Edge act, to finance export cotton, will be undertaken at a meeting in New Orleans this week, to be attended by bankers from all Southern states.

The first export shipment of cotton seed oil cakes to leave California this season has been shipped from San Pedro to Hamburg, Germany. The steamer carried 2,000 tons. About 40,000 tons are shipped from San Pedro each season.

In order to facilitate the movement of California rice and protect the industry of the state, the California Rice Growers' Association has inaugurated a "buy a bag of rice" campaign, as decided action is needed, and that quickly to save the industry.

Giving as a reason the fact that the supply of hogs was not sufficient to justify keeping its Canadian plant running, Armour & Company announced during the week the closing of its Hamilton, Ontario, establishment and Dominion sales agencies.

Receipts of wheat at San Francisco during the first ten months of 1919 were 84,977 tons. In the same period of 1920 the total receipts were only 30,161 tons. The reduction must be due either to the short crop or the better holding of wheat by farmers.

For "additions and betterments" to public utilities, the State Railroad Commission, during the year ending June 30, 1920, authorized issuance of $59,413,772.56 of various kinds of securities Total securities authorized aggregate $91,038,485.12 as against $84,572,599.48 in the preceding year.

The potato yield this year, according to the Department of Agriculture, will be 421,252,000 bushels, compared with 414,986,000 last month and 357,901,000 last year. Sweet potatoes will total 105,676,000 bushels, compared with 103,676,000 bushels last month and 103,579,000 last year.

To travel by rail from Blythe, Riverside county, to Niland, Imperial county, covers two hundred miles in 20 hours with one change of cars. By road, the distance is 75 miles. Application has recently been filed with the State Railroad Commission for permission to establish a stage route.

On November 1 the price index of all crops was 28.0 per cent less than a year ago and 4.6 per cent more than the average of the preceding five years. The production index is probably 3.2 per cent more than last year's aggregate production and 6.8 per cent more than the average of the preceding five years.

According to a preliminary estimate of the Department of Agriculture the corn crop this year will total 3,199,126,000 bushels. This report is comcompared with 69,835,000 bushels a year ago and 82,618,000 bushels the average for the five years preceding. The quality is 7.7 per cent above average.

Opportunities for making a comfortable living in California will be explained to prospective Dutch settlers by George Stam of Kirkville, who is now on his way to Holland to extol the merits of Sutter Basin lands, in the hope of inducing some of the thrifty agriculturists there to come and live in this state. Mr. Stam is a native of The Netherlands, coming to California some thirty years ago and becoming independent by growing crops in the Sutter Basin. It is also his intention to establish direct market connections in Holland for farm products from here.

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EDITORIAL

THE BENEFICENCE OF A BLOW-OFF!

THINK of the monster, mogul locomotive, as it stands at the last valley station, with its great eye searching the grades it must surmount! What a material embodiment of conscious strength and confidence it is! What a picture also of docility as one sees the locomotive engineer climbing over the great bulk of it on his last oiling-errand, to assure himself that no joint shall run dry and shriek to lessen the complacent self-confidence of his beloved mechanism when, presently, it shall glide forward upon its stupendous task! There stands the monster, quiet and docile. There you stand beside it in admiration mute—and then, without a warning sound, there bursts from the very center of the organism a deafening roar as though Jove had slipped the leash from his favorite thunderbolt, closing your ear to all other sounds, causing the very earth beneath your feet to tremble and filling your soul with terror and apprehension lest the stars were rushing from their courses. In a moment, however, you regain composure—even to admiring the silvery plume which seeks the zenith, if the atmosphere be that of a clear, frosty morning, or wondering at the dense white cloud in which the monster enmantles itself, if it be a rainy midnight. Your confidence is fully restored as you perceive the oiler still at his task of seeking joints and crevices—even though the roar does not relax nor the shuddering of the earth beneath abate—for you realize that some beneficence has seized its opportunity of saving you; that, perhaps, if the roaring and shuddering had not intervened, the monster would have destroyed itself and you and many others for a distance all around. You are thankful for the benign invention of the safety valve!

THE COMFORT OF A SAFETY VALVE.

We have often stood in the situation in which we have placed the reader and, beyond the sensations indicated, there has come to our thought the cosy comfort of the safety-valve as it settle down from its thrilling outburst. When the signal comes from the conductor, the idle steam rushes to its work in the cylinders, the monster moves, the pressure is lightened; the "valve-plug" nestles down into its "seat"; the hissing, roaring tumult ceases instantly; the bell rings clear in the universal quiet and the self-moving monster rushes with all its trailers to the mounting of the grades. A great danger of pent-up power has been escaped; a great piece of constructive labor has been entered upon. And so, it seems to us, the safety-valve may be thought of as rejoicing in its beneficent work. It may be imagined to be saying to itself: "My spring has just the right amount of resistance; my "plug" is accurately ground into its "seat," and it welcomes the pressure of the spring so long as no riotous tumult below compels it to resist the spring and to mock at its pressure until the force from too great restraint below has been allowed an innocent outburst or returned to useful work." And so the safety valve, with its spring always alert to balance good pressure against destructive force and its plug always ready to help the two to adjust themselves to safety and to effort, rides aloft, across the valleys and over the mountains—rejoicing in its quiet but always on the guard and ready to hiss and roar and to abolish dangers from the tremendous internal forces which it holds in control. The safety valve may surely be thought of as taking much comfort in itself.

THE SAFETY IN AMERICANISM.

It does not seem to us to be an analogy too forced, but rather a surety which every true Amerlean citizen should rejoice in, when we suggest that the experience of last week in our public affairs, should remind us all of the function and the action of the safety-valve. What does it mean when a country of one hundred and five million souls can go through a campaign of half a year of most eager popular effort and discussion, to determine the personnel and policy of its government, without even a local disturbance of any kind? What does it mean when the voters of such a population decide, by a popular plurality of seven millions, that our internal policy, our international relations and practically every important incumbency in public service shall be radically changed from policies, relations and incumbencies which have prevailed or have been strenuously advocated by the government of the preceding eight years? As we read of turmoil and bloodshed which accompany efforts to change policy or personnel of administration in other countries and of the impatience and intolerance of contending parties with and for each other, it is remarkable what sweeping changes we can make in this country's government with such quiet and complacency. But really it is not strange, because our national constitution provides opportunity and method for progressive development; because our people possess the temperament for calm transaction no matter how heated preliminary discussion may have been, and because the common sense and patriotism to dispel vision and fallacy and discern the principles upon which our theory and practice of government rest. These three things are the spring, the plug and the seat of the safety-valve of American citizenship. Speaking anatomically of the figure which we have invoked, let it be said that, in the construction of the safety valve of American citizenship, the "Spring" is the constitution of the United States; the "plug" is the voting privilege, now happily freed from sex distinction; the "valve seat" is the common sense and patriotism of the American people.

It is our conviction that to safely secure progress which is just and true, and all justice and truth which are applicable to the whole population of this country, and to all individuals and industrial classes which are parts of it, is to purify and protect our citizenship from all who are not loyal to American principles and satisfied with American methods of social and political advancement. And now, having blown off once more the dangerous pressure of international vagaries, social, political and industrial, which accumulated while we awaited the signal to go forward, we can safely and strongly take the up-grade to the great national development for which all our public history and experience have been preparatory. We are upon the threshold of a period of unprecedented prosperity.

OUR OWN BLOW-OFF.

In a small way we reflect this stupendous fact in our own experience this week. For several weeks we have been giving our readers the chance to blow off the destructive forces which lurked in the insides of them and our present conclusion must be that they have blown, for not a letter of expulsive or propulsive character has reached us since our last issue. The two letters of diametically opposite views which we printed last week seem to have yielded a resultant of quiet. One wished to blow us up for not advocating starvation of the labor unions and the other threatened to knock us down for not upholding them. We refused to agree with either and we feel safer now that both have blown themselves off. In fact, we are perhaps as happy as the distinguished Mr. Gompers, who issued a proclamation before election stating that the hope of the labor unions lay in the election of Democrats and the day after the landslide to the Republicans, just as joyously declared that labor interests were better provided for than in the last congress. In his statesmanship Mr. Gompers must be described as an imaginative optimist, whose last word is always his best word. And we come very near agreeing with him in the latest declaration of his belief, because there surely was never anything which promised worse for the American laboring man than the world-leveling and free-trade which have now been repudiated by the American people. The realization of these visions would reduce the wage-scale in this country to about four bits a day and would have made it very hard for employing producers to pay even that. Mr. Gompers and his proteges have been saved by the blow-off of surging fallacies on November 2. A great many other things have been saved by it also. The great American safety-valve was on its job. But we are a little sad that our readers' pressure for self-expression should have blown off also.

IMPEACHMENT OF FARMERS BLOWS OFF

Another instance of the safety and beneficence of a blow-off is to be found in the impeachment of co-operating farmers, which was undertaken with the sanction of the State Attorney General in the alleged interest of consumers who claimed that the Northern California Milk Producers were illegally operating in respect to its own membership and profiteering in respect to the public. A decision was handed down by Superior Judge P. J. Shields of Sacramento county, which supported the Milk Producers in their contention against impeachment of their organization and their operations and practically threw their prosecutors out of court, so far as a layman can understand the legal phraseology. This extract from Judge Shield's decision is very clear and should be very significant to all:

"The charges of the complaint wholly fail to brink the case within the requirement of the law. Here the defendant appears to have legally organized and for the purpose which it is the policy of this country to encourage. It had adopted a form of organization favored by the national government, encouraged by our State law and one which is the result of social experience and which seems calculated to promote an industry and to aid an element in our citizenship which are today the special objects of national and state concern." The Northern California Milk Producers was organized to develop the dairy business and to prepare and market dairy products. It seems to have confined itself to that business and to be going through the formative experience of organization, acquiring sites and equipment and the means by which it may conduct and extend its business.

Judge Shields advised the opponents of the Milk Producers that before their "complaint will be sufficent it will have to be substantially amended." That is practically the same riot act which the Los Angeles judge read to the lawyers who started in to make trouble for the raisin association a few weeks ago. We doubt if any such complaint against our co-operating farmers can be "substantially" amended enough to make it worth hearing by a court. Rival traders and mistaken consumers are barking up the wrong stump when they attack the principles upon which producers' co-operations rest.

Of course, there may be questions about the policies and methods of operation of such associations, involving the relations of the association to its membership's interests, etc., which are no concern of the public. We have sometimes thought that the operation of such organizations withdrew too far from the membership and therefore did not include enough of members' points of view and interests, which are of the very essence of true co-operative organization. This is apparently a point which is held important by State Market Director G. B. Daniels, who is required by law to promote such organizations in their best forms. Mr. Daniels has addressed a letter to the individual members of the Milk Producers' Association of Central California, urging their attendance at a general meeting of members to be held in Modesto on Nevembr 20. We have an idea that such meetings should really embody the outspoken convictions and desires of co-operators in the transaction of their business.

They should not be packed by partisans nor flooded with collected proxies supporting particular persons or their ready-made policies. Such meetings are not of the nature of ordinary corporation assemblies, nor should their proceedings be of a character common to them. A corporation is said to have no soul; a true co-operation has a very large one, and the voices of the membership should sound it forth. We believe co-operating individuals should draw nearer to those who serve them and to each other.

QUERIES AND REPLIES

By the Editor.

Inquirers Must Give Full Name and Address
Answered Questions also on other pages.

What Causes "Water-Core" of the Apple?

To the Editor: What causes water-core of apples? My Winter Bananas ran about 5 per cent water-core this year. Whole limbs would produce water-core apples. The trees were well pruned and thinned out last year—a little too much so if anything. When the apples were about three-fourths grown we had a few days of cloudy, cool weather, followed by hot weather. I was giving these trees water every 18 to 20 days, as they had a big crop. Could the cool weather have stopped the circulation in the fruit and the crowding of the trees with water have caused the sugaring process when the hot weather began again? I have observed that the most water-core appeared on the south side of the trees and on fruit that was most exposed to the sun. I would certainly appreciate your judgment on the matter.—J. L., Yucaipa.

Water-core is considered a physiological abnormality of the apple—that is, it is caused by no parasitic organism. Your theory proceeds upon that basis, and, as no cause has been demonstrated, the field is open to your view until some one presents a better one. You are in fact unconsciously supporting the view of A. S. Colby of the U. S. Department of Agriculture, who recently published the following very interesting description of the trouble:

Water Core.

A second non-parasitic disease quite common on certain varieties of apples, usually those maturing early in the season, is known by the expressive name of water core. Evidence of its occurrence comes from the apple-growing sections of the world, particularly in semi-arid districts. The external appearance of affected fruit seldom is a guide to its interior condition, but on cutting into the apples, numerous hard, watery, transparent areas are found in the flesh. The core is sooner or later involved and liquid is formed in the seed cavities.

While the fact that a surplus of water is found in the affected tissues is sufficient reason for the name of the disease, the reasons for this excess are not well understood. It is quite generally believed that certain environmental conditions which bear on transpiration are the chief factors in causing water core. If little water is being given off or transpired, that remaining in the outermost parts of the tree is under excessive pressure in the plant cells. Therefore, water may be forced into the spaces between the cells of the fruit, since those cell walls offer less resistance, resulting in the transparent watery areas above referred to. It should be noted that more than one cause is necessary in bringing on the disease, and it is believed that they must favor reduced transpiration and a consequent piling up of the sap unable to escape in the regular way.

Vigorous trees, especially when they are young and just coming into bearing, will often show the disease . There will seldom be a heavy crop, but a few large fruits will be produced which will be subject to water core. Conversely the disease is seldom found on trees making a poor growth.

Water Supply Important.

The question of available water supply is very important. Where there is a sudden excess of water just before the fruit matures, accompanied by certain extremes in temperature, the disease may be looked for. A warm day followd by a cool night, with moisture present in sufficient quantity about the roots, will perhaps bring on some such conditions as these. The surplus water is given off by transpiration as long as the sun shines, but when it becomes dark and cool, even though water is coming up from the roots, it is transpired very little indeed, and, having to be stored somewhere, is forced into the intercellular spaces of the least resisting plant cells, those of the fruit. Thus other parts of the tree are not affected. The fruits at the extremities of the branches usually suffer most, perhaps because of their exposed position.

Where for any reason the leaf area of the tree is reduced, consequently resulting in a corresponding reduction of the surface from which evaporation may go on, water core may result. This may be especially noted if defoliation occurs just before the fruit matures.

The above considerations, though by no means exhausting the reasons advanced for the appearance of the disease, point the way to orchard operations looking to its control. Cultivation should be practiced intelligently and a cover crop sown early enough in the season, June-July, to be of value in removing excess moisture from the soil.

If irrigation is practiced, be especially careful at the ripening period of the fruit. Proper drainage must be provided. The pruning should be done in the dormant season, not in summer. Spraying is very necessary to insure the maximum amount of healthy foliage. Do not allow the fruit to hang on the tree after the proper time for picking. Put the fruit into storage, cool, not as low as 34 degrees F., at once. Being non-parasitic, it will not spread to other apples in storage.

Never Mind about Mustard

To the Editor: I wish information on tame mustard culture—time to sow, amount of seed per acre, and what the market price and demand is. Is it a seed that is liable to be hard to clean off the land?—A. J. K., Yuba City.

Mustard likes to hold on the land as grain growers know. As it is an annual, it is easier to clean off than perennial weeds, but it is hard to catch up with the seeds. Besides mustard is a crop which those not experienced in growing it should let alone. It is not hard to grow and the times and methods of operations and machinery are much like those of grain growing. The trouble is that there is only a limited demand for mustard. The seed crop is not food for man or beast. It is only condiment or medicine. During a war the naturally limited supply becomes inadequate and the price may run very high; after a war the value drops back to the normal, which only a few experienced growers can make money from. Contracts made in the Lompoc district (which can easily supply all that can usually be sold) ran as high as $12.50 per hundred and there was much profit in it while the war was on. The present value, we understand, is only about one-quarter of that. Do not monkey with mustard; there is too much danger of getting burned.

Planting Apples.

To the Editor: I planted out Pearmains, Delicious, Arkansas Beauty, Banana and Red Astrachan. On heavy soil these kinds did not do well. A large percentage died. In the lighter soil all of them did well. I am thinking of replanting with Pearmains, Arkansas Beauty, and Yellow Newtown Pippin. The Pippins seemed to do the best of any in the heavy soil. Are these trees all right? If not, what kind would be better?? Will yearling trees do? Do they need quite a bit of moisture in planting?—J. Y. S., Downey.

Apples are apt to dislike very heavy soil, especially if it is not well drained or has a touch of alkali. It is not desirable to plant more apple trees where apple trees have failed, unless you have an idea that the latter did not have a fair chance and you can do better by them next time. So far as soil goes, there is not much difference in varieties. They are all on the same kind of roots and all like about the same ground conditions, though in aerial conditions they may differ widely in behavior. The varieties to plant more of are ones which you have already proved to do best with you. The Pearmain and Yellow Newtown pippin are varieties which do well wherever any winter apples do well in California, and the Astrachan is the most widely grown early apple. The others you mention are doing well in most places where they have been planted. Yearling trees are best to plant and the ground should be continually moist but not wet.

Outlook for Vines and Seedlings.

To the Editor: I am thinking about planting Sultanas and Thompson seedless grape slips. Do you think there would be any prices on one-year-old grape vines later on? Would there be any profit in planting seeds of different fruit trees and raising them to sell as yearlings?—H. S., Woodland.

We have no mantle of prophesy and shrink from giving advice in a matter which each should decide for himself because he has to make decision at his own risk. However, we will say that we believe there will be a demand for home-made booze timber beyond California's ability to supply it for several years—perhaps permanently, because California has practically a monopoly of that line of grape production. We believe also that a good business in seedlings for nursery budding can be built up by a careful and intelligent grower, who will make proper effort to secure thrift, uniformity, and moderate size in his seedlings. It is likely that the national quarantine will exclude the kinds of seedlings which formerly came from France and the seedlings which the coming large increase of our fruit acreage will require, should be home grown. But it is not easy.

Seedlings of Apricot Varieties.

To the Editor: I want to plant apricot seeds so as to bud apricot and Sugar prunes on them. Will it make any particular difference what kind of pits they are—Blenheim, Royal, or Hemskirke? I am told only Blenheim will do, the others making poor trees and bringing sour-sap?—L. J. B., San Jose.

We are not aware that any preferences between seedlings of apricot varieties have ever been demonstrated. As between Blenheim and Royal, unless your trees are twenty-five years old, or propagated from trees which were differentiated about that long ago, it is not at all certain which you have. Recently some propagators have not undertaken to keep them apart and many growers are growing one for the other, no doubt. As to difference in other varieties in tree-making or sour-sap resistance we know of no demonstration and until it is made we would not regard it seriously.

Demand for Improved Prunes

To the Editor: Where can I buy French prune bud-selects, and what will they cost? I shall be very thankful for any information, as I do not know if they are on the market yet.—S. C. M., Marysville.

All progressive nurserymen are now on to the importance of propagating selected variations within the French prune type, and we presume will be freely offering such selections in their advertising this fall and winter. We cannot differentiate between propagators, and we cannot assume the risk of designating one or another as particularly entitled to the planter's patronage. That is a business proposition which the planter must settle for himself. As to bud-selection by the association organized for that purpose, selection for this year's planting is impossible, because the buds for such trees were put in about a year before the association was organized.

Clean Alfalfa Hay.

To the Editor: I have alfalfa which is a fairly thick stand about 4 years old. Would you think it advisable to disk it to barley or oats this fall? Would it hurt the alfalfa any and would I get enough more hay to pay for the seed and labor?—L. H. N., Rialto.

If you are running the alfalfa for hay and you have a good and pretty clean stand, we see no advantage and some danger in scratching in the grain. If you want more winter feed, and the field makes much winter growth of foxtail and weeds, you may as well make it grow better pasture. You may be sure that the grain will not improve the alfalfa for hay.

CALIFORNIA WEATHER RECORD

The following rainfall and temperature record is furnished the Pacific Rural Press by the United States Department of Agriculture Weather Bureau at San Francisco for the week ending November 8, 1920.

Station—	Rainfall Past Week	Rainfall Seasonal To Date	Rainfall Normal To Date	Temperature Highest	Temperature Lowest
Eureka	.09	7.59	4.93	56	36
Red Bluff	.06	2.07	3.03	68	36
Sacramento	.08	1.35	1.76	68	36
San Francisco	.07	2.03	1.96	68	46
San Jose	.64	2.37	1.51	72	34
Fresno	.22	1.17	1.10	72	42
San Luis Obispo	.74	1.94	2.06	80	36
Los Angeles	1.54	2.34	1.00	78	46
San Diego	.13	.50	.69	74	47

Courting Coy Millions For Water Development

Written for Pacific Rural Press by R. E. Hodges.

Applications of public utilities of all classes in California for authority from the State Railroad Commission to issue stocks, bonds, notes and other evidences of indebtedness reached a total of $132,263,977.31 more than a billion dollars during the life of that commission from March 23, 1912, to June 30, 1920. Permission was granted to issue over a billion dollars of this. Now, who in California had the money to invest over a billion dollars in securities of public utilities? Well, the investors were not all in California, for these securities are recognized for safety everywhere in America because of control over the utilities which is exercised by the State. During the year ending June 30, 1919, the Commission authorized issuance of $84,572,599.48 of public utility securites. During the year ending June 30, 1920, such securities, totaling $91,038,485.12, were authorized.

General Manager John A. Britton of the Pacific Gas & Electric Co. is quoted as having recently said that $500,000,000 will be required in the next ten years for electric development, of which $350,000,000 will have to come from the East.

In an address delivered to the Commonwealth Club of California recently, Prof. Frank Adams, Professor of Irrigation Investigations of the University of California, gave the following estimates of amounts that will be required in California for irrigation development, not including any enterprises still in the preliminary promotion stages nor large private projects, such as those on Feather River nor the smaller private projects which have been so extensive in the past. Neither do they include farm irrigation laterals and structures nor preparation of the land, features which will equal the cost of constructing the main works and will require as much financing one way or another:

Needed to carry out immediate construction plans of organized districts, and in the main already authorized by vote of land owners $12,000,000

To be needed during next five years by organized districts to cover contemplated work now definitely included in construction programs $23,000,000

Likely to be needed by new irrigation districts for which construction plans are now being prepared $44,000,000

Likely to be needed by new irrigation projects now in process of organization or active promotion $78,000,000

Bond issues contemplated within the next ten years by organized reclamation and drainage districts in the Sacramento-San Joaquin Delta in which irrigation is a feature $17,000,000

Total $174,000,000

Six major projects alone will require over $100,000,000 in the next five years, if the plans of their sponsors are brought to successful issue or definite beginning within that time.

Again we ask, who is going to furnish the money? It is morally certain that in a State being developed at such a stupendous rate, practically all the local capital will be required for local needs, including, among other items, the preparation of land and ditches and getting settlers established in production.

Irrigation Bonds Are Safe.

California irrigation district bonds are generally considered safe investments, in Caliornia. No default in payment of principal or interest has occurred on obligations of any California irrigation district organized or re-financed since the Wright Act was revised and re-enacted in 1897, according to Prof. Adams.

But We Must Convince the East.

But it is not enough that Californians should have confidence in our irrigation bonds, for Californians can not furnish the money to buy them. We must depend very largely on eastern capital. But eastern capital now regards our irrigation district bonds almost as a joke. The capitalists must needs study laws, personnel, political and legislative probabilities, etc., in every state in which they consider investing in irrigation bonds.

We have in California a variety and a superfluous number of commissions affecting various phases of public irrigation activity, and there is a consequent uncertainty of responsibility which makes the investor pause. In addition to this, while we have an official Irrigation District Bond Commission, whose duty it is to investigate the probable success of districts before authorizing them to issue bonds, they do not have enough power or finance to adequately assure investors of the safety of those bonds. If these conditions continue, the time will probably come when districts will have to pay outrageous interest on their bonds in order to sell them. Even now this is in evidence. One of the strongest districts in the State recently sold a half-million dollars of drainage bonds at an interest cost to it of 6¼ per cent. In this time of high cost of money, this may not be excessive, but it looks rather high for a public taxable corporation.

Convince East This Way.

Two measures may yet be taken before the market is flooded with irrigation and electric securities—measures which will give confidence to eastern investors and attract their money at lower interest rates.

One of these measures is to give the State Department of Engineering or some other competent official body such powers and appropriations as will enable it to investigate adequately the engineering and economic feasibility of all projects and refuse permission for doubtful projects to issue bonds: then exercise a certain control over expenditure of the money and administration of the district. This means sacrifice of some individual prerogatives, but it also means that enough capital will be made available and less interest will have to be paid.

The other measure is less vital and at present is rather nebulous. Some system of co-ordinating or consolidating all commissions and offices having to do with irrigation so that the various requirements of State Water Commission, State Railroad Commission, Irrigation District Bond Commission, State Department of Engineering, etc., may be expeditiously learned and fulfilled, might not save a great deal of expense to the State, but it certainly would expedite irrigation financing and development.

Agricultural Representation Necessary.

An effort was made at a recent Legislature to consolidate a number of commissions into a Board of Public Works, but it failed. In fact, the only consolidation effected by all the agitation preceding the 1919 Legislature was in the agricultural departments. This, however, has worked so well for two years that it may be easier next spring to extend the system to other departments of State Government.

The engineering and electrical features of the water problem would make it undesirable to include all water control under the Department of Agriculture; but certainly that Department should be officially represented on any Board of Public Works having any control of irrigation development. It is not now so represented on the Irrigation District Bond Commisison, although it is self-evident that the suitability of soils, elevations, and other agricultural conditions under proposed irrigation projects would have a direct bearing on the permanent value of their bonds and on the amount of money that could justifiably be spent per acre for the development. The Bond Commission now consists of the State Engineer, the State Attorney General, and the State Superintendent of Banks, all necessary for the purpose, but none of them logically capable of determining the agricultural values which would justify expenditures for irrigation.

The Legislature will do something about it next spring. What the water users and prospective water-users want may well be expressed in advance in every available way, including resolutions passed by their organizations.

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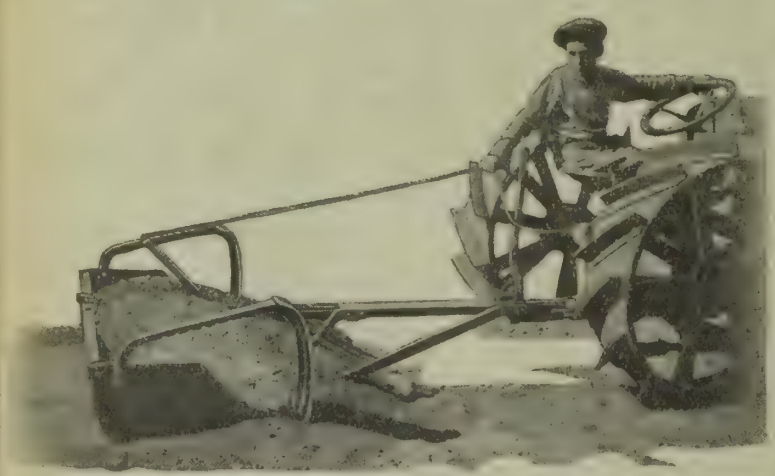

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STATE WATER STORAGE SURVEY URGED.

(Written for Pacific Rural Press.)

"In the light of the past year's experience resulting from water shortage," says the State Railroad Commission in its annual report to the Governor, "the Commission is of one mind in the thought that there is no endeavor which will more constructively tend toward development and prosperity of the State than the devising of ways and means for storage of water and its proper application to the soil and its use in the generation of electricity. . . . We believe that the problem of conservation and distribution of water is now and for the next quarter of a century will be a most important factor in development of the state's natural resources. Less than half of the total area of arable lands in the state susceptible of irrigation has an available water supply. We believe the time is past when the state as a whole can afford to sit by and wait for the spasmodic development of its water resources by individuals. The problem as a whole must be solved by the state as such; and it is our thought that now is the time for a comprehensive program to be outlined. This the state can do through its power in the enactment of laws and its ability to aid in financing. . . . It is urgent that steps be taken immediately whereby a complete investigation of all hydro-electric power possibilities and water storage possibilities be made in detail. Such an investigation must have in mind electrification of the railroads, the approaching exhaustion of oil and natural gas, and the possibility of additional irrigation. The Commission is of the opinion that such a task should be delegated to an appropriate state agency deemed best equipped to perform the work."

A similar recommendation is made by the Association of Irrigation Districts of Northern California and by the Sacramento Valley Development Board. The Irrigation section of the Commonwealth Club of California except the Eel and Salinas rivers, is urging a similar complete action. The California State Irrigation Association, which is formed to push the Marshall plan for complete use of all major streams of California, except the Eel and Salinas rivers, is urging a similar complete survey, probably by an unofficial body, to determine the feasibility of his plan.

Beyond any doubt, the Legislature of 1921 will consider and probably validate some plan for a complete official survey of our water power and storage possibilities.

Systematic Spraying, The Orchard's Salvation.

Written for Pacific Rural Press by W. S. Killingsworth.

On a recent trip through a prosperous fruit-growing section of Central California the writer's attention was directed to the seeming total neglect of many of the apricot orchards. Especially was this flagrant neglect noticeable among the older trees. Referring to such as a "crime against horticulture" expresses it mildly. One who is at all familiar with the beneficial results of a standard spray, applied with a standard outfit, under the supervision of an experienced orchardist, could readily see that many of these orchards had never been sprayed; however, if an attempt had ever been made at such several crops have been produced in the interim. The trunks and larger limbs were covered with a luxuriant growth of a green substance having the appearance of moss. The amount of new tree growth for the season was conspicuous by its absence. The leaves had appeared on the old wood and were prematurely drying up, not from a lack of moisture, but from starvation, accounted for by disease and pestilence that had sapped the wood and fruit-producing power from every tree.

Removing Winter "Moss" with Crude Oil.

This could easily have been remedied by a thorough application of crude oil emulsion at any time during the winter months which kills the moss, that will be removed by the rains and winds that follow. As this moss had been permitted to grow for years at least, in order to make a good job of removing it, it would possibly have required the addition of five pounds of caustic soda to the 100 gallons of water, well mixed before being placed in the crude oil emulsion. In some of the orchards, we casually observed, we are in doubt as to whether one application of the crude oil emulsion and caustic soda would have answered the purpose of making a clean sweep, but if such should be necessary, by all means repeat the dose the following season. That will be enough for awhile; every other year will do, as too much crude oil emulsion would be injurious to the life and prosperity of the trees. The writer is familiar with the use of crude oil emulsion, having used it for years with remarkable results, on all varieties of deciduous trees during the fall.

Horticultural Degenerates.

An imaginary line separated some of these horticultural "cemeteries," from three and four-year-old apricot orchards which had every appearance of having been well cared for by being systematically sprayed and pruned. The bark from top to bottom was clean and smooth, there was a remarkable growth, the leaves were very dark green, looked as though they had been varnished. These orchards were living examples of what is necessary to keep them in a healthy and productive state, while the aforesaid horticultural degenerates were a disgrace to the industry and dying examples of willful neglect or unmitigated laziness, either of which, or both, we are unprepared to say.

If we were horticulturists of the "stone hatchet" age, such neglect would naturally be overlooked, but there is no excuse for such in this age. A regular spraying program is now considered a necessity by every successful orchardist, the expense of which, treated as insurance, can no more be escaped than the outlay for cultivation, manures and pruning.

The Why and Wherefore of Spraying.

While spraying is a recognized part of orchard practice, the writer is more than ever impressed by the lack of definite information as to the underlying facts or reasons for spraying possessed by the average user of spraying machines and spraying materials. The best results can only be expected by those who understand the reason for spraying with a given insecticide for a given insect or pest at a stated time, therefore special emphasis is placed upon the timeliness of any spray to produce results. The known life history development of the parasite to be controlled determines the time, and therefore the best practice in securing control.

For example let us treat of the San Jose scale, conceded to be among the most disastrous orchard pests known to horticulture, whose successful control depends upon the use of strong sprays which are applied while the trees are in a dormant state. These principles apply to all fruit trees infested with this scale. So persistent is it in its work that no portion of the tree above ground escapes, and when abundant it attacks the leaves and fruit.

The Deadly San Jose Scale.

At one time a few years ago it was thought that the entire acreage of peach orchards of Georgia was doomed to final destruction by the San Jose scale. Many of the orchardists became discouraged and gave up peach growing entirely. The injury results from the scale insects sucking the juice from the plants. In the primary stages of the insect's attack, growth is checked, but as they multiply the rapid destruction of the leaves and twigs follow causing partial, and many times a total destruction of the leaves and twigs of tree or plant attacked.

When the attack is very bad on peach trees it takes but two to three seasons to put them entirely out of commission as a commercial producer, unless a vigorous effort is made to check the spread, while pear and apple trees will withstand their onslaught much longer. For the guidance of those orchardists who are not familiar with this insect and at the same time their trees are suffering the ill effects of their invasion, we will describe the scale as being small, grayish in color. The actual insect is beneath the so-called scale, this being a waxy covering for its own protection. Where trees are badly infested they are easily detected as the bark and limbs will present an ash-gray appearance, and on close examination will be found thoroughly incrusted with the scales, which, when scraped with a knife, will produce a yellowish, oily fluid. The foliage will also be covered, giving it a motley diseased appearance, easily detected on approachng the tree.

Hibernation and Development.

As the tree is dormant in the winter months, we will refer to the San Jose scale being "dormant" also, as it goes into a state of hibernation, so to speak, for during the winter it is in an immature condition, simply adhering to the bark of the tree awaiting developments both in itself and the tree, brought about by favorable climatic conditions in the spring. During all of this semi-lifeless state the small dark-gray blackish intruder is barely visible to the unaided eye. However, when the sap begins to circulate, the scale also has a movement of its own and in the due course of time the active males come forth from the male scales. After cohabiting with the females the males die. The females remain on the premises and continue to grow and in a very short while a family is in evidence—minute, yellow, oval creatures—these take up the fight. They crawl from place to place until they become satisfied and settle down for business. Their method of attack is by forcing the beak into the plant and at once commence to feed by sucking sap from the tree. It is a deplorable fact that the careless methods used in districts where the San Jose scale is known to exist, is primarily the cause of its promiscuous distribution practically all over this nation where fruts are grown. However, there are still fruit-growing sections where this insidious pest has not made its appearance, and no effort should be spared to keep it out, but its appearance in an orchard should not be the occasion of the destruction of otherwise valuable trees, in view of the fact that it can be controlled by thorough and painstaking work with spray.

Mode of Introduction.

The story goes that the insect is introduced into new territory, principally on nursery stock. However, that need be no excuse for under the present rigid laws requiring inspection of all nursery stock, no pests should be found on stock packed for shipment by a reputable nursery after it has been passed upon by an inspector who knows his business and intends to uphold the law.

The state and national governments have rendered great service in the matter of securing parasites known to be enemies of San Jose scale which have served successfully in its control where the parasites were in sufficient quantities to meet the enormous reproductive capacity of the insect. The every-where-to-be-found ladybug makes it very unpleasant for the enemy. These bugs are propagated at the state insectary at Sacramento and are shipped to all parts of the state where they have accomplished a great deal by destroying the scale.

The Surest Remedy.

But the surest remedy is the control by spraying with lime-sulphur solution. This is now perhaps the main reliance in the control of San Jose scale. Its use on dormant trees has proven to be without any injurious effect to the tree or fruit buds. The spray is applied in the spring before the fruit buds open, or, in the case of badly infested orchards both in the late fall and spring. In our use of the spray we found that one annual application properly applied was, as a rule, sufficient to hold the pest in check. The first application of spray should be made in the fall as soon as the foliage has dropped, using 12 gallons of lime-sulphur solution for every 100 gallons of spray, and if necessary to give the second spraying in the spring, let it be just as the fruit buds are beginning to swell, using 10 gallons lime-sulphur solution to each 100 gallons of spray. Should the trees be "case-hardened" by the excessive attack of the pest, there is a possibility of the lime-sulphur solution not accomplishing its purpose. Where such is found to be the case, it is advisable to make the first treatment with crude oil emulsion. This will have the same cleansing effect on the scale as it would on the moss on the trees we have mentioned. A great many orchardists may say, "I have no San Jose scale in my orchard; it's clean and produces well." That may all be very true, but how do they know they are not bothered with it? Constant examination of the orchard is imperative, especially where the scale is known to exist in certain localities. We would advise every orchardist after reading this article, to go at once and make a careful survey of his orchard, for it may mean a great deal to them in the end, as not only the San Jose scale, but many other pests are in the land, and they "must eat."

An effort to secure a modification of the ruling of the State Board of Health, relative to the sterilization of olives is to be made by processors in the Oroville district. The law now calls for the sterilization of all olives at a temperature of 240 degrees. Processors of bulk olives claim this is unnecessary for their product.

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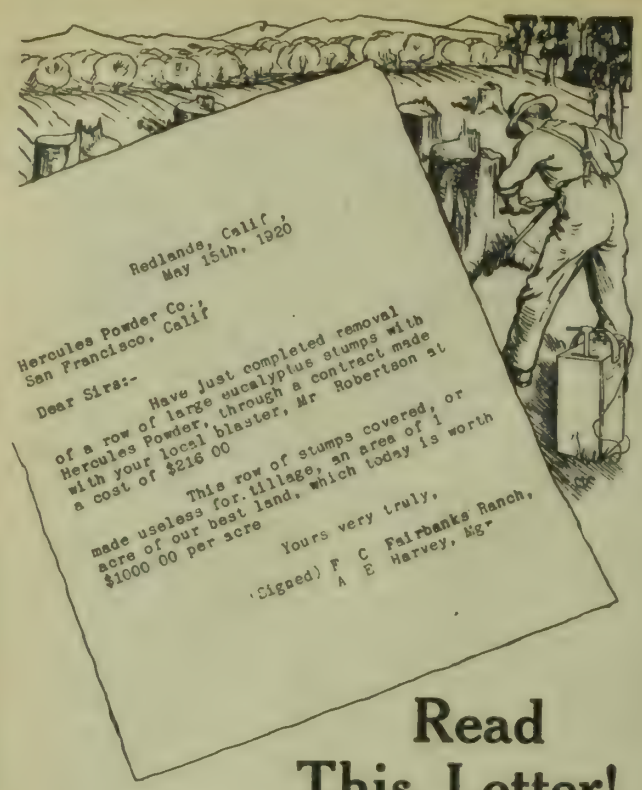

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High grade salt-cured alfalfa hay for sale.

Timely Work in the Orchard

(Written for Pacific Rural Press by W. S. Killingsworth.)

A Dangerous Tree Protector.

Where it becomes necessary to protect young trees against squirrels and rabbits, avoid the use of heavy grease of any kind, especially axle grease. As a matter of fact no caustic material should be used, as all such are very injurious to the trunks of young trees. Unless applied in quantities it will fail in results, and in such quantities the injury is manifest. There are other protections for young trees that protect without loss, a description of which may be found elsewhere in this issue.

House the Tools and Implements.

It has not rained much yet, consequently there has been no seeming need of being in any great hurry about housing the tools and implements on the farm. In these times of high prices it will not pay to allow valuable farm machinery to rust and crack from exposure to the inclemency of the weather. Draw it under a shed, and if there is not one on the ranch, build one; it may financially inconvenience the rancher, but better that than put several times the amount of shed cost into new and serviceable machinery at the beginning of another season. Under ordinary care a machine does not wear out for a long time unless rust is permitted to encroach upon its vital parts. So when the tool or machine is properly housed, get a good metal paint possessed of rust inhibitive properties and apply it, and next spring, when the clouds have rolled by, the machine will be as good as new.

Don't Pasture the Orchard.

How foolish, how inconsiderate of the welfare of an orchard is it, to deliberately convert it into a pasture when the crop is harvested? Should the orchard have been properly cared for in the matter of cultivation there would be nothing for stock to obtain in the way of food, consequently the browsing act would ensue, and it would be useless for us to attempt to picture the damaging results to tree and vine. Should cultivation have been neglected and obnoxious weeds allowed to run their course, all the better that they not be consumed by the stock but plowed under, so that they may act as a mulch and a fertilizer. Aside from all this, stock should not be allowed to tramp the ground in an orchard. Too much of this is really done during the long months of harvesting, by pickers tramping around the trees and orchard trucks continuously passing in and out. Let the ground rest and await the plowing season. Experience has taught us that where stock has run riot through an orchard a miserable job of plowing follows. The ground turns over in large lumps that are impervious to rain and impenetrable to the harrow's tooth or the clod-masher's weight. Especially is it the case should the orchard be pastured during or subsequent to the rainy season. It will be better by far to let the stock stand in the barn and "eat their heads off" than to injure the prospects of the following season's crop. We don't believe that the experienced orchardist will be guilty of such, hence this timely warning may be of benefit to the amateur.

Nursery Stock Scarce.

It may not be generally known that there is a scarcity of many varieties of nursery stock, and the orchardists will be compelled to curtail planting of those varieties, unless he placed his order early. Now, in order to assist our patrons in securing the varieties they are most in need of, we will lend whatever assistance possible in securing this stock. Many nurserymen are using the columns of the Pacific Rural Press as an advertising medium, and by that means it places us in close touch with them; in other words, we are in a position to get first-hand information that we will pass out to those who so desire it.

Protect Young Fruit Trees.

There is no chance for an argument that it is good business sense to pay six bits to a dollar for a tree f. o. b. nursery, add freight and expense for planting and then allow that tree to be gnawed to pieces by jackrabbits and ground squirrels, when, by a little pains and extra work, it can be easily saved. Where there are only a few trees, re-sets in an old orchard that is easy, corn stalks, heavy wrapping paper, or some of the more durable weeds that naturally grow along the creek bank, may be carefully bound around the young tree as a protection against the death dealing agencies heretofore mentioned. Now, where the acreage is extensive the aforesaid remedy would hardly fill the bill, therefore it would be more economical to invest in the regular tree protector manufactured for that purpose. They are easily attached and can be procured at a minimum cost. Feed is scarce, naturally these invaders will commence to work before the grower is aware of their presence.

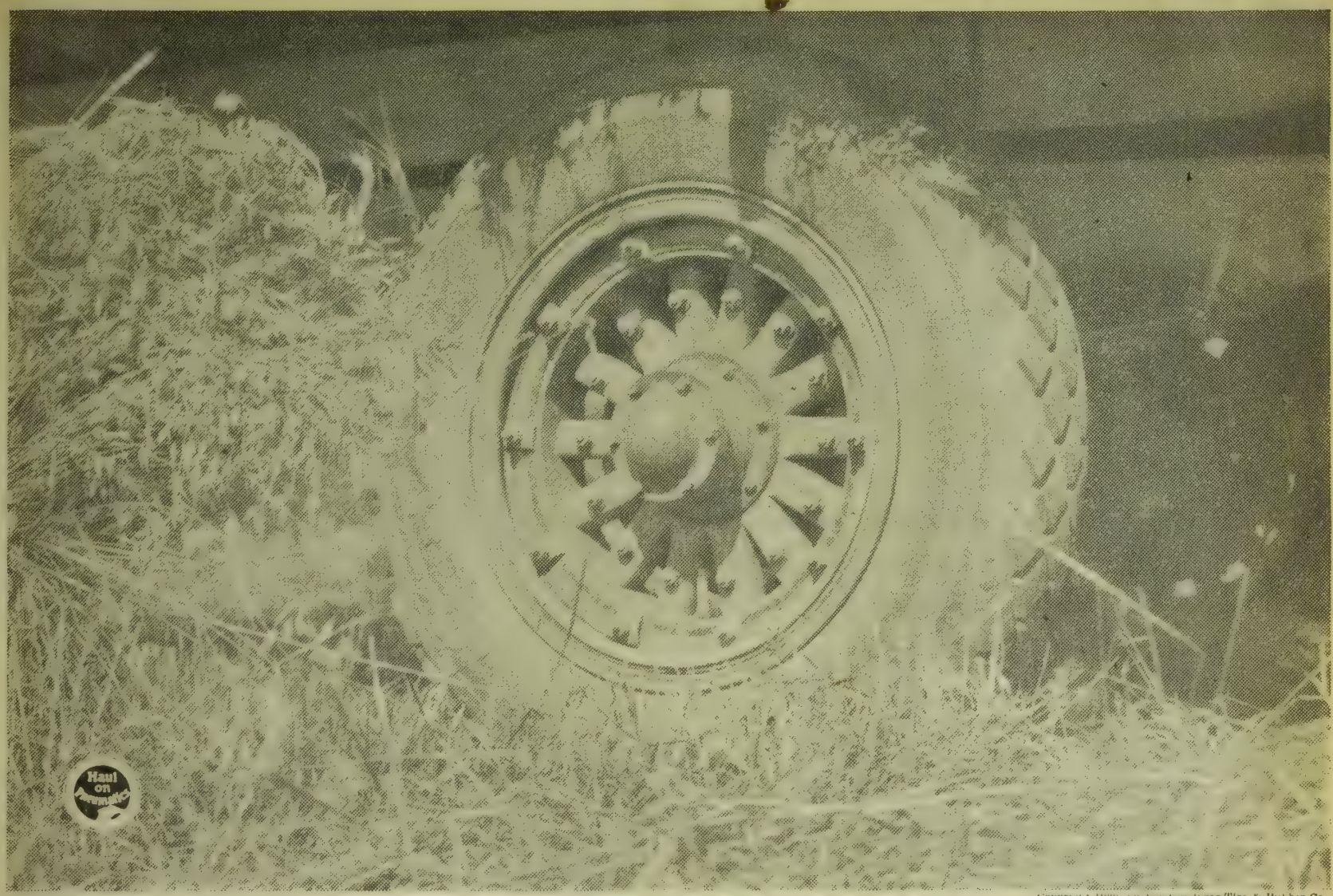
Start Cover Crops with Water.

Orchard cover crops must not be allowed to suffer for water while they are starting growth. H. Dewenter of Los Angeles county had his cover crop furrowed and was irrigating the day after he planted it when rain commenced to fall. He stopped and did not irrigate the rest for two weeks. There was a bad difference where he held off on account of rain.

FIGURING ON ORCHARD IRRIGATION.

I have a ten-acre walnut orchard in Alameda county about 1100 feet long with a hard road lengthwise through its center. A well at one corner will probably supply water, and I want to use underground pipe for distribution. The ground is level and so gravelly that a small stream would not go very far. Water remains in a pit 29 feet deep. How much water, how big a pump, and what horsepower motor will be required? How should the water be distributed? —G. J., San Francisco.

You would probably need ten acre-inches per acre per season in five irrigations. Two acre-inches per acre per irrigation on your ten acres would require a three-inch pump throwing 225 gallons per minute about 40 hours of constant running to irrigate the place once. You would not want to spend over four days to irrigate the orchard each time. With gravelly soil and this amount of water, even in your narrow orchard, it will be best to run your pipe line down the center and irrigate in both directions into furrows from standpipes with about six holes in each to spill water into six furrows. Place the standpipes close to trees so they will not interfere with cultivation. The same reason will require you to bury the pipe under at least a foot of soil. If you think you must leave the hard road through the center, it will be necessary to provide for transfer of water across it from the standpipes for one-half of the orchard. Surface irrigation pipe may be fitted with elbows to catch the water and carry it across the road. You will probably find the water level 35 to 40 feet below the surface while pumping. If you use six-inch cement pipe it will require a lift of seven feet above ground into a cement standpipe to overcome pipe friction to deliver the full stream at the far end of your pipe. Figuring on a total lift of 50 feet, a centrifugal pump delivering 225 gallons per minute would require a six-horsepower motor. Get a direct-connected pump and locate it on a platform in the pit at a safe distance above the high waterlevel.



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"The big Goodyear Cord Tires make a motor truck a real farm tool. I use mine to pull a hay cutter, or a rake, or an automatic loader, as well as to haul grain to the threshing machine and then to the barns for storage. The pneumatics roll through our peat bogs, 14 feet deep in places, which we use for fuel supply; teams can't go into them after rains, pneumatics can. I haul pure-bred Holstein stock to St. Paul, 80 miles, without appreciable shrinkage. Others take days to do the harvesting I do in hours—because of my truck on pneumatics."—E. H. Kuchenbecker, Owner, Oakcraft Grain and Dairy Farm, Owatonna, Minn., R. F. D. No. 1

THROUGHOUT agricultural America today there is many a farmer who can make a report similar to the one given above, regarding the all-round utility and value of a truck on Goodyear Cord Tires.

Just as the application of motor power quickens plowing, pumping, spraying, grinding and other farm operations, so does truck power aided by the active pneumatics quicken farm work in a large variety of ways.

All those tons of produce, stock and supplies that otherwise require such tedious toil in handling and hauling, are rapidly loaded and whisked between farm and town on the big, smooth-going Goodyear Cord Tires.

Farm products formerly limited to selling points only a few miles away, now have ready access by means of trucks on Goodyear Cord Tires, to markets sometimes 50 to 100 miles distant.

In the most strenuous of such duty these pneumatics demonstrate the rugged strength of their Goodyear Cord construction which makes possible that exceptional reliability with which they serve.

Farmers' reports of savings and advantages obtained with pneumatic-tired trucks and other motorized equipment, will be mailed on request by The Goodyear Tire & Rubber Company, from Akron, Ohio, or Los Angeles, California.

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CORD TIRES

BEEMAN

Boys Run Beemans

PLOWING, HARROWING, CULTIVATING, and other light jobs are so easy with a Beeman that boys can do the work. Write for details.

Distributors: Northern California
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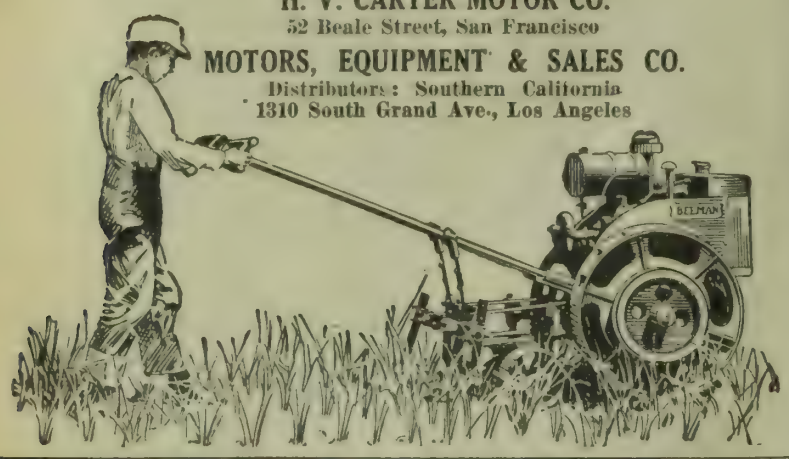

Fruit Trees

That Produce

Plant Trees That Grow!

We have been in the nursery business for a good many years and we have learned the best varieties adapted to the various soil and climatic conditions of this state. This experience is yours for the asking. Start right and success is yours. Start wrong—and you're headed for sure disappointment.

Write for Price List.

And at the same time, tell us the kind of trees you want and the number desired. We specialize on family orchard collections.

Elmer Bros. Nursery

"The Nursery That Helped to make Santa Clara Valley Famous."

76 So. Market St., SAN JOSE, CALIF.

THE SEAL OF SUPERIORITY IN TREES
Orenco

PEAR and APPLE PLANTERS

We solicit your inquiries regarding your needs in Pear and Apple plantings, either for home or commercial orchards. Our trees are especially fine this year and feel certain you will find ARENCO TREES just what you want for your orchard needs. Oregon trees mature early, thus enabling us to deliver them to you in time for early planting.

Good Trees at reasonable prices.

OREGON NURSERY CO.
ORENCO, OREGON

GET A CUSHMAN ENGINE
FOR YOUR SPRAYER
Put one on your old machine or specify Cushman engine when you order a new sprayer. The Cushman is RELIABLE.
Write for information
CUSHMAN MOTOR WORKS
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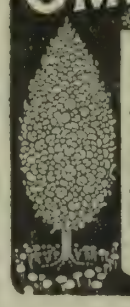
ORNAMENTALS



Trees, Plants, Shrubs direct from nursery to you. For windbreaks, hedges, and beautification. WRITE FOR CATALOG, which illustrates and describes best varieties for California conditions.

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MORGANHILL-CALIFORNIA

40 Cords a Day

Easily Sawed by One Man with new OTTAWA. Get your own fuel at less than 2c a cord, then supply big demand for fire wood at $20 a cord up. **Beat the Coal Shortage!**

OTTAWA LOG SAW

Over 4 H-P. 310 strokes a minute. Wheel-mounted. Easy to move, cheap and easy to run. Engine runs other machinery when not sawing. New clutch lever starts and stops saw while engine runs. **Cash or Easy Payments. 30 Days' Trial. 10-Year Guarantee. Send for Big FREE BOOK and Special Low Factory Price NOW. Write to**

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Big Money Boring Wells

One Man One Team

Have water on your own farm. In spare time make wells for your neighbors. It means $1000 extra in ordinary years, double that in dry years. No risk—no experience needed.

Outfits for Getting Water Anywhere

Earth augers, rock drills and combined machines. Engine or horse power. *Write for easy terms and free catalog.*

LISLE MFG. COMPANY
Box 712 Clarinda, Iowa

Here and There in the Fruit Business

Many Grapes Will Be Planted.

The unprecedented prices that have been obtained for both table and wine grapes will be the cause of a large acreage being planted to many varieties. The Pacific Rural Press is in daily receipt of many inquiries about grape cuttings and rooted vines, which goes to prove that if such can be obtained the increased acreage planted to grapes will be far ahead of any season known. This revival of the grape industry is possibly due somewhat to recent rulings by the United States revenue department on the matter of wine-making for home use. We cannot resist the temptation of suggesting that one had better give the matter some consideration before going heavily into the grape industry, especially the wine varieties, as great pressure will be brought to bear to place an embargo on the manufacture of wine in any quantity and with any "kick." As for table grapes, soil and climatic conditions will play an active part in the amount of tonnage annually produced regardless of acreage. Like many other fruits there are hundreds of acres planted to table grapes, totally unfit for such, while other fruits would produce to the best advantage. Simply because one has a piece of land that has all the "ear marks" of productiveness, is no criterion that it will produce grapes, and it would be best not to experiment as such is costly even under favorable conditions, but where localities are proven to be ideal as table grape producers, we see no reason why a selection of varieties best suited to those localities should not be planted to grapes. California grapes are fast gaining a substantial hold in all markets of the country and their popularity will continue to increase as long as shipments come up to a standard of excellency.

California Handling Eastern Apples.

Like "shipping coal to Newcastle," New York state apples are being shipped to California—rather a novel coincidence, nevertheless it is true. It is said to be the first carload of eastern apples to be shipped to California. This was a car of hand-picked apples shipped from Canandaigue, New York, to Long Beach. The car was made up of Baldwins and Northern spies. It contained 600 bushels. Freight rate charges will total $1 per bushel.

Tree Fruit Shipments Over.

Exclusive of apples, the deciduous tree fruit season has closed, leaving the trees and ground ready for the pruning shear, saw and plow. Apples are practically harvested; those that are not were held on account of shortage in labor, a lack of storage room and transportation facilities. A few cars of winter pears continue to go from Watsonville and San Jose districts. This fruit is mostly intended to be stored in the eastern cities for use during the winter and spring. Quinces and pomegranates have been harvested, however, as the acreage of both is of little consequence in comparison with the rank and file of tree fruits. It requires but a short while to dispose of the fruit.

Acquire Timber Lands.

The California Peach Growers, Inc., have acquired large timber rights from the government. The contract provides for 60,000,000 feet of lumber. Anticipating its fast growing needs in box material prompted the association to take this step. In addiion to this large amount of lumber the association has completed the purchase of approximately 10,000,000 feet from the Yosemite Power Co. All of this material will be required by the association for dried fruit containers. The great advantage in securing this large lot of lumber is the association is assured of a supply of lumber and shook as is needed. This is not a new venture for the peach association for they are now closing the second successful year of lumber mill operation, the total cut for the year being nearly 7,000,000 feet.

Grape Shipments Continue Heavy.

The splendid spell of open weather we are now experiencing and the increased supply of refrigerator cars are aiding greatly in the movement of grapes from all districts. The splendid prices that continue to prevail for both table and wine grapes will be the cause of every available ton being shipped. The second crop, which has heretofore remained on the vines, or sold at a minimum price to the wineries, are being picked and shipped to eastern markets. While prices have ranged far above those obtained in former seasons, we are told by shippers that on account of increased freight rates, high cost of material used in packing, and high cost of labor, when the trial balance is taken off at end of season there will not be that profit the layman would figure.

Apple Prices Improving.

Word comes from Watsonville that the apple packing houses are now under full headway. A large part of the season's crop is now in boxes, ready for shipment. Market conditions are strengthening. Prices are firmer for Newtowns. Bellflowers have also stiffened up and packed fruit is selling higher than two weeks ago. Shipments are going out at the rate of 35 to 40 cars daily. More would be shipped if cars could be had. On November 3, 1920, there had been shipped 1647 cars of apples—988 local and 649 cars to eastern points.

Car of Persimmons from Vacaville.

The first car of persimmons to be shipped from Vacaville was grown and shipped by H. A. Bassford, on the celebrated Ulate's Ranch. This car of persimmons was shipped direct to New York, to be handled by the Pioneer Fruit Company.

ANTS MENACE FRUIT TREES.

"Consider the ant, thou sluggard!" The Argentine ant has in recent years multiplied himself into a serious pest of orange trees and orange pickers. In some groves the pickers spend a very appreciable share of their time trying to keep clear of the ants. Do these pests injure the blossoms or fruit, or twigs or leaves? Not to any extent except perhaps by going after nectar in the flowers of deciduous fruits. Their delight is in the honey dew secreted by scale and aphid insects which really do harm the trees. They increase the flow of honeydew by increasing their herds of insects by protecting them from parasites which otherwise would kill them off. They even transplant them to more

CALIFORNIA FARMS AND FARMERS INCREASED RAPIDLY.

California has 117,690 farms by the recent census. This is a 33.4 cent increase, since 1910, as compared with a 1.4 per cent increase in the United States as a whole. Twenty-five states show decreases. California figures show rapid development and a third bigger consuming power than ten years ago, not only for foods, clothing, furniture, and building materials, but also for all farm machinery and equipment. Still, one who on this date drives for hours in various districts of our big and little grain-producing valleys scarcely seeing a farm house, knows full well that the number of farms in California will increase far more rapidly in the next ten years. This is especially evident from the general rush of big landholders in the past year to put their land on the market in relatively small tracts. It is a good movement for all concerned.

Pear Blight

If you intend planting pears, you will want to know all about PYRUS USURIENSIS, the new Asiatic pear stock, by aid of which 75 per cent of blight peril may be eliminated and orchards doubled in value without increase of planting cost.

Can be supplied by no other Pacific Coast nursery this season. Sold under guarantee to refund price if blight-killed within TEN YEARS. For particulars, write.....

Loma Rica Nursery

Pear Specialists.
A. L. Wisker, Mgr., Grass Valley, Calif.

BARTLETT PEAR ON JAPAN ROOT:

We have a fine lot of yearling Bartlett, as well as Bosc, Anjou, Comice, Flemish Beauty and Winter Nelis.

These trees are grown on new soil, never before in nursery stock, are well rooted, clean, healthy and hardy. Hundreds of thousands of our trees in all parts of the west are now bearing profitable crops for their discerning owners.

We also carry a complete line of general nursery stock, all of which is guaranteed to please you.

Remember our prices cover freight and packing charges.

WASHINGTON NURSERY CO.
Toppenish, Washington.

SAVE MONEY—BUY PIPE FROM US

Farmers, Miners, Builders—people in every kind of business are saving money buying used or renewed pipe from us. We sell every kind of pipe. Send in a list of your requirements today and get our prices. We have saved hundreds of people 33 1-3 to 50 per cent on their pipe bills. Here's a partial list of some of the miles of pipe we have in stock for immediate delivery.

8,000 ft.	6 in.	Riveted	16 gauge
700 ft.	8 in.	"	16 "
5,000 ft.	12 in.	"	12 "
1,000 ft.	18 in.	"	12 "
800 ft.	22 in.	"	14 "
300 ft.	24 in.	"	14 "
500 ft.	36 in.	"	12 "

10,000 feet light wrought iron 8-inch pipe with cast-iron collars.

All above pipe thoroughly overhauled and inspected and ready for immediate use.

We also have large quantity standard pipe and screw casing, pressure tested and guaranteed.

Don't delay—write for our prices on your pipe requirements today.

PACIFIC PIPE COMPANY
229 Howard Street, San Francisco, Cal.

CRESOLITE

makes

STUMPS HUMP

also willows and all brush. Money back if it don't.

LOUIS BAHRS, Loomis, Cal. Agents wanted.

RHUBARB Wagner's GIANT

—NOW BEST TIME TO PLANT—
Growers Harvested 15 Tons per Acre First Year—So Can You
ORDER YOUR BERRY PLANTS NOW
Send for Special Rhubarb and Berry Price List. J. B. WAGNER, Rhubarb and Berry Specialist, 1550 E. Villa St., Pasadena, Calif.

favorable locations. It has been proved that soft brown scale, for instance, have disappeared soon after the ants were killed off. One of the notable ant infestations in California includes about 2,000 acres on the San Bernardino-Riverside county line. According to Horticultural Commissioner J. P. Coy, the farm bureaus and horticultural commissions of both counties are co-operating with owners of infested groves. The owners have organized, elected a chairman, and appointed an ant committee and inspector in each district.

The procedure is to hang a dilute sweetened poison in flat two-ounce spice cans on the tree trunks close to the regular trails, followed up and down by the ants. The poison is prepared on a formula worked out by the U. S. Department of Agriculture and may be obtained locally in bulk or in the cans. A few strands of excelsior are inserted in the poison syrup. The ants get loaded up with the syrup, which does not kill them immediately. They carry some of it to the egg-laying queens and they all die. The cost is five to eight cents per tree. Arthur H. Borden of the U. S. D. A. writes in the San Bernardino county Farm Bureau Monthly that the poisoning is best done late in March, early in April, or during September and October. Extermination has been accomplished in a number of cases.

THE FRUIT AREA OF SOUTH AFRICA.

(Written for Pacific Rural Press.)

While it is beyond the peradventure of a doubt that California is the world's Mecca for fruits, we must not lose sight of the fact that other countries produce some fruit as well. We are in receipt of a copy of "Commerce Reports," issued by the Bureau of Foreign and Domestic Commerce, at Washington, D. C., in which we find the following report from United States Vice-Consul C. J. Pisar, stationed at Cape Town, South Africa.

"According to an agricultural census taken in 1918, there was in the Union of South Africa at that time over 2,500,000 citrus fruit trees, 2,172,000 apple, 1,162,000 apricot, 6,000,000 peach, 1,144,000 plum, 97,000 mango, 206,000 nectarine, 789,000 pear and 2,400,000 other kinds of fruit trees—a total of 16,470,000 trees. While the acreage set to grapes is not given we know that the growing of wine grapes is quite an industry, beginning as far back as 1654, when wine grape vines were introduced into the colony from the Rhine provinces, and in 1659 the first wine was made. While stationed in the city of London in 1896 as a buyer of Spanish, Italian and Sicilian fruits, at the auction rooms of Covent Garden and Pudding Lane, there our attention was first called to the horticultural products of South Africa, which we found to be up to the standard of the average fruits from other sections of the world. The orange was highly colored, sweet and juicy. As a matter of fact we have no criticism to offer that would detract one point from the commercial value of any of this fruit. Special notice might be given of the splendid grading and packing which stands to reason must be given preferred attention, owin to the time consumed in transporting this fruit by steamer from South Africa to the English markets.

GRASSES DORMANT THROUGH SUMMER.

Grasses claimed by H. L. Musser of Los Angeles, a pioneer experimenter, to be hardy against drouthy periods are Paspalum and Satoria. The former was represented at the recent cattlemen's meeting in Los Angeles by a bunch which was dry in September but had become green again following an irrigation. Ability to lie dormant through drouth periods and revive when rains come is a cardinal requirement of every perennial dry range grass in California. The Satoria sample was tall and rather coarse—recommended for sandy soils, tenacious of life, and a great multiplier from sprouts which grow from the root crown, but not in the nature of Johnson grass.

—Orchards Call For Overcoats—

Winter is at hand with its heavy rains. The health of your peach, apricot and plum trees demands protection during the dormant season when the trees are bare of foliage.

Fungus enemies get in their work at this time. But there's a sure way of combating them. By acting now, you can insure their better health, vigor and fruitfulness. They are entitled to the "overcoat of health" found in

Orchard Brand

BORDEAUX PASTE, 32-36 lbs. or BORDEAUX POWDER, 16-18 lbs. } per 200 gal. tank

If scale insects are present, or if more sticking qualities or penetration are desired, add Miscible Oil and Glue to the above formula as outlined in our Deciduous Bulletin.

Shot-hole fungus, Curl Leaf and Anthracnose cease their attacks on trees sprayed with this mixture as we prepare it. It's an old-fashioned health garment but we make it in a new-fashioned and less-expensive way.

Used now—before the rains come—it ends the orchard troubles prevalent during the dormant season. It puts your trees in shape to receive the healthful spraying that must follow later on.

Your free copy of our latest bulletin on deciduous spraying will be sent on request. Our expert entomologist, Paul R. Jones, will advise you—but write today for his bulletin.

INSECTICIDE DEPARTMENT

BALFOUR, GUTHRIE & CO.

350 California Street
SAN FRANCISCO

Lindsay Warehouse
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FIG TREES

EXTRA QUALITY—TWO TO SIX FEET IN HEIGHT
ORDER AT ONCE WHILE TREES ARE AVAILABLE AT THESE PRICES
10c EACH—In Orders of 2500 or More
12½c EACH—In Orders of 1000 to 2500
15c EACH—In Orders of 1000 or Less
We are contracting now for future delivery in all varieties of Fruit Trees and Vines at Similar Prices

E. H. THOMPSON'S NURSERY
LE GRAND CALIFORNIA

FRUIT TREES

We can still supply a limited number of trees.
Write for our price list

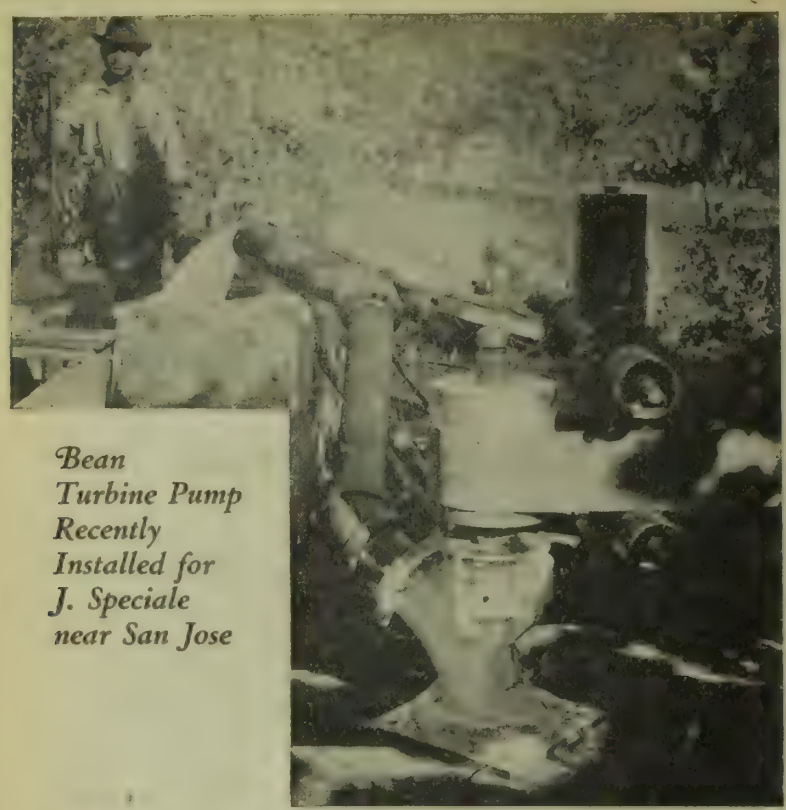
The Fresno Nursery Co.
Fresno, California

NURSERY STOCK

PLACENTIA AND EUREKA SPECIALISTS
NURSERIES—VENTURA and LOS ANGELES COUNTIES
R. E. Pierce OXNARD, CAL. A. G. Snow

HARDING GRASS—PLANT IT NOW

ADVANTAGES: is a perennial—grows all winter—endures quite heavy frosts—grows all summer with little moisture—"Animals are crazy for it"—is easily eradicated—On good soil will produce 3 tons to the acre from one cutting—Does well on granite soil. Furnishes a rich abundant pasture without irrigation for 7 to 10 months, according to conditions and locality—Multiplies rapidly—"Try again."
Strong, well-rooted plants, price—100, $1.00; 1,000, $4.00; 10,000, $30.00
A. LAFORGE, NEWCASTLE, CALIF.



Bean Turbine Pump Recently Installed for J. Speciale near San Jose

WATER!

The water level in Mr. Speciale's well was getting so low that his old vertical pump was almost useless. Instead of digging the pit deeper and trying to use the old pump a little longer, he installed a Bean Turbine in the same well and solved his water problem for all time. You can do the same. Sign the coupon.

BEAN SPRAY PUMP CO.
111 W. JULIAN ST., SAN JOSE, CALIF.
Branches: Fresno Los Angeles

Bean

Turbine Pumps

(Clip Out and Mail)

BEAN SPRAY PUMP CO.
111 W. Julian Street
San Jose, Calif.

Distance to water below surface of ground.....
Probable distance to water when pumping.....
If water is to be raised above surface of ground, how high? (Length and size of pipe line).
Volume of water desired (Gals. per min.).....
(Inches
If you have pit, give width..... *length*
depth.....
H.P. of motor or engine if you have that equipment
Give total depth of well.....
Inside Diameter of well...
Is well straight and true?.....
Is electric power available?.....
Name
Address
Rural Route No...
(50-PS) *Box* .....

"GROZ-IT" BRAND
Pulverized Sheep Manure

IN BAGS OR IN BULK. NOT LIKE ORDINARY MANURE.
"Groz-It" is well aged, dry, free from weed seeds and foreign matter. Odorless. Can be applied with a drill.
A Complete Fertilizer. Cheap and efficient.
Minimum Guarantee
2.25% AMMONIA. 1.25% PHOSPHATE ACID. 3% WATER SOLUBLE POTASH
1 ton is equivalent to from 5 to 7 tons ordinary barnyard manure
CALL OR WRITE
PACIFIC MANURE FERTILIZER COMPANY,
429 Davis St., San Francisco, Cal.

Your Soil Needs Humus and Nitrogen Bacteria
Melilotus Indica Supplies Both

Now is the time to plant it. Buy only seed that has a quality test tag on every sack. It protects you against seed of low germination.
Buy from your local dealer or from
Aggeler & Musser Seed Co.
Look for the Tag LOS ANGELES, CAL.

RELIABLE
MARIOUT
BARLEY SEED
HAS
Greatest Yield Record. Our Seed Is COMPETENTLY TESTED FOR HIGH PURITY.
H. G. STEVENSON. JR.
Winters, California

Agricultural and Mechanical Service

Rains Should Not Reduce Hay Prices.

What effect will the recent rains have on the hay situation?—W. S. K., Alameda county.

Since most of our hay is consumed by horses and dairy cows, neither of which will reduce hay consumption on account of the plentiful grass which is now appearing, the rains should have very little reasonable effect on the hay market except where hay was spoiled and made still more scarce. Beef cattle and sheep normally eat but a small proportion of our hay crop and most of that is for fattening purposes, which will not be reduced by abundance of grass. The State will be fortunate if rains continue, so we may have plenty of grass, for without it, the price of the small available amount of market hay in the State would go up out of proportion to the profits that could be made by feeding it.

Wheat for Humboldt County.

What variety of wheat would be suitable to plant in this section for chicken feed—something that yields well and matures early? Should it be sown in the fall or spring, and how many pounds per acre?—S. H. W., Humboldt county.

Defiance is about the only variety that will resist rust in your country. With you, Rust resistance is more important than early maturity. Plant as soon as you can get around to it, about 90 pounds per acre for the first trial.

Hairy Peruvian Advantages.

What advantages has Hairy Peruvian alfalfa over the common Chilian variety? Would you recommend Hairy Peruvian for this section, where the soil is sandy?—F. F., Southern Stanislaus county.

Hairy Peruvian alfalfa planted extra thick and given plenty of water has shown itself able to outyield common alfalfa considerably and under the conditions mentioned, the hay from it is practically as good for cow feed. It continues growth at lower temperatures in late fall and early spring than common alfalfa, and thus furnishes more green feed in the winter, especially if you pasture it. We would recommend this variety in your case, provided no substitution is practiced by the seller. The higher price for seed encourages dishonest substitution by irresponsible parties.

Curb for Sandy Well-Pit.

I put down a 30-foot well-pit alongside a ditch in rather sandy soil, which becomes liquid when the ditch is full. I curbed the pit with wood and it caved in this spring. I want to put in a curb that will hold. Do you think a cement stave silo used as a curb would hold? The staves are 2½ or 3 inches thinck and very strong. I thought of putting in a cement pit twelve inches thick at the bottom, tapered to six inches at the top and reinforced, but the cement stave pit will cost only half as much.—C. M. B., Tulare county.

The cement stave silo mentioned will resist the pressure from outside if it is properly put together and bands well tightened around the outside. It will probably not be water tight.

Lime in Vineyard.

I am buying lime at $7.00 per ton, to apply on young Muscat vines on light, powdery white ash soil. How and where should it be placed and worked into the soil?—K. G., Fresno county.

Do you have reason to believe that your soil needs lime? If it has shown poor growth of legumes, or if you have given it a good test and found it acid, try half a ton per acre applied with a drill or broadcasted between the rows where you can plow it under, the sooner the better. For best results it should be in powder form Leave two or three narrow strips across the vineyard unlimed and watch and report to us any difference you may observe in growth of vegetation, vines, or grapes.

Farmers Need Workmen's Compensation.

As first enacted, the provisions of the Workmen's Compensation Act I believe were not intended to apply to farmers. Has there been any legislation or judicial decisions since then which would make it advisable for them to elect to come under its provisions? Some of the farmers and dairymen up here have been advised to do so.—J. P. B., Humboldt county.

Any farmer who employs help more than ten days at a time may well elect to come under the provisions of the Workmen's Compensation Act, which limits his liability for damages to injured employees and costs far less than a lawsuit even if successfully fought. If you do not come under this act, you will be liable to an expensive lawsuit at any time under the general liability law, and there is no limit to what it might cost you.

Cutworms Like This.

I would like a good cutworm poison recipe.—K. G., Fresno county.

A recipe clipped from the Pacific Rural Press about ten years ago has been used by W. M. Barcus of your county, who reported recently that it has given the best of satisfaction. The formula follows: 100 lbs. bran, 10 lbs. middlings, 5 gals. cheapest molasses, 10 lbs. powdered arsenic, 10 gals. water, 1 gal. glycerine. 1. Mix middlings and bran together. 2. Mix water and molasses by themselves. 3. Mix these two mixtures thoroughly together. 4. Pour the glycerine onto this mixture and stir. 5. Sprinkle arsenic powder over this sticky mash and stir. 6. Stir and stir. This will take care of 12 to 15 acres. Tablespoonful to each vine.

What Is Corn Fodder Worth?

What is the value of corn fodder with corn on it that has not quite ripened?—R. M., Shasta county.

If properly siloed at this stage with addition of water, it is worth about 25 per cent more for feed than if the ears were removed, cured, ground, and fed with silage made of the stalks from which the ears had been removed, as tested out by Prof. F. W. Woll, now of the California University Farm. The fodder alone with leaves very dry and with ears removed contains about 50 per cent of digestible nutrients, but probably half of this is wasted in practical feeding. The corn would probably dry out about 15 per cent of its weight before it could be safely stored, and then it would probably be worth 15 per cent less than the same quantity of corn well matured on standing stalks. On this basis, if you have three tons of soft corn on the cob per acre, its dry matter might equal that of about 5100 pounds of cured corn, but would equal not over 4,335 pounds of cured corn in feeding value. In other words, your immature corn on the cob is worth a little less than 75 per cent of the same weight of well-cured corn, besides being difficult to store, transport, or market. On the 75 per cent basis, your acre of corn for grain might be worth $65 if it were husked and could be marketed. In its present condition probably it is worth $50 for local use. The fodder alone, if well cured in shocks, might be worth at present prices of hay about $7 per ton or $20 per acre. Are any of our subscribers getting $70 per acre for shocked corn fodder with the ears on f. o. b. the ranch, and what is the tonnage per acre?

Using Fire Clay.

How is fire clay mixed and used?—L. D. V., Amador county.

Mix with water into a thick paste and apply in place. Let it harden before building fire against it.

The Parrish irrigating ridger is a new machine. Two 28-inch disks throw dirt toward the center to make a neat ridge. They are adjustably fixed on a frame which rides two wheels and permits great variation in distance between disks. It is raised and lowered by two hand levers.

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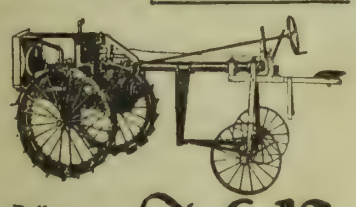

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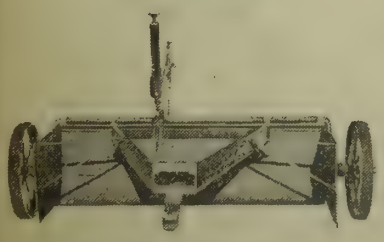

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BOYS LIKE FARMING THIS WAY.

(Written for Pacific Rural Press.)

At Fresno, October 29-30, all the agriculture teachers in the Valley schools met in conference with the "Ag. Club" leader, who represents the Farm Bureau and University. They discussed such questions as "a partnership percentage deal between father and son" as a means of making the boys' work a vital factor in holding the boy to agriculture; "a farm management project," whereby the boy under competent supervision would become the farm bookkeeper and get lessons in better farm planning and management; "a farm mechanics' project" and "the community program of work of the Farm Bureau," and they earnestly talked over the problems met in putting over their agricultural work with the boys and girls. The thing that impressed this reporter was not so much the projects discussed, but the spirit and point of view of the men themselves. These men are regular farmers themselves—that is, they see and plan as farmers and with the farmer rather than the school in view, and with the boy himself most of all in view. We have clamored for agriculture in the school. Well, we are getting it, only (glory be) it isn't in the school at all, but on the farm where it belongs. And it is being developed by real sons of the soil for sons of the soil. It is only the boy who wants to study agriculture but has no "blessed dirt" at home who must be provided for at the school. All the rest will do the job right on the old home place. You have rather belittled the boys' club work, have you? You haven't encouraged your boy very much, hey? Well, now, you stop and think! You have "hollered your head off" for agriculture in our schools. That is exactly what boys' club work is, and it is up to you to get right behind it and pull for it, and sacrifice for it, and, in every way possible, help the men who are working to put it over. You will do these very things if you are in earnest about wanting agriculture taught in the schools, and if you love the boy and want him to stay on the farm and make more of a success of it than you have made. It is a shame that these teachers of agriculture have to spend so much energy getting the fathers lined up. Line yourselves up and let the club leaders give all their time and energy to the boys.

FEDERATION OF AMERICAN FARMERS.

At the October meeting of the State Board of Directors of the Federation of American Farmers, it was decided that steps be taken to secure inspection of electric meters by some official with power to act in the matter for protection of power consumers.

Overloaded motor trucks and stages engaged in commercial transportation were discussed and the secretary was instructed to gather information as to laws now in existence and unenforced for the regulation of these abuses. He is to report to the Board at the November meeting.

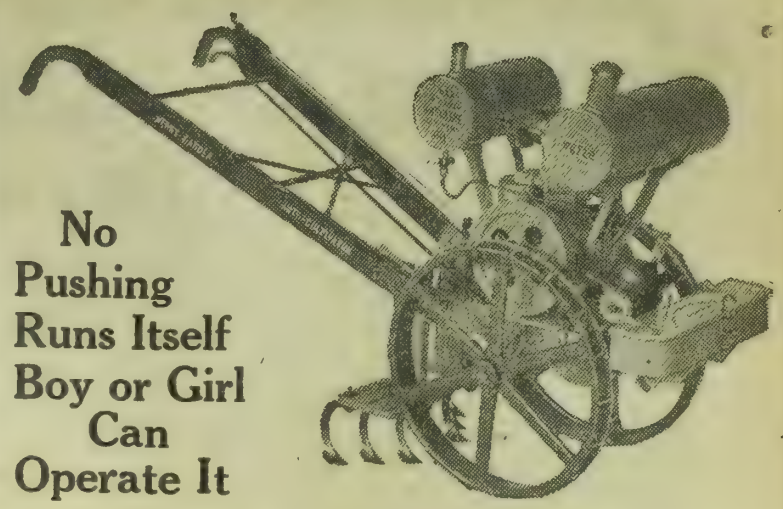
The secretary was instructed to write U. S. Senator Arthur Capper, endorsing his proposed bill for suppression of gambling in food grains for future delivery and pledging the support of the Federation. Copies of the letter were ordered forwarded to every California Senator and Congressman.

Many complaints were voiced to the effect that the State Railroad Commission does not send notices to farmers when matters affecting their interests are under consideration, resulting in decisions made on ex parte statements of facts.

The secretary was ordered to ask the Railroad Commission to notify the Federation so that farmers affected shall have full and timely notice of such hearings through this organization.

State inspection of grains and the establishment of State grades, such as are in force in many other states and also providing for return to farmers of all valuable dockage, was favored and a committee was suggested to draft such a bill for passage by the next Legislature.

Solve the Labor Problem



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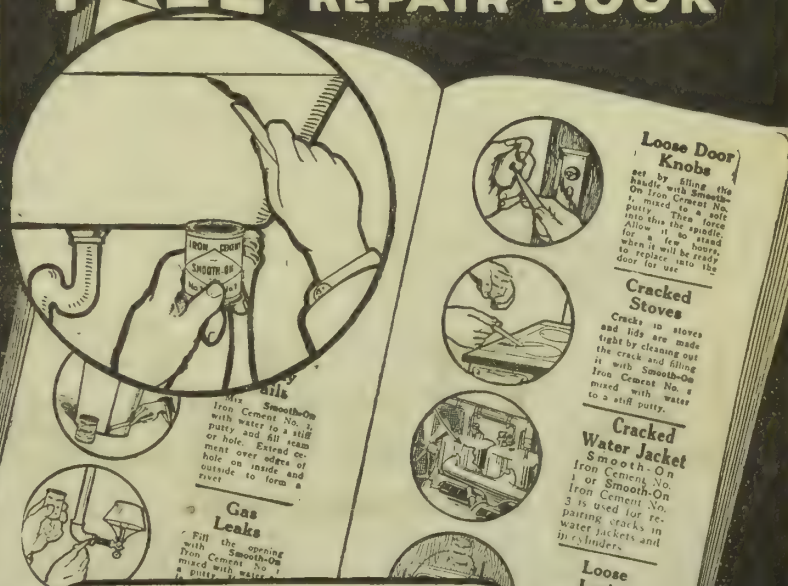

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SIGNIFICANT AGRICULTURAL POINTERS

World Breadstuffs Decreased.

World cereal production in 1918-19 was three million tons less than the five-year average preceding the war. The twelve leading countries of western Europe produced 20,000,000 tons less in 1918-19 than the five-year average preceding the war. Africa, Asia, Australia, South America, and North America grew about 17,000,000 more than in the pre-war period. Over two-thirds of this increase was in North America. Wheat and rye consumed in 1919 in the twelve European countries mentioned was 26 per cent below the pre-war average. Substitutes still are prominent in the European diet and will continue so long as financial exchange rates cripple European buying power. But we may depend on it that Europe will buy all the wheat she can pay for.

Wheat Cotton Profits to Somebody.

"I have positive information that the world's wheat situation is such that a very slight holding movement among American farmers will lift the price of wheat. I know that the world can not go much longer without cotton. The 1920 crop is not a large one. The spindles must have our cotton in a short time. Within a few months they will be coming to us for cotton. It is now a question as to whether the speculator or the farmer will carry these crops. The farmer cannot afford to do otherwise this year." Thus spoke President Chas. S. Barrett of the National Farmers' Union at a general conference of farm organization representatives in Washington recently. Our further question is, "Will the banks prefer to help farmers or speculators, the Federeal Reserve Bank in particular?"

Alfalfa Silage Failed.

Alfalfa silage failed on the Rancho San Julian in Santa Barbara county this year. First-cutting alfalfa, with a little foxtail, was siloed rather green and wet. A mildewed smell was noticeable after a day or two; and when fed this fall the cattle would not clean it up nor could they fatten on it. No more alfalfa will be made into silage in the near future.

Rice Association to Boost Demand.

Louisiana and Texas rice crops are large this year; and Burma, Saigon, and Siam will export millions of tons, according to R. C. Mason of the Dealers' and Millers' Rice Association of California. Mr. Mason calls attention to the present critical situation, in which growers, millers, bankers, and all others involved may experience disaster. The association is taking early steps to create a heavy home consumption of California rice for the sake of strengthening demand. The millers and bankers are perhaps as critically involved as the growers, for they have heavy investments in the numerous mammoth new mills erected in this state within the past three or four years. This is a case of a common cause with growers, and the solution of the problem is the same for both millers and growers—stimulate consumption of the California crop.

Should Speculators Be Financed?

"It is almost more important than anything else in the marketing problem between producer and consumer that the producer receive at least the cost of production. Anything less spells decreased acreage, and decreased production with consequent shortage and higher prices," said Secretary F. N. Bigelow of the State Market Commission at a recent meeting of the California Bankers' Association: "If it were possible, I would strongly urge upon the banking system such a policy as would permit loans to growers to temporarily tide them over periods when to sell at the market spells severe loss. For the grower to be put in a position to get his cost of production does not mean speculation. If such financial aid is withheld, the very desire of the Federal Reserve Board to minimize the

use of its facilities for speculative purposes is controverted. Cotton, for instance, must be absorbed by the mills fairly evenly throughout the year, and therefore should be fed to them gradually. If the cotton grower, for lack of financial aid, is forced to dump at a sacrifice, someone else must hold the cotton and thus is enabled to reap the speculative profit."

Mariout for Tulare and Kings.

A 42-per cent greater average yield of Mariout than of common barley planted side by side under the same conditions is reported from five ranches in widely separated parts of Tulare county. Mariout averaged 14.2 sacks, while common barley averaged 10 sacks. In all cases, Mariout ripened about two weeks earlier. Prof. G. W. Hendry of University Farm reports several large shipments of Mariout seed destined for the Tulare Lake region where early ripening is desired to reduce hazard of flooding when snow melts in the mountains in spring.

Globe Artichokes Going East.

Motor trucks are saving the globe artichoke industry for the Halfmoon Bay district of San Mateo county, where most of the artichokes shipped east from California are grown. Abandonment of the Ocean Shore Railroad recently left the industry without transportation except by road, fourteen miles over the coast range into San Mateo or farther into Colma. About two carloads per week are going east from San Mateo county and one carload from Santa Cruz county, according to Manager J. L. Debenedetti of the Halfmoon Bay Artichoke Growers' Association. The season is earlier this year than usual, and the artichokes are bringing around $7 per box in the East, though they must still compete with eastern vegetables. Regular apple boxes are used by this Association though drums are used by some other growers. Transportation, icing, etc., now cost around $2 per box. Shipments will continue at three or four carloads per week until February when the heavy movement will commence, as forecasted by Mr. Debenedetti.

Fertilizers Increased Alfalfa.

Lime mixed with flowers of sulphur more than doubled the yield of alfalfa on sandy loam of the Westport district of Stanislaus county in a careful experiment carried out under auspices of the Farm Bureau the past season. Superphosphate alone nearly doubled the yield. Sulphur alone and lime alone increased the yield about 25 per cent. Half-acre blocks were treated and one was left untreated. The mixed lime and sulphur consisted of 500 pounds slacked lime and 100 pounds of flowers of sulphur on the half-acre. In four cuttings after the fertilizers were applied, the following results were secured: No fertilizer, ½ acre yielded 3,330 pounds hay: lime alone, ½ acre yielded 4,258 pounds hay; sulphur alone, ½ acre yielded 4,160 pounds hay; superphosphate, ½ acre yielded 5,320 pounds hay; lime and sulphur, ½ acre yielded 7,688 pounds hay.

Select Seed Corn Early.

There is absolutely no doubt in the mind of any person informed on the subject, that proper selection of seed corn will increase the yield year after year over what it would be from seed indiscriminately obtained. The time to select such seed is when it is pretty well ripened, but before the crop is picked. Some California ranchers are practicing this already, and more will do so as they become convinced of its necessity. Not only the size of ear, uniformity and depth of kernels, relative size of cob, time of maturity, etc., should be considered, but also position on stalk and nature of stalk.

Australian Grain Elevator System.

The last country in the world outside of California to abandon sacks for grain handling is Australia, which is going about the big job in earnest. A "co-operative" elevator company, capitalized at nearly $2,500,000, has been organized at Adelaide to build a complete system of country and seaport elevators. The Government seems likely to help in the financing. Bitter experience with sacked grain on the docks during the war has borne fruit.

CO-OPERATION IN JOAQUIN VALLEY.

(Written for Pacific Rural Press.)

The Stanislaus and Merced County Farm Bureaus held a joint meeting in the form of a picnic on the banks of the Merced river near Livingston, October 30. Among other encouraging things, Merced reported a fire control that saved the county $55,000, forty fine carloads of hogs sold with a net saving to farmers of $5,000, eleven agriculture clubs and 1,600 cows on test. Stanislaus held up her end with an increase of 33 per cent in membership, 3,331 hogs sold at a saving of $9,035 and 14,263 cows on test. The Tri-County Farm Bureau Exchange—Stanislaus, Merced and Madera—just getting under way, reported 400 members signed up in a month—"pretty good shooting," as the manager remarked. If you are a bit dubious about co-operation among farmers, you should have attended that picnic. There was just one word on everybody's lips and that was co-operation. Wylie Giffin, of the Raisin Growers' Association, made a stirring appeal for it, prefacing with the remark that the great problem now was not how to sell co-operatively, but how to do it "and keep out of jail." The response to his address, as well as to the statement of Walter Packard, superintendent of the Delhi Land Settlement, that co-operation was the only thing that could keep agriculture from breaking down, indicated that the farmers would rather go to jail than to back up.

SOME RICE CROP HERE.

With the rice harvest of the Willows district only about half over and every warehouse filled to overflowing, the storage of the remainder of the rice crop is becoming a problem. The low prices offered have materially curtailed shipments, which normally relieve the storage situation.

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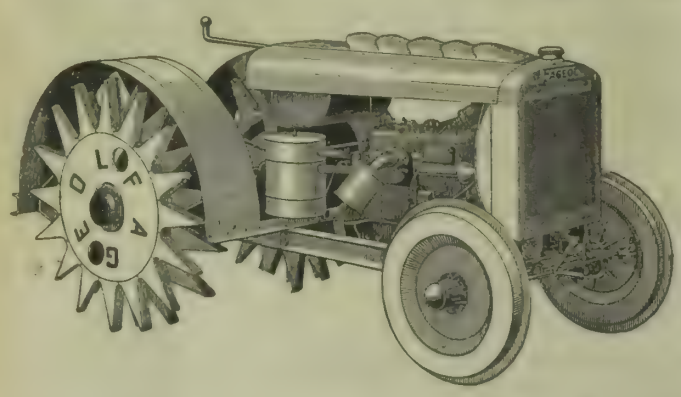
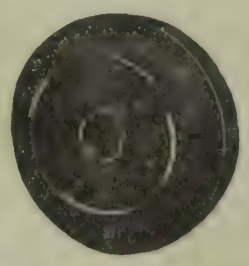


DELAVAL
IRRIGATION PUMPS



High Efficiency Saves Power

The above illustration shows the impeller of a DeLaval irrigation pump. It is made of bronze and highly polished in order to reduce friction and pitting when exposed to water. Each individual impeller is designed to meet the special conditions for which it is required. It is then tested in factory under these actual conditions.

This is one of a series of advertisements explaining the different parts of the DeLaval Irrigation Pump.

Write for Booklet on "The Selecting and Testing of Centrifugal Pumps"

HERZOG ELECTRIC & ENGINEERING CO.
179 Steuart Street, San Francisco

(8)

Mechanical Power on the Farm

Prepared for California power-farmers, at the request of the California Tractor and Implement Association, to increase public knowledge of the practical points of Power on the Farm.

MINIMIZING FRICTION.

(Written for Pacific Rural Press by C. W. Stratford, Consulting Engineer Associated Oil Co.)

Lubricants are wonders of the physical world. Without them every-day utilities would immediately become miracles. If lubricants were suddenly wiped out, practically all mechanical motion would come to a creaking stop and civilization would fall back a thousand years.

The resistance to motion of one surface sliding over another is defined as friction. The miracle performed by lubricants is to reduce friction to a point of negligible interference to such motion.

All materials possess peculiar frictional characteristics. There is solid friction and the friction of fluids. Fluid friction never is more than a minute fractional part of that of solid friction. Considering solid friction, though seemingly smooth to the eye or touch, all surfaces are made up of microscopic "hills" and "valleys." When one solid surface is brought into contact with another, these hills and valleys interlock and resist motion, causing rapid wear. The function of a lubricant is to fill up the "valleys" and substitute fluid friction for that of solids. The interposed film of lubricant, therefore, holds apart sliding surfaces preventing interlocking, thus protecting them from wear.

As illustrations of high and low friction, we all know how hard it is to slide rubber footwear over a hard, dry surface. On the other hand, we all know equally well what a shock is experienced to our walking balance when we inadvertently step on a banana peel. That banana peel is a lubricant or friction eliminator.

Were it possible to manufacture an ideal engine oil, its properties would consist of unchangeable viscosity at all operating temperatures; an oil that would suffer no chemical decomposition during use and in which fuel, products of combustion (either gaseous or liquid) would be neither soluble nor miscible. Unfortunately no such substance is known, but the nearest approach to it is a properly refined hydrocarbon oil.

The important properties to be considered of the best hydrocarbon oils used for engine lubrication are correct viscosity for the operating temperatures of the engine, minimum volatility of the oil at such operating temperature, maximum durability in use and an appropriate cold test to meet atmospheric starting temperatures. A good oil, like good steel, is made or ruined by the methods of treatment in the course of its manufacture. A well-tempered piece of steel answers all requirements of service. If it is too hard it breaks; if it is too soft it bends. So, by analogy, a poor oil will break up into non-lubricating sediment, on the one hand, or boil away and give little service by its fleeting presence. Good oil will remain to perform its work of lubrication. The refiner must have a clear conception of the conditions under which the engine oil is to be used, and so adjust his manufacturing processes as to produce oils that will best meet service requirements.

All will agree that the best means of knowing the qualities of engine oils, whether good or poor, is by the efficiency of the service rendered. For the user to test out all the engine oils offered him on the market would be far beyond his time and resources. It is therefore necessary for him to depend upon the assurance of the refiner that oils recommended for specified purposes have each and all been tried out and proved satisfactory. Just as the user is limited as to the number of oils which he may try out in actual use, so is the refiner limited as to the methods of tests available for his investigations. The best test that the refiner may apply is in a motor-oil testing laboratory where the oil under investigation is used for the lubrication of various internal combustion engines. Besides engine tests the determination of volatility, susceptibility to oxidation and miscibility with water also throw much light on the desirable qualities of the best engine oils.

THREE YEARS OF BULK-GRAIN POWER FARMING.

Seventeen thousand acres of wheat were harvested, threshed, and warehoused in 50 days this summer by Moreing Bros. of the Natomas reclamation in Sacramento county. Much of this wheat was moved to Stockton mills by barge during the same 50 days. The stubble is being turned under now in a strip 45 feet wide at the rate of two or three miles per hour. Sounds like a true California tale, doesn't it? We told something of the reason for such rapid disposal of wheat harvest and stubble in our issue of November 9, 1918. It is due to the use of seven tractors of 75 horsepower each, seven combined harvesters, each cutting a 34-foot width, and carrying five-ton bins to handle the grain in bulk, seven motor trucks to take grain from harvesters to river landings, and 35 horses for odd jobs. At the time of our previous article, Moreing Bros. had just discarded 45 four-horse teams in favor of the seven motor trucks; and although the haul is not long, those trucks have proved their economy by three seasons of heavy use.

Until this fall, the fields have been plowed only three inches deep, and a plowpan has formed that helps account for a rather low yield the past season. At this writing, three of the tractors are each breaking up that plowpan in strips 180 inches wide and eight inches deep. Rapid early plowing is necessary on such a big job, because wheat must be sown early—before December, if possible.

No trouble has been experienced in getting help for the big job—only a small fraction of the ordinary amount of help required at harvest and plowing is needed here because of the big use of machinery and the bulk handling of grain. Bulk handling also saves a great deal of grain formerly lost from torn or rat-eaten sacks. An electric motor elevator belt empties the bins into barges on the river. Power farming has proved necessary here after long trial.

ELECTRICITY TEN MILES FROM A POWER LINE.

Half of the housework is saved for Mrs. C. W. Brockman of Imperial county at a cost of less than a dollar a week, and Mr. Brockman gets a lot of benefit from the same investment for his own ranch work. Electricity is the good servant, though the Brockman's live ten miles from a power line. They are "simply rich" with electric lights, installed wherever they want them about the house and barnyard and even in trees of the yard.

About a dozen lights run all evening on the average about the ranch. Mrs. Brockman has an electric washing machine, she makes electric toast (the best kind), she sews for the family with a machine run by electric motor, she irons the clothes without a fire, and even pulls dust out of rugs and carpets into a bag where it does

not fly all over the furniture and into her lungs.

A sixteen-cell storage battery, delivering 32 volts is stepped down by a transformer to six volts with which the automobile battery is recharged at home with no loss of time chasing to town to have the job done. Four cells of the battery are used for ignition on a two-horsepower engine, which runs machinery in the ranch blacksmith shop. All of this electrcity is furnished by a machine which cost $450 and requires about three gallons a week of kerosene to run the engine which runs the generator. Could you deprive this rancher and his wife of electricity if it cost three times as much? "Not by a jugful."

GAS MILEAGE WASTED.

The average automobilist is wasting 25 to 30 per cent of his gasoline by using too rich a mixture as indicated by recent tests of the U. S. Bureau of Mines. A tunnel for motor cars 8000 feet under the Hudson River to connect New York and New Jersey is proposed. The amount of carbon monoxide and carbon dioxide given off by motor cars would kill the motorists unless ventilation were provided. To determine how much of poisonous gasses are exhausted in order to determine the amount of ventilation which will be required, the investigators borrowed about seventy cars and trucks then in ordinary use. They operated these cars without changing their carbureter adjustment, using special apparatus to measure gasoline consumption and poison gases in the exhausts. Many passenger cars and trucks showed as high as 10 per cent carbon monoxide in the exhaust. Carbon monoxide should have been burned more completely to produce power. The engineers estimated that 25 to 30 per cent greater mileage could be gained on the average of all cars tested, if the carbureters should be most economically adjusted. This would save a lot of gas on the approximately 7,800,000 automobiles in use in the United States.

POWER NOTES.

A power-lift automatic-shutoff grain drill is the new model Van Brunt handled by John Deere. Pull a little rope and an arm engages a hook, which turns over, disengaging the gears and closing the grain openins. Each half works independently of the other to enable it to finish a narrow strip economically.

Imperial valley is irrigated with water from the Colorado river, which deposits so much silt in the canals that they must be periodically cleaned out. Much of this cleaning on the bigger laterals is done by use of big V scrapers, each drawn by four seventy-five horsepower Caterpillars, two on each bank of the ditch where that arrangement is possible.

CAUSE OF DECLINE IN WHEAT.

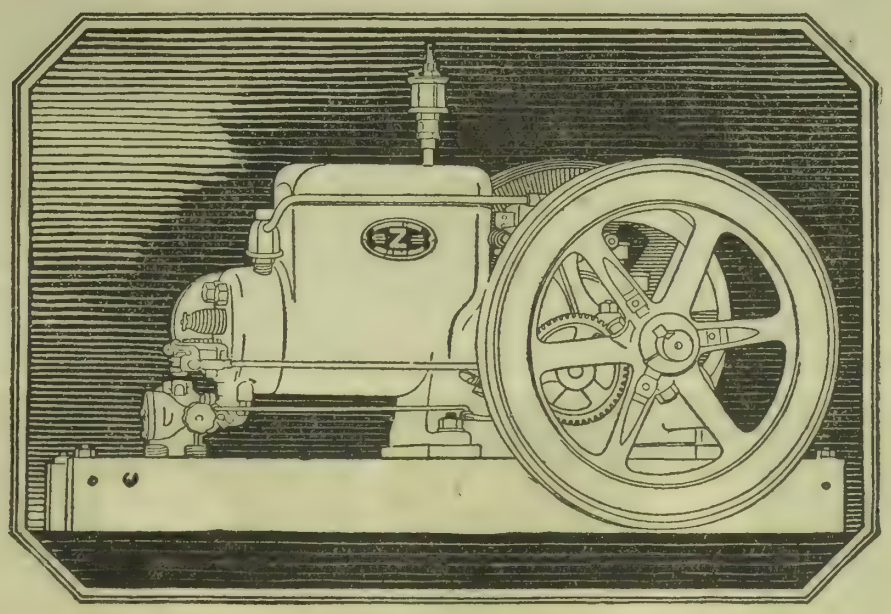
President Howard of the Farm Bureau Federation quoted figures at a recent agricultural-credit conference at Washington, D. C., to prove that there is an actual shortage of 200,000,000 bushels in the world's visible supply of wheat and that the United States surplus is already oversold, giving rise to the prediction that wheat in this country will sell for $3 to $3.50 per bushel before another crop is harvested.

He ascribed the present break in prices to the manipulation of wheat traders, who sold enormous quantities of futures at high prices to foreign buyers before the crop was harvested, and are now bearing down the price so that they can fill those orders at enormous profits to themselves.

One of Many of the Same Kind.

To the Editor. We greatly appreciate your Service Department. We consider this new Department one of the best of the many good things the Pacific Rural Press has done for its subscribers, and think it will be of much benefit to all of them as well as to those who use your advertising columns. With best wishes for your continued prosperity.—H. G. S., Jr., Winters.

FAIRBANKS-MORSE "Z" FARM ENGINES



As Clean Cut as a Thoroughbred

The clean-cut business-like design of the "Z" Engine was not just accident. A farm engine, to be efficient, *must* be properly designed. The "Z" has graceful, natural lines—free from geegaws.

The parts are strong—weight where weight is needed. Strains foreseen—contact parts case hardened—*all* parts carefully, precisely made by accurate machine work.

Looks like a thoroughbred—*is* one. Delivers a steady flow of power—runs smoothly—operates economically. Correct design and precision methods give the "Z" its built-in quality. It is a mighty pleasing engine to look at.

Other "Z" features are: Runs on kerosene, as well as gasoline; Bosch magneto; more than rated power; parts interchangeable; long life.

Let your nearby dealer show you why you should have a "Z."

PRICES:

1½ H. P.	$ 85.00
3 H. P.	135.00
6 H. P.	220.00

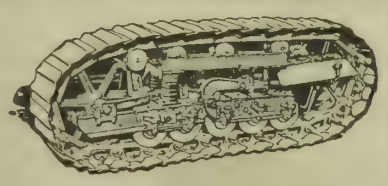
All F. O. B. Factory

FAIRBANKS-MORSE QUALITY F M 100%

FAIRBANKS, MORSE & CO.

MANUFACTURERS — CHICAGO

Western Branches: Los Angeles; Portland; San Francisco; Salt Lake City; Seattle.



No Slippage

The long, wide track of the "Caterpillar" Tractor distributes the tractor's weight over so great an area that the ground pressure per square inch is negligible. At the same time it serves another purpose—prevents slippage on any ground surface.

Eliminating slippage prevents power waste—puts the power where it is wanted, in pulling force at the drawbar. That's why the "Caterpillar" Tractor leads in power.

The Holt Manufacturing Company
Stockton, Calif. Peoria, Ill.
Los Angeles, Calif. Spokane, Wash.
San Francisco, Calif.

CATERPILLAR
Reg. U. S. Pat. Off.

The name "Red Crown" is your guarantee of an all-refinery gasoline with a continuous chain of boiling points.

STANDARD OIL COMPANY
(California)

RED CROWN GASOLINE

RED CROWN GASOLINE

The Gasoline of Quality

Fifty-Third Fruit Growers' Convention

(Written for Pacific Rural Press.)

Convention Hall, Fresno, Cal.,

Nov. 9, 1920.

Fresno is today the mecca of the fruit, farming and nursery interests of California, more than four hundred fruit growers, farmers and nurserymen from all parts of the state are assembled in convention in the city of Fresno during the present week. Preliminary to the opening of the Fruit Growers' and Farmers' Convention, the California Association of horticultural commissioners held a meeting Monday, attended by more than 100 persons, including commissioners, state and government officials. In addressing the Association, Director Hecke asked that a delegation be sent to the next annual meeting of the Western plant quarantine board, which will be held during next May. This board was created at Riverside in May of 1919, and at that time was advocated for plant protection on the Pacific slope. The place of meeting of the board will be announced shortly through the State Department of Agriculture. The discussions before the horticultural commissioners were largely technical, the activities of the meeting centering around the question of plant quarantine together with state and federal legislation on the subject. Lee A. Strong, the new chief deputy quarantine officer of California emphasized the danger of invasion of California by the dreaded alfalfa pest. According to Strong, after the channels of trade are closed against Utah and Idaho on alfalfa hay, efforts have been made to dispose of the alfalfa crop from those states by processing it and shipping it as alfalfa meal.

Many momentous problems were discussed Tuesday by the delegates to the Fruit Growers' and Farmers' Convention, and the discussions were led by interesting addresses by experts in every line of the industries represented at the great gathering, which is one, if not, the most important that has ever taken place, not only in Fresno, but in California. The main address was delivered by G. H. Hecke, State Director of Agriculture, who reviewed the past year and outlined the intentions of the department for the future. Willam Glass, past president of the Fresno Chamber of Commerce, in opening the convention, dealt with the problems now before the county in regard to co-operative marketing. An account of the full proceedings of the convention will appear in the next issue of the Pacific Rural Press.

Auto Machinists---Auto Repairers---Garage Men---Draftsmen---Vulcanizers---Ignition Experts---Trained Men of Every Kind in the Automobile and Engineering Lines are in Big Demand at Good Pay. : : : : : : : : :

Any of these trades may be learned quickly and thoroughly at BUTLER'S big automobile school—classes both day and night the year round—easiest thing in the world to begin work here—no previous experience needed—you work with tools from the start—always under the eye of an expert—you learn by actual practice on engines, motors, lathes, dynamos, batteries, magnetos, etc., the quickest and best way to learn—

MAIL THIS COUPON

W. L. BUTLER, Gen. Mgr.,
Heald's Engineering & Automobile School,
1220 Post St., San Francisco.

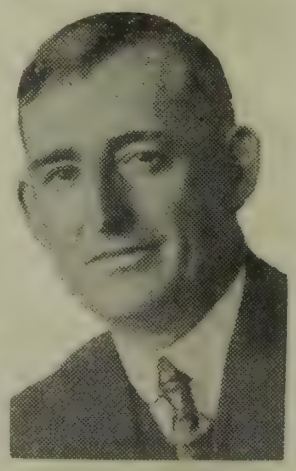
Please send me information about the courses checked below:

—Auto Mechanic
—Battery Expert
—Gas Engineer
—Vulcanizer
—Auto Driver
—Auto Repairman
—Civil Engineer
—Elect. Engineer
—Mech. Engineer
—Architect
—Concrete-man
—Draftsman
—Ignition Expert
—Practical Electrician
—Oxy-Acet. Welder and Cutter
—Auto Course for Car Owners

Name .....

Address .....

BUTLER'S Engineering and Automobile School will help you to rise as you work—Classes both day and night—The largest—best equipped—most reliable auto school on the Pacific Coast—three stories of modern equipment—machine shops—electric shops—vulcanizing shops—repair shops—lathes—forges—drill presses—planers—32 expert instructors—2000 students annually. Many short, high-speed courses—no vacations—enter at any time.



W. L. Butler

SALT LAKE CITY CATTLEMEN'S CONFERENCE.

Cattlemen who are interested in their own welfare, and which of them are not, should not forget the conference called for December 6th, 7th and 8th at Salt Lake City. Probably the most important matters to come up for consideration will be those of marketing and financing through Federal aid. As the meeting is to include cattlemen from the twelve westernmost states, their interests are more or less identical.

President Bixby and Secretary Stollery of the California Cattlemen's Association, who have been instrumental in arousing interest in this conference all over the territory mentioned, are very sanguine there will be a large attendance, but wish to impress on all interested in the cattle business the necessity for attending and placing their views before the assemblage.

BEEF CATTLE NOTES.

E. A. Noyes & Son of Sutter City have recently sold all their grade "White faces," and in the future will breed nothing but registered Herefords. They report crops in their holdings as very good.

Supt. E. E. Peterson of the Diablo Stock Farm reports that he mated thirty purebred horned Hereford cows with a Polled Hereford bull and of the get, twenty-eight were without horns.

H. H. Gable, proprietor of the Diamond G Ranch, north of Esparto, who breeds registered Herefords of supreme quality and conformation, reports feed as short in his locality, no rain having fallen since last spring.

John A. Bunting, secretary of the Pacific Coast Hereford Breeders' Associaton, has left for the East to attend the Kansas City Royal. Before he returns he plans to visit the prominent Hereford herds of the Middle West.

Balfour, Guthrie Co. shipped a Polled Hereford bull to Australia last week. The bull was raised by F. W. Denny, Rowan, Iowa, and was purchased at the Los Angeles sale. The Diablo Stock Farm has had her in charge since the sale.

The Cattle Protection Board has caused the arrest of two men for cattle "rustling" in the Button Willow district. The cattle were recovered near Corcoran with brands and earmarks changed. The arrested men are out on $5000 bail.

Fred H. Bixby of Long Beach states that he bought 1400 feeder steers at 8 cents and is feeding them on beet tops but must move them when rains come and must sell them by January 1st at a three cent spread in order to make any money.

The Cleveland National Forest in San Diego counuty is becoming overgrown with brush which reduces its grazing value and some cattlemen are wanting to burn it off. But if it is burned off, erosion by winter rains will make it still less valuable, as stated by good authority.

The San Julian Rancho, owned by the Dibblee Estate of Lompoc, recently sold to Mr. Driscoll of San Luis Obispo, a registered Shorthorn bull and heifer. Mr. Driscoll has just started a registered herd with these animals and some heifers from the Santa Margarita ranch.

Five years ago there were seven herds of registered Herefords in New Mexico. Now there are 68 such herds, according to John B. Bowman of that state who showed Polled Herefords at Los Angeles. He estimates that there are nearly 6000 registered animals of this breed in his state including all strains.

Recent sales reported by the Diablo Stock Farm at Diablo, owned by G. W. Emmons include 8 polled Hereford 2-year-old heifers to O. E. Hollister, Lompoc; one Polled Hereford heifer to H. Messinger, Jumal; one 2-year-old bull to Powers Lumber Co., Oregon. Manager Peterson also states they have recently purchased the entire herd of Polled Herefords owned by Jno. McGillivray of New Mexico, consisting of 31 females and 12 bulls.

Hereford Breeders' 5th Consignment Sale

"They say," dollars won't grow, but it seemed to be the unanimous opinion at the fifth public consignment sale of the Pacific Coast Hereford Breeders' Association that an inch of rain all over California would have increased the average at Sacramento on Thursday of last week. The quality of the offering was good enough to justify an average somewhat greater than that of approximately $342. The trend of affairs all over the country, however, seem to be against the higher averages of a year ago and we may take the prices obtained as an indication of a return to normal in all walks of life the cattle trails included.

Space forbids a discussion of the offerings in detail, but taken as a whole the cattle were a mighty good lot of White faces, and wherever they may go will be a demonstration for better stock.

The top of the sale in the female line went to the University of Nevada consignment—the second time they captured this place—when Cazier paid $700 for the cow Pamella with bull calf at foot. The honors were equally divided among the bulls as Plumas Duke 2d from the Barngrover consignment and Mission Chief from Bunting's each brought $700, and both went to Howard Tilton of Madrone, who evidently means to cover the hills in his country with the best of Herefords. Mr. Tilton purchased ten head, including the two bulls just mentioned.

Frank Vanatta, veteran Hereford breder and judge of Fowler, Ind., L. I. Case of the American Hereford Breeders' Association, with headquarters at Kansas City, Mo., were present and assisting the management on the pedigree side.

The detail of the sale follows:

BARNGROVER CONSIGNMENT.

Name of Animal	Buyer	Address	Price
Plumas Duke 2d	Howard Tilton	Madrone	$ 700
Ann Bly 2d	Wm. Briggs & Son	Dixon	385
Patrician Sue	Dr. O. T. Daley	Porterville	300
Ada Elmore 3d	Nortridge Bros.	Banta	300
Inez Donald	Howard Tilton	Madrone	325
Miss Repeater 100th	Howard Tilton	Madrone	$ 260
Miss Perfect 2d	Dr. O. T. Daley	Porterville	200
Miss Tempter 19th	Howard Tilton	Madrone	225
Goldie Perfect	J. H. Cazier & Sons	Wells, Nevada	300
Kate Fairfax	Dr. O. T. Daley	Porterville	250
			$3,245

BUNTING CONSIGNMENT.

Mission Chief	Howard Tilton	Madrone	$ 700
Carnation 2d	Howard Tilton	Madrone	500
Trixie	J. G. Roberts	Madera	150
Miss Gay Lad 51st	Howard Tilton	Madrone	350
Lady Rainier	H. M. Barngrover	Santa Clara	490
			$2,190

CAZIER CONSIGNMENT.

Lady Generous	Ed T. Morgan	Northam, Nev.	$ 225
Bearer 2d	Dr. O. T. Daley	Porterville	360
Eldena 2d	H. J. Buchanan	Dutton Station	250
Carnation Girl	E. A. Noyes & Son	Sutter	475
Tulasco Lass	H. M. Barngrover	Santa Clara	475
Begin	J. A. Niles	Porterville	300
			$2,085

MORGAN CONSIGNMENT.

Angel	Briggs & Son	Dixon	$ 325
Riverside Waxy	J. H. Cazier & Sons	Wells, Nev.	300
			$625

RULE CONSIGNMENT.

Rosemont 20th	J. A. Niles	Porterville	$ 355
Marian C. P.	Wm. Bemmerly	Woodland	375
Miss Sonoma	J. G. Roberts	Madera	175
Sonoma Lady	Howard Tilton	Madrone	200
Sonoma Lass 4th	J. G. Roberts	Madera	250
Sonoma Lass	J. G. Roberts	Madera	250
Eva Gleed 6th	J. G. Roberts	Madera	200
Celeste 3d	J. G. Roberts	Madera	350
Mytilda	J. G. Roberts	Madera	300
Belle Sonoma	Howard Tilton	Madrone	235
			$2,690

UNIVERSITY OF NEVADA CONSIGNMENT.

Mojava	Howard Tilton	Madrone	$ 370
Ormonda	Jay G. Brown	Porterville	310
Pamella	J. H. Cazier & Sons	Wells, Nevada	700
Washoe Sabrina	H. M. Barngrover	Santa Clara	325
Nevada Sabrina	Jay G. Brown	Porterville	450
			$2,155

THE CAZIER HEREFORD SALE.

(Written for Pacific Rural Press.)

The value of intelligent selection and constructive breeding was forcibly demonstrated in the sale of purebred Herefords held at Sacramento November 5 by John H. Cazier & Sons Co. of Wells, Nevada. Fifty head were sold at an average of $488.30.

A three-year-old cow, Nevada 4th, by Harris Standard 2nd, with a bull calf at foot, sired by Beau Blanchard 76th and rebred to Beau Blanchard 76th, topped the sale at $2100. She was purchased by E. A. Noyes and Son of Sutter City. They also bought Carnation Girl 2nd, a three-year-old cow by the same sire and bred to Beau Blanchard 76th, for $1325, which was second in price for the sale.

One of the features of the sale was the number of new names added to the list of purebred Hereford men in California. Leading in numbers among the new purchasers was C. H. Howard, distributor for the Buick automobile in San Francisco. He bought six cows, two of which had calves at foot. Among the other new purchasers were F. W. Hoffman, Byron, Cal.; W. S. Walters, Healdsburg; R. J. Prewett, Antioch; Moulton Warren, Cool, Cal.; R. W. Weldon, Toll House; H. J. Buchenau, Daulton Station, and Nicholas Lavalen, Cement.

The four young bulls that were included in the offering brought an average of $2465.

SAN JOSE, THE HOME OF GOOD HOLSTEINS.

The Creamcup Herd of Holstein-Friesians, owned by M. Holdridge of San Jose, is one of the leading herds of the breed of California. Especial attention has been paid to the building up of a herd of clean, healthy cattle of the best type, producing a large quantity of milk testing high in butterfat.

The herd is strong in the blood lines of high-producing Holsteins, many of the animals tracing back to the king of the Pontiacs. Some of the high producers whose blood is keeping the herd at the top are Winifred Hotaling 2d and Creamcup Tula Pieertje Pontiac. The former produced 33.82 lbs. in 7 days and the latter 29.71. It is truly a great herd.

Likes the Editorial Policy.

I enjoy reading the Rural Press very much, especially the editorials—not that I would discredit the other excellent writers, but I like a paper with an editorial policy and an editor with intelligence enough to express it.—C. E. Barnes, Solano county.

Creamcup Herd

Holstein-Friesians

Will Sell A One-Half Interest

Preferably to an owner of an alfalfa dairy ranch. An unequalled opportunity for some one to acquire an interest in a well-known established herd, noted for excellent type, a clean bill of health and high production.

All registered Holstein-Friesians.

1½ mile north of San Jose on North First Street.

M. HOLDRIDGE,
SAN JOSE, CALIF.
R. R. A, Box 437

80 Registered Holsteins 80

AT PUBLIC AUCTION

State Fair Grounds, Sacramento, Calif.

Thursday, December 16, 1920

Featuring the dispersal of the R F. Fisher herd, Carlotta, and highly bred offerings from other leading breeders, including

A 1000-POUND GRANDDAUGHTER OF KING OF THE PONTIACS AND FOUR OF HER DAUGHTERS

Contributors to sale:

R. F. FISHER, Carlotta.
FRED W. KIESEL, Sacramento.
J. McKINDLEY, Acampo.
BRIDGFORD COMPANY, Patterson.
E. D. BARRY, JR., Daggett.
ANDERSON & FOGARTY, Sacramento.

Details will be announced in succeeding issues. Every animal guaranteed to be a breeder; no tuberculin test certificates furnished.

Write for catalog now.

Auctioneers:
COL. BEN A. RHOADES, Los Angeles.
COL. JOHN A. DAVIS, Manteca

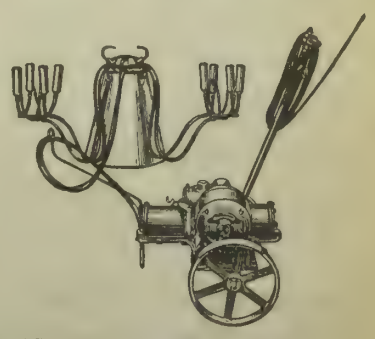
Management
Calif. Breeders' Sales and Pedigree Co.
C. L. Hughes, Sales Mgr., Sacramento, Calif.

Sharples Moto Milker

A COMPLETE MILKING MACHINE
For $385.00 San Francisco

A plant in itself, including power, at a greatly reduced price. Will handle from 8 to 50 cows, milking two cows at one time at an average of 20 cows an hour.

No Installation—No Pipes
No Pulsators—No Extra Charges



Ready to run when unboxed. Has the Sharples "Compressed Air Squeeze," which is the secret of successfully milking a cow. Will operate from 110-220 volt power line, or 32 volt farm plant. If you have no power, we will quote you on a Sharples Pipe Line machine.

Investigate this before buying a milking machine.

JORDAN-HILL COMPANY
Western Distributors.
Corner Main and Market, San Francisco, Cal.

The Dairy Cloud Reveals a Lining of Silver

Written for Pacific Rural Press by Ralph Newman.

In one of the old musical shows there was a song that ran like this:

I've got a motter, always merry and bright,
Look around and you will find
Every cloud is silver-lined—
Tum tum te-tum, te-tum te-tum te-tum tum,
I've often said to myself, I've said:
Cheer up, Cuthbert, you'll soon be dead—
A short life and a gay one!

It might not be a bad idea to sing it wherever dairymen foregather these days. Evidence had just begun to force the conviction that feed would be reasonable in price, that labor costs would go no higher, and that, therefore, the dairyman could squeeze through, when—bing! The condenseries in the east and middle west began closing down. Every dairyman knows what that means. Recently the market on all dairy products has been behaving very badly. Butter fat alone was seemingly holding its own, especially on th coast. The average August quotation in San Francisco was 61 cents as against 57 cents a year ago, and that was reported to be the highest market at that time in the United States. Indications were that while we might have trouble getting a price for powdered milk, with sugar, casein, etc., the butterfat would see us through. Then those eastern condenseries closed their doors, leaving a vast volume of milk, produced at a time of year when costs of production are highest, to be turned into butter. What that will eventually do to our butterfat remains to be seen, but speculators will not be slow in seizing on the situation, and there is what used to be the law of supply and demand to reckon with. We have already witnessed a drop of 8 cents in a single week, with ups and downs since. The dark side of the cloud is out just now.

Why the Condenseries Did It.

The main reason, the one the condensers themselves harp on, is the falling-off of exports. Europe, where there is especial need for milk, cannot buy it, and our warehouses are bursting with canned milk that cannot be sold so as to yield the customary dividends. Thus the condensers justify the closing of their plants.

But there are some other angles to the thing. Local consumption has also fallen off some, due to price. A good deal of this condensed milk now on hand was sweetened with high-priced sugar. To cut the price enough to move it would seriously eat into profits, and, while the dairyman may not, the manufacturer must insist on cost plus for his product. So "production" must stop till what has been produced is disposed of at a profit. (The law of supply and demand as she works.)

Again: It will be noted that the shut-down came when the more costly fall and winter milk began to come on. For months it has been known that no great quantity of milk could be expected, yet, while milk produced on grass and therefore cheap, could be had, the condensers scoured the country for it and took every drop they could get, filling their warehouses to the bursting point. Then, when the higher-priced milk was supposed to be delivered, these wise business men calmly told the dairymen to go chase themselves.

And, for a time at least, these eastern dairymen may have to do that very thing to keep warm, unless the action of the condensers makes them hot enough to withstand zero weather without an overcoat. The situation for these eastern dairymen is serious. They face a winter of loss. Suddenly deprived of a market and obliged to find another, many of them may be temporarily embarassed. Not alone their "profits" but their capital—their living is in the balance. As rapidly as it can be done, the vast quantities of milk will be turned into butter or other products, but that these dairymen, and with them all the rest of us, are in for a heavy jolt, there can be no doubt. If the manufacturers had "stood by"—if they had been willing to co-operate in an emergency and take a share of the loss, it would not be so bad, but here, as always, "business" will have its pound of flesh and the whole loss must fall back on the "producer."

The Silver Lining.

"Every cloud is silver lined." The silver in the lining may not get into our pockets this winter, but eventually it will brighten life for the dairyman. There are some phases of this lining worth noting right now.

Co-operation among dairymen has been spreading all over the country. As it has spread, most dairymen have come to see that co-operation in production is a fine thing and they have gone that far. Many more have come to see that co-operation in the manufacture of dairy products is also an essential and have gone that far, California perhaps farther than any other state. Condensers in California have not shut down their plants. Some, we hear, have "intimated" a bit, but none have done it. Why? They do not dare to do it. California dairymen are not helpless when it comes to manufacture. To be sure there are not yet enough plants actually owned and run by honest-to-goodness dairymen to adequately care for all the milk produced in the state, but there are enough of them right now, and there is power enough behind them to get more in a hurry, to make it mighty uncomfortable for any "corporation" plant that should attempt to do to California dairymen what some of these same corporations have done to their patrons in the east. Let them try it around Sacramento or Modesto, or Tulare, or even Gonzales! Dairymen all over the country see the point. The situation in the middle west and the east is going to be worth far more than it will cost, in the impetus it is going to give to the movement for truly co-operative manufacturing plants owned and operated by the dairymen themselves.

Nor is this all. New York is giving us another glimpse of the silver lining. Many dairymen who have gone beyond mere acceptance of co-operative production to co-operative manufacture, are inclined to block the wheels when it comes to co-operative marketing. Not because there is any objection to the principle, but from fear that "mine" will be lost in "ours"; from a dread of embarking on the journey until every inch of the way has been charted and every last individual advantage now enjoyed is guaranteed. Maybe in California we haven't suffered enough yet to become imbued with the spirit of sacrifice involved in co-operation carried to its conclusion. Maybe we haven't yet been pounded enough to make us real sports. Comes New York with an exhibition of the real spirit of co-operation that ought to fire us all. To meet the present emergency, the organized producers of whole milk in New York have agreed to pour their milk into a pool with that of all other dairymen and accept the same return paid to the rest when the pooled milk is disposed of in any way possible. That's the spirit! At bottom it may be but shrewd selfishness. In the long run, they would go down if other dairymen went down, but just the same that's the spirit! That's the spirit that will put across co-operative marketing if it is put across, and again I say the crisis is worth more than it will cost in the inspiration this action of New York dairymen will give to all the other dairymen of the country.

PENOBSCOT RANCH AND ITS AYRSHIRES.

A visit to the Penobscot Ranch up in the Eldorado County hills just above Cool will repay anyone and especially a lover of the "bonnie Ayrshire coo."

First there is the ride from Auburn down into the American river canyon, across the "wire bridge," and up on the other side to Cool. If taken in the rain, with the mist, like puffs of smoke from giant's pipes, rolling down the green hills into the yellow river, it will be an experience for even the sophistocated to remember.

Then there is the ranch itself, 1200 acres of it, precipitous hills and level meadows—a thing of beauty as nature made it, and rapidly becoming utilitarian also as the plans of its owners begin to unfold. Ultimately the five hundred acres of fairly level land under ditch will be devoted to alfalfa, corn and other forage plants, while the hills will be given to fruit and range. A silo full of corn and several thousand pear trees are tangible evidence that the transformation is on.

And then there is the dairy. After a wild and wooly ride over the mountain road, as you round a curve, it bursts on your view and you know you have arrived. They have gone at it right. No gingerbred. No money expended for gimcracks, but a perfectly sanitary milk house, a modern milking barn, a hay barn, the first unit of a battery of silos, a large, concrete manure pit, bull pens that will stay put, comfortable sheds for the young stock and a club-house for the humans—that is the plant as far as it has gone.

We arrived too late for the morning milking and there wasn't a cow in sight, nor yet a heifer over a year old. Some splendid calves there were. The herd sire, Steybrae Commander, greeted us, and we were introduced to a yearling bull, Penobscot Eclipse, an individual who will be heard from if he lives—and he certainly is enough alive now, but not a cow in sight. Why? Well, this is an Ayrshire country. The owners of this ranch have been wise enough to see it, and this is an Ayrshire farm. The "coos," true to their breeding, though choice, high-priced purebreds, were a mile or more away on the rugged hills in the rain rustling their keep.

There is a moral here. The cow the "forty-niner" drove over the plains and that once made the Sierra hills a dairy section, went the way of the "forty-niner." The migrating dairy, that later peopled the hills with dairy cows in the good old summer time, has also passed into history. Will

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The all-round water system for the household. Furnishes water under pressure at small cost. Send for catalog.

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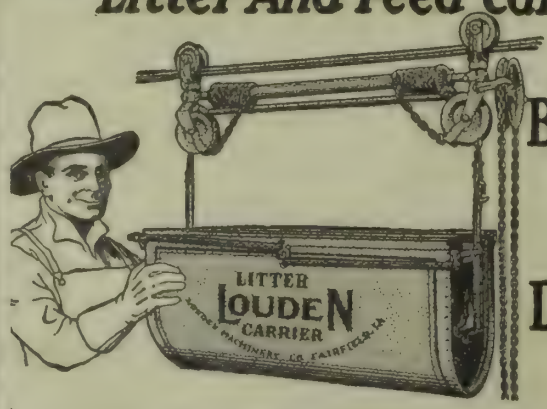

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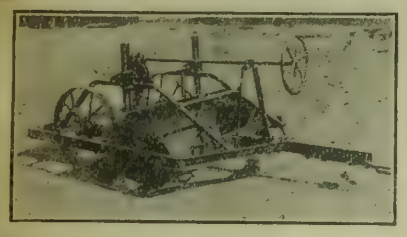

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these hills again become a prominent dairy section? If they do, this dairyman believes the Ayrshire is the girl who will turn the trick. The Ayrshire — and modern transportation. The pasture of the Eldorado hills, turned into milk by these Penobscot cows, is made into butter in San Francisco. Shades of the "forty-niners," what a change!

A BEAUTIFUL DAIRY RANCH.

(Written for Pacific Rural Press.)

For years we have admired the country around Mission San Jose, in the southern part of Alameda county. The early Mission fathers knew good soil and beautiful locations, and the rolling country surrounding the Mission San Jose, commanding a view of the Santa Clara valley and down the Bay of San Francisco, is about the most scenic of the many mission sites in California.

The Linda Vista ranch, located very near the above mission, on the Highway, is one of the show places of that section. This ranch contains about eleven hundred acres, of which 70 acres are in bearing prunes, 30 acres in alfalfa, 500 acres used for general farming and the balance is hill ground and kept for pasture. The prune crop this year is about 25 tons and will be sold through the Association. Most of the farm crops are fed to the dairy and other stock on the ranch. One hundred and twenty Holstein cows compose the dairy. Two big silos, holding about 600 tons of silage, made up of pea vines and corn, help out the alfalfa and other feeds. Four Empire milking machines, a cement milk house, carbonic ice machine, truck and used equipment, together with great barns and an irrigation system from reservoirs, all together makes up a splendid, paying dairy ranch.

SHEEP AND GOAT NOTES.

To aid in the upbuilding of the milch goat industry, the College of Agriculture of the State University is now offering a correspondence course on milch goat raising. Circular number 112 available on application may be had by writing to the Division of Agricultural Education of the University of California.

A cut in the wages of sheepherders to $75 and $80 per month is announced by the sheepmen of Elko county, Nev. For a year or more past they have been receiving $100 to $125 per month, but the decline in the price of wool is said to make it impossible to pay that high wage longer.

Switzerland, with an area of only 16,000 miles supports about 400,000 goats, it is said. California has plenty of room greatly to increase the present number.

Walter Priddy, former shepherd for Bullard Bros., of Woodland is now with the Corriedale Sheep Company of Hollister. Some very wealthy and influential men of that locality are interested in this company and have unlimited capital and range resources for carrying on a breeding and importing business. They expect to specialize in Corriedales and Shropshires. Some of the Corriedales owned by this company were shown in March and again in October producing from 8½ to 15¾ pounds of medium combing wool.

Reports have been circulated in some Eastern papers derogatory to the wool pools. The Michigan State Farm Bureau as spokesman for 80,000 farmers says: "The price of wool today is higher than when 90 per cent of the 4,000,000 pounds was placed in the pool and the consignors would be making money if they sold now. Bids for wool aggregating 500,000 pounds have been made to the bureau at prices ranging from 35 to 67½ cents, but have been rejected. Though the market is unsettled yet there are some signs of awakening."

Pine silos and redwood silos have been in use on the Hollister Estate Co. ranch in Santa Barbara county two or three years. The pine silos are already showing decay while the redwood is perfectly sound.

Fourth Tulare Sale

60 Registered Holsteins 60

SALES PAVILION, TULARE, CALIF.

Thursday, Dec. 2, 1920

Representative breeders will offer in this sale a selection of well-bred females, and a limited number of young bulls, that should meet with the approval of buyers seeking foundation material.

YEARLY RECORD COWS
DAUGHTERS OF YEARLY RECORD COWS
BY GREAT YEARLY RECORD SIRES
IN CALF TO YEARLY RECORD BULLS

Among the reference sires, bulls to which females in the sale are bred, will be found:

SIR AAGGIE DE KOL ACME 2ND, five of whose seven nearest dams average 1153 lbs. butter in one year.

SIR PIEBE DE KOL SEGIS PONTIAC, by Senator Hackney's famous bull King Segis Pontiac Count, and out of a dam that made 717.46 lbs. butter from 17,635.2 lbs. milk in one year.

KING PONTIAC ALCARTRA PRILLY, by the three times Grand Champion King Segis Alcartra Prilly, and out of a 36.61 lb. daughter of Spring Farm King Pontiac that milked 805 lbs. in 7 days and is now on yearly test.

MOORLAND KING MEAD HASKINS, a 32-pound son of King Mead of Riverside, second dam a 32-lb. 4-year-old.

SEGIS PONTIAC ABBEKERK, a 35-lb. son of Segis Pontiac De Kol Burke, second dam a 31-lb. daughter of Tidy Abbekerk Prince.

PRINCE GELSCHE WALKER ALCARTRA, by Prince Gelsche Walker, out of a half-sister to Tilly Alcartra that made 796.16 lbs. butter from 19,043.5 lbs. milk in one year.

SIR VEEMAN HELENA KORNDYKE, by the great proven sire, Sir Veeman Korndyke Pontiac, and out of a 31 lb. dam.

CONTRIBUTORS TO SALE:

GOTSHALL & MAGRUDER, Ripon.
ALEX WHALEY, Tulare
R. C. STURGEON, Tulare
F. S. BORROR & SON, Tipton
E. D. BARRY, JR., Daggett
HARRY HILL & SON, Riverdale.
H. E. SPIRES, Caruthers.
PETER LOWSON, Tulare
DR. O'DONNELL, Tulare

See next week's issue for details. Write for catalog now.

Auctioneers:
COL. BEN A. RHOADES, Los Angeles
COL. GEO. W. BELL, Tulare.

Management
Calif. Breeders' Sales and Pedigree Co.
C. L. Hughes, Sales Mgr., Sacramento, Cal.

DISPERSAL SALE

45 REGISTERED HOLSTEINS
25 GRADE HOLSTEIN COWS AND HEIFERS
60 HEAD FEEDER HOGS
ONE FINE TEAM HORSES

SMALL RANCH, FRESNO, CALIF.

Tuesday November 16, 1920

The owners have decided to plant their ranch to vineyard and will make a complete dispersal of their dairy herd.

The foundation of this herd was purchased in the Stevens Bros.' dispersal sale at Liverpool, New York, and contains animals of most substantial breeding, including a great young cow with an official record of over 26 lbs. butter in 7 days as a 3-year-old.

The herd sire is IT SNOWBALL, a son of It, out of a 24-lb. 4-year-old daughter of King of the Pontiacs, and the sale list includes 17 of his young daughters.

Among other choice things in the offering are:

A DAUGHTER of the 31-lb. son of King of the Pontiacs, King Pontiac Diona Pietertje.
FIVE DAUGHTERS of the 32-lb. bull King Fontiac Pietertje De Kol.
A DAUGHTER of King Pontiac Ormsby Pietertje, who is by King Korndyke Hengerveld Ormsby, out of a 27-lb. daughter of King of the Potiacs.

PLEASE NOTE—The necessity for getting these cattle off the land in order to prepare for the vineyard this fall does not give us time to prepare the usual catalog. We will have ready by sale day a list showing the breeding of the various animals, and an extended pedigree of each animal will be furnished the buyer.

These cattle will be presented in ordinary working condition, every registered animal guaranteed to be a breeder, but no tuberculin test certificates will be furnished as the herd has never been tested.

THE 60 HOGS range in weight from 80 to 180 pounds, and are a good bunch for feeding purposes.

THE GRADE COWS AND HEIFERS include 13 cows, 5 two-year-old heifers, and 7 head of heifers from six months to one year old.

SALE BEGINS AT 10 A. M. on above date, on the Small Ranch, about 12 miles southwest of Fresno, 3 miles north of Caruthers, on Dinuba Avenue, between Marks and Valentine.

Owners: SMALL & DAVENPORT, Fresno, Calif.

Auctioneer
COL. BEN. A. RHOADES, Los Angeles

Management
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Livestock and Dairy Notes

SALE DATES.

Nov. 15—W. Marshall & Son, Santa Rosa, Poland Chinas.

Nov. 18—Funnell Ranch Company, Hereford, Sacramento.

Dec. 1—H. E. Vogel, Holsteins, Fresno.

Dec. 2—Consignment Sale, Holsteins, Tulare.

Dec. 15—H. A. De Wolfe, R. L. Holmes, Holsteins, Modesto.

Dec. 16-17—Consignment Sale, Holsteins, Sacramento.

Jan. 19—Stanislaus Co., Duroc Ass'n, Durocs, Modesto.

The Dairy.

The Jersey Calf Club of Stanislaus county will be limited to 15 members.

Alex. Whaley of Tulare is crowding H. E. Cornwell of Modesto for place with 25 tons of corn silage per acre. Whaley has grown the Orange County Prolific.

It is reported that Gotshall & Magruder of Ripon have consigned 20 head and Spires of Caruthers, 8 head to the Tulare Consignment sale of Holsteins, to be held December 2d.

H. G. Ball, one of the newer breeders of Tulare, will carry all his Holstein cows on semi-official test, and will soon place several on official test.

Frank Guerin of Visalia has a splendid lot of young Holsteins coming on. One of them is a very promising young bull sired by King Korndyke Pontiac 20th, and out of the famous K. P. Tola.

The selection of the Holstein in this case was largely due to the efforts of H. V. Bridgford of the Bridgford Holstein Company and C. L. Hughes, secretary of the California Holstein-Friesian Association.

Secretary Miller of the Stanislaus County Jersey Breeders' Association has received a letter asking for two carolads of young grade heifers. The same inquiry also asked for some purebred stock.

After long and careful consideration of the comparative merits of the various dairy breeds, the settlers in Delhi Land Settlement cast their ballots by a big majority in favor of Holstein-Friesians, and this will be the official dairy breed of the Settlement.

A consignment sale of 80 head of registered Holsteins by some of the leading breeders of the state is listed this week for December 16th at Sacramento by the California Breeders' Sales and Pedigree Company.

The Stanislaus County Holstein Breeders' Association announce a sale to be held at Modesto December 15th for H. A. De Wolfe of Ripon, and R. L. Holmes of Modesto. The names of these breeders are enough to insure stock of a very high order.

R. L. Holmes' Holstein cow, Winifred Hotaling 3d, has just completed a ten months' record of 952.78 lbs. butter. Mr. Holmes has gotten together one of the best herds of the Blacks and Whites in Central California and records will be coming along thick and fast from now on.

H. A. De Wolfe of Ripon and R. L. Holmes of Modesto announce a combination sale of 50 head of Holstein-Friesians for Wednesday, December 15th, at Modesto. The sale will be managed by the Stanislaus County Holstein Association with Col. Geo. A. Gue as auctioneer.

T. J. Gist and Sons of Tulare, recently sold to the Indian School Agency at Greenville, Cal., the Senior Yearling Holstein bull that took second at the Tulare fair. They are developing, for their junior herd sire, a son of Carnation King Sylvia, out of King Silvia Segis Colantha.

W. C. Day & Son, owners of Ranchita Lilydale, at San Luis Obispo, report the sale of two registered Jersey heifers to E. C. Andrews of the same place. Mr. Andrews also purchased Susie's St. Mawes, Jr., as a herd sire. The Jersey business seems to be booming in that locality.

Among the Holsteins to be sold at the Vogel dispersal December 1st will be what is probably the highest production heifer ever offered in California. She is 14 months old, sired by Sir Aaggie De Kol Mead, out of a daughter of Gelsche Walker, and her fourteen nearest dams have a record of almost 30 lbs. butter in 7 days.

Stanislaus County has added 3 new breeders of registered Jersey cattle to the list of those who keep the beautiful Island breed. H. McCommas, who formerly had a grade herd, has now 12 head of registered cattle. Mrs. R. Richards of Hughson has recently purchased 9 cows and a bull from Dr. Belknap of San Jose. Chas. Jarrett of Salida is the third to get in line with purebred stock.

It is reported that Carnation Segis Prospect, a Holstein cow owned by the Carnation Stock Farm near Seattle, Wash., has produced 33,469 pounds of milk in 318 days. This beats the record of Tilly Alcartra, owned by Morris & Sons Corp., at Woodland. Tilly's record is 33,425 pounds for 365 days. This leaves the Washington cow 47 days to pile up a still greater amount to establish a record that will stand as long as that of the California cow.

The Jersey cattle breeders of San Luis Obispo county have organized with Sylvio Stornetta as president, E. C. Andrews as vice-president, Warren C. Day as secretary-treasurer, J. W. McLean, chairman constitution and by-laws committee and Prof. F. M. Watson, official tester. The object of the organization is the promotion of the interests of the breed of Jersey cattle in the county. A cow-testing association will be started in the very near future and they hope to place a purebred sire on every farm in the county.

Milbrae Dairy received very recently the great young Holstein sire, Pabst Ivy Pontiac, bought at the last Pabst sale in Wisconsin for the top price of $3,100. He is a son of King Pontiac Champion, the only "century" son of King of the Pontiacs. He is out of a 24-lb. 4-year-old cow, who promises to make over a 1,000 lbs. of butter this year. She in turn is out of a 32-lb. cow, who is also on yearly test in the Pabst herd. Milbrae Dairy now has six cows in the test barn, from which good records are expected. Chas. P. Walker is in charge.

The dairyman with wrinkles on his brow and a vacuum in his purse may now prepare to smile. Relief from a limited supply and high prices for rich feed stuff is at hand. Conditions created by the world war that have been working to the disadvantage of the feeders of concentrates are fast disappearing; this applies particularly to unhampered facilities for transporting at moderate freight cost of bulky and low-priced commodities from foreign sources of supply to the port of San Francisco, and the proper handling and storing after arrival. There are a number of these by-products that will eventually be offered. One company engaged extensively in the manufacture of cocoanut meal is interested in twelve large vegetable oil mills located in various parts of the Dutch East Indies, and is now erecting an extensive warehouse and grinding mill in San Francisco. This company expects to offer this market sixty thousand tons of cocoanut meal per annum.

Beef Cattle.

A letter from Geo. Watterson of Bishop, proprietor of Hereford Farms in Inyo county, reports the following sales: H. N. Beatty, Weldon, 2 Here-

The "Range" of LAYNE & BOWLER pumps is from 180 to 4500 gallons of water per minute. These pumps can be installed in 10 inch wells or larger...

Request Folder No. 25 and names of owners in your district

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ford bulls; Robertson & Alexander, Weldon, 1 Hereford bull; Jas. Sloan, Lompoc, 5 Hereford bulls; J. M. Smith, Lompoc, 5 Hereford bulls. Mr. Watterson also writes that J. A. Swall of Bishop has recently sold to Watterson Bros., bankers and merchants of the same place, his entire herd of registered Shorthorns, consisting of about 45 head. It is the intention of this enterprising firm to increase the herd until their 500 acre ranch is fully stocked with the "reds, whites and roans."

L. I Case, representing the American Hereford Cattle Breeders' Association, attended the three days' Hereford sales at Sacramento last week.

LIVESTOCK DIRECTORY.

Rate, 4c. per word. Cash must accompany all orders.

SWINE.

Duroc-Jerseys.

DUROCS—BIG-TYPE—HIGHEST QUALITY—popular blood lines. Herd headed by Johnson's Defender, Jr., and Western Pathfinder. Bred sows and gilts and young boars for sale at moderate prices. Greenwood Farm, Witherow & Stafford, Live Oak, Cal.

BRED SOWS AND GILTS and young stock. Pathfinder and Great Wonder I Am breeding. Monthly payments, if you wish. Derryfield Farm, Capital National Bank Bldg., Sacramento.

BOYANNA BIG-TYPE DUROCS—Breeding stock; priced right for sale. Inquiries invited. Satisfaction guaranteed. J. Boyd Harrold, Dixon, Cal

BIG-TYPE DUROCS—Herd headed by California Orion King. Am offering excellent young boars at right prices. Inquiries invited. Harvey M. Berglund, Dixon, Calif.

LAMB'S DUROCS—Seven good sows with litters, weaned pigs and choice open gilts. Priced right to close out the herd. Elmer Lamb, Ceres, Calif.

GOOD SPRING AND FALL GILTS—Strong in Pathfinder blood, sired by Pathfinder Wonder. Hamlin Farm, Box 697, Sacramento.

WINSOR RANCH DUROCS—Young boars and some top gilts bred to WINSOR'S GIANT ORION—Morris C. Allen, Mgr., Bonita, Cal.

REGISTERED DUROCS — Choice gilts and weanlings, either sex. Breeding and satisfaction guaranteed. H. E. Boudier, Napa.

BIG-TYPE DUROCS — Gilts and boars of Great Orion Sensation breeding. Falfadale Farm, Perris, Cal.

FOR THE BEST in Durocs, write June Acres Stock Farm, Davis, Cal.

Poland-Chinas.

AN OCTOBER YEARLING BOAR out of the 1920 Grand Champion Sow. Two March Boars, one by Long Big Bone Jr., out of the 1919 Reserve Grand Champion Sow. He headed the 3rd prize litter Sacramento this year. One by The Westerner, out of the 3rd prize Junior Yearling Sow this year. These are tops, priced low, to move them. Alex D. McCarty, Route C, Box 338, Modesto, Cal.

POLAND CHINAS—Some promising young boars; also 2 yearling boars, 300 lbs. Big-bone type, excellent breeding and 2 bred sows, farrow in November. Pedigree on application. Edward A. Hall, Rt. 1, Box 39, Watsonville, Cal.

ELDERSLEY AND SHADY BROOK Farms big-type Poland-Chinas that make money for the Feeder, the Farmer and the Breeder. Prices reasonable. J. H. Ware, Brown's Valley, Calif.

THE PACIFIC HERD of Polands—I Am King, herd sire. Weanlings for sale. Satisfaction guaranteed. Nettie E. Andrews, Modesto, Cal.

TOHOQUA POLAND-CHINAS—A good tried boar and some choice young breeding stock for sale. Ferguson & McKaig, Orland, Cal.

WAUKEEN HERD POLAND-CHINAS — Home of King's Big Bone Leader. A few service boars for sale. Les McCracken, Ripon.

LAKESIDE STOCK FARM—Large, smooth and big-boned Poland-Chinas. Geo. V. Beckman & Sons, Lodi, California.

POLAND-CHINAS—Strictly large type. J. F. Lehman, Lodi, Cal.

REGISTERED POLAND-CHINA SWINE — Prize-winners. Finest stock in the State. Bassett Bros., Hanford, California.

REG. BIG-TYPE POLAND-CHINAS—Service boars; weanling pigs. J. H. Cook, R. 4, Chico.

Berkshires.

ANCHORAGE FARM BERKSHIRES
Orland, Calif.
HERD BOARS—STAR LEADER, Junior and Reserve Grand Champion of the World. The Grand Champion carload of barrows, over all breeds, at the San Francisco Live Stock Show, was sired by a son of Star Leader. NATOMAS BARON DUKE, grand champion of California. For sale, bred gilts, open gilts, young boars and weanling pigs. Write for booklet, prices and list of sows.

BRED GILTS.

Sired by Mayfield Rookwood 2d, a Grand Champion Boar, out of 600-700 lb. sows, and actually bred to "ACHIEVER," our English Blood Boar, the Sire that puts more bone and pork-making qualities into his pigs.

Priced reasonably and absolutely guaranteed.

Castleview Ranch, Santa Rosa, Calif.

The only herd of English Berkshires in the West. Bigger, better, stronger litters. More pounds of meat for less feed. Weanling pig, $35. Satisfaction guaranteed or money refunded at once. Sandercock Land Co., 703 Market St., S. F. In charge Natomas Land Sales.

GRAPE WILD FARMS—Berkshires—Guernseys. Big-type Berkshire Boars of serviceable age, sired by Big Leader—greatest son of Grand Leader 2nd. Panama-Pacific Grand Champion. A. B. Humphrey, Prop., Escalon.

QUALITY BERKSHIRES — Young stock, both sexes. Geo. P. Upham, Martinez .

BERKSHIRE BOARS—Real herd sires. We are offering these at sacrifice prices to move them quickly. Write for description and price. R. J. Merrill & Son, Morgan Hill, Cal.

FOR SALE—Some fine purebred Berkshire pigs. Ready to wean. L. D. Baun, Yuba City, Cal.

REAL GOOD BERKSHIRES — Cholera immune. Frank B. Anderson, Sacramento, Cal.

Miscellaneous Swine.

YORKSHIRE SWINE — Registered Boars, Sows. Young stock. Mahajo Farm, P. O. Box 597, Sacramento, Calif.

DAIRY CATTLE

Holsteins.

HOLSTEINS

THE LEWIS COMPANY

Registered Holstein Cattle
Bulls, Heifers and Calves
of Ormsby breeding
Tuberculin tested
Lewis Building, San Jose

ASEVEDO BROS. CO.
Patterson, Cal.
Breeders of
REGISTERED HOLSTEINS
For Sale

Young bull, sired by King Abbekirk Johanna 24th, and out of a dam making 24 lbs. as a 4-year-old

CREAMCUP HERD — Registered Holsteins. Pontiac bull calves. M. Holdridge, Rt. A, Box 437, San Jose.

REGISTERED HOLSTEIN-FRIESIANS — Both sexes choice stock; tuberculin tested. Sunnybrook Ranch, H. H. Sisson, Mgr., Willits.

REG. HOLSTEINS, both sexes. World's record backing. Kounias Reg. Stock Farms, Modesto, Cal.

REG. HOLSTEINS—A. W. Morris & Sons Corp., Importers and Breeders, Woodland, Cal.

F. H. STENZEL, SAN LORENZO—Breeder of Registered Holsteins. High test producers.

REGISTERED HOLSTEINS — Best blood lines of the breed. R. L. Holmes, Modesto, Cal.

CHOICE HOLSTEIN bulls for sale. No females. Millbrae Dairy, Millbrae, California.

GOTSHALL & MAGRUDER — Breeders of registered Holstein-Friesians. Ripon, Calif.

EL DORADO HERD OF REG. HOLSTEINS—Alex. Whaley, Tulare, California.

Milking Shorthorns.

REGISTERED MILK AND BEEF SHORTHORNS, bulls and heifers for sale; catalogue free. Thomas Harrison, Santa Rosa Stock Farm, Santa Rosa, California.

INNISFAIL HERD MILKING SHORTHORNS—Young stock for sale; both sexes. Owned by Alexander & Kellogg Leased by J. D. Rowe & Son, Davis, Cal.

WILLOW BROOK HERD—Milking Shorthorns. A few registered bulls and heifers for sale. W. T. Roberts, Penn Grove.

BREEDERS OF REGISTERED SHORTHORNS—Milk strain; choice young stock for sale. John Lynch Ranch, Box 321, Petaluma.

Jerseys.

SERVICE JERSEY BULL, bull calves Financial King blood, Chester White boars, prize winners. Best blood, type, production. N. H. Locke Co., Lockeford, Cal

FOR SALE—Purebred Jersey bull, 16 mos. old. Prize winner at two fairs this fall. $250.00, if taken now. W. H. Alfred, Loleta, Humboldt Co., Calif.

SUNSHINE FARM JERSEYS—"Production counts." E. E. Greenough, Merced, Cal.

PUREBRED JERSEYS from Register-of-Merit dams. Purvine & Son, Petaluma.

Ayrshires.

PENOBSCOT FARM REGISTERED AYRshires—Long lived, hardy, good "rustlers." High butterfat producers. Choice individuals; all ages; reasonable prices. Cool, El Dorado Co., 9 miles from Auburn, Cal.

STEYBRAE AYRSHIRES — Registered; all ages. E. B. McFarland, 414 Claus Spreckels Building, San Francisco.

NORABEL FARM AYRSHIRES — Le Baron Estate Co., Valley Ford, Cal.

Guernseys.

PUREBRED GUERNSEY HEIFERS—Heifer calves and bull calves for sale at reasonable prices and on terms, if necessary. The mothers are wonderfully bred, and with high milk and butterfat yields. The sires have made Guernsey history. Also a few purebred Holstein cows, heifers and a herd sire for sale. Prices and terms on application. If you desire to start with purebreds, now is your opportunity. S. J. Strauss, P. O. Box 62, Modesto, Cal.

GUERNSEY BULL—Escalon Truetype, No. 58660, sired by Bullion of Edgemoor; dam, Escalon Topsy. F. B. Dashiel, Rt. 1, Box 179, Santa Rosa, Cal.

BEEF CATTLE.

SHORTHORNS—The foremost beef breed—Have a limited number of stock for sale, both sexes. If you wish to start a small herd I can probably supply your needs. T. T. Miller, Hollister, Cal.

RANCHO SAN JULIAN SHORTHORNS—Purebred range bulls, unregistered, for sale. Estate Thos. B. Dibblee, Santa Barbara, or Lompoc, Calif. John Troup, Supt.

ALAMO HERD REGISTERED HEREFORDS (founded by Governor Sparks). Herd and range bulls. Reasonable prices. W. D. Duke, Gazelle, Siskiyou county, California.

THE NEVADA HEREFORD RANCH—Jno. H. Cazier & Son Co., Prop., Wells, Nevada. Reg. Hereford cattle. Breeding stock for sale.

CARRUTHERS FARMS, Live Oak, California. Shorthorn cattle and Berkshire swine of quality and select breeding.

WM. BRIGGS & SON, Dixon, Cal. Breeders of Hereford cattle and Rambouillet sheep.

SIMON NEWMAN CO., breeders of Registered Herefords, Newman, California.

HEREFORDS — Mission Hereford Farm, J. A. Bunting, Prop., Mission, San Jose, Cal.

REGISTERED HEREFORDS—H. H. Gable, Diamond G Ranch, Esparto, California.

GEORGE WATTERSON — Breeder Registered Herefords. Bishop, California.

REGISTERED SHORTHORNS — Fair Oaks Ranch, Willits, Calif.

SHEEP AND GOATS.

F. A. MECHAM ESTATE, Petaluma, Cal.—Breeders and importers of Shropshire, Rambouillets and American Merinos, both sexes. Also Red Polled cattle. Take electric car at Petaluma or Santa Rosa for Live Oak Ranch

FOR SALE—Rambouillet rams and ewes—purebred; the very highest grade of large smooth body; heavy shearers; the wool and mutton type. Immediate delivery of individual or carload lots. You can find none better or of higher grade. Address Glenn, Cal. Location, 8 miles south Hamilton City, 1 mile west Ordbend. Windell Orchards Co.

OAKDENE GOAT FARM, Walnut Creek, Contra Costa Co., Cal.—Breeder of milk goats. Nubian, Saanen and Toggenburg registered grades. Bred and fed for milk production.

J. R. BLOOM, Dixon, Calif.—Twenty-five years breeder of purebred Shropshire sheep. Rams for sale. Single or carload lots.

DORSETS—ROMNEYS—Dorset ram lambs for sale. John E. Marble, South Padasna.

SHEEP FOR SALE—1000 ewes. Will sell in lots to suit. Chas. G. Owens, Livermore.

HARVEY S. VAN VLEAR, Lodi, Breeder and importer of registered Hampshire sheep.

CALLA GROVE FARM, MANTECA, CAL.—Breeders and importers of Hampshire sheep.

KAUPKE BROS., WOODLAND, CALIF.—Breeders and importers of Hampshire sheep

CARL LINDHEIMER, Woodland, Cal.—Rambouillet Ram lambs for light use.

BULLARD BROS., Woodland, Calif.—Breeders and importers of Rambouillet sheep.

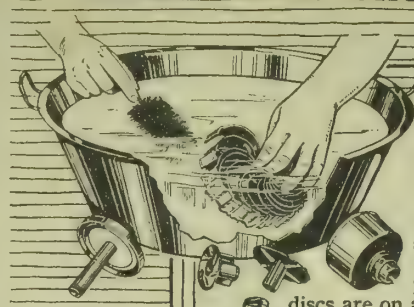
MISCELLANEOUS.

BUTTE CITY RANCH
SHORTHORN CATTLE, SHROPSHIRE Sheep, Berkshire Hogs, Shetland Ponies, Bronze Turkeys, White Plymouth Rocks. Stock for sale at all times. W. B. Dwyer and W. S. Guilford, Box P, Butte City, Glenn county, California.

FOR SALE OR TRADE—Percheron stallion reg. (weight 2000). Will exchange for work horses or cattle. Address Ralph L. Clark, R. F. D. 2, Box 74, Lodi, Cal. Phone 24F4.

REGISTERED BROWN SWISS, carrying best blood of the breed. M. J. Pedrotti, San Rafael, Calif.

Washed all as one piece—in a jiffy



This is why farm-wives prefer the "Viking"

Women, you are too busy these days to have to wash twice a day from 20 to 30 *separate* discs of your cream separator, and then try to get them together again in their *proper order*. The "Viking" saves you all this bother, for, in addition to its being the most perfect skimmer known, all the discs are on a ring and you never have to take them apart. If you want to know all about this wonderful dairy necessity, send for our newest Catalog No. 126 Swedish Separator Co., Neal Weaver, Rep., 1650 Calif. St., S. F. Quick shipments always assured from Okld. and S. F.

"Viking" Cream Separator

Winsor Ranch Guernseys

Herd headed by Veda's May King of Edgemoor, Grand Champion at L. A., he by ITCHEN MAY KING, Grand Champion at the National.

Some outstanding bull calves coming along.

MORRIS C. ALLEN, Mgr. FRANCIS BROWN, Herdsman.

Bonita, Calif.

DIGESTER TANKAGE

Send for Sensible Folder on Feeding Hogs

WESTERN MEAT COMPANY

Animal Food Dept. 704 Townsend St., San Francisco

DE LAVAL CREAM SEPARATORS

The best of all dairy investments. Save $15 to $20 per cow every year.

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How Calves Do Grow on

AN-FO BRAND CALF MEAL

NO SCOURS EITHER

From Feed Dealers, or

ANIMAL FOOD CO., OAKLAND

WITTE

2 H-P. Pulls 2¾

Big Value--Big Surplus power. Immediate shipment. Offer includes engine on skids--ready to use. From Pittsburgh add $5.00. All sizes 2 to 80 H-P. lower Now.

WITTE ENGINE WORKS

2862 Oakland Ave. Kansas City, Mo.

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$54.95 F.O.B. K.C.

Engine Catalog FREE

75 REGISTERED HOLSTEINS

with

Type--Production--Breeding--Health

AT PUBLIC AUCTION

BETSY LAMB PRILLY

Wednesday, Dec 1, '20

Westland Farms
FRESNO, CALIF

It is necessary to re-seed practically all of the alfalfa fields at Westlawn Farms, and the owner, Mr. H. E. Vogel, has decided to disperse his entire milking herd of registered Holsteins, including also some choice bred heifers and a few good young bulls.

This herd has been developed along constructive lines for twenty years, and is composed of a remarkably good lot of individuals with production, popular breeding, and good health.

AMONG THE FEMALES

are daughters and granddaughters of KING MEAD OF RIVERSIDE; PRINCE GELSCHE WALKER; JULIANA KING OF RIVERSIDE; KING OF THE PONTIACS; FIDELLA PRINCE OF RIVERSIDE; ARALIA DE KOL; SEGIS PONTIAC DE KOL BURKE; AND OTHER SIRES AND DAMS OF CORRESPONDING WORTH.

FEMALES OF BREEDING AGE ARE BRED TO:

SEGIS ALCARTRA DE KOL BURKE, by Segis Pontiac De Kol Burke and out of a 29-lb. 4-year-old that made 624.1 lbs. butter in one year as a 2-year-old, her dam a half sister to Tilly Alcartra that made 753.1 lbs. butter from 19,972.4 lbs. milk in one year as a 3-year-old.

KING ARALIA MEAD, by King Mead of Riverside and out of Margaret Aralia De Kol, 1161.48 lbs. butter from 22,922.7 lbs. milk in 1 year, she by a son of Aralia De Kol and out of a daughter of Juliana King of Riverside that made 653.21 lbs. butter from 16,387.1 lbs. milk in 338 days as a 4-year-old.

SIR AAGGIE ARALIA BURKE, by Sir Aaggie De Kol Acme, and out of a daughter of Margaret Aralia De Kol. His dam is now on yearly test, and, omitting her, his six nearest dams average 1021.32 lbs. butter and 23,545.3 lbs. milk in one year.

KORNDYKE SADIE VALE PRILLY, by King Korndyke Sadie Vale 22nd, a 30-lb. son of King Korndyke Sadie Vale, and out of the Grand Champion cow, Betsy Lamb Prilly, 35.03 lbs. butter from 743.3 lbs. milk in 7 days, and she made 31.37 lbs. butter from 647.8 lbs. milk in 7 days at previous freshening as a senior 4-year-old.

BETSY LAMB PRILLY HERSELF WILL BE SOLD! Here is one of the very greatest young cows that ever appeared in the western sale—a cow that we tried hard to get to represent California in the world's record consignment at the St. Paul sale last June.

Watch for details in next week's issue. Write for catalog now.

Auctioneers:
COL. BEN A. RHOADES, Los Angeles.
COL. GEO. W. BELL, Tulare.

Management
Calif. Breeders' Sales and Pedigree Co.,
C. L. Hughes, Sales Mgr., Sacramento, Calif.

JAVA

COCOANUT CAKE MEAL.
Made where the cocoanuts grow.
Sun-dried—not smoky or rancid.
Carried in modern ventilated steamers. Shipped in solid cakes.
Inspected and ground in San Francisco

Has your past experience in feeding cocoanut cake meal been satisfactory?

We particularly request a trial of our meal by those who in the past have been disappointed.

Your feed dealer may not have our brand in stock but can obtain a large or small lot promptly.

Trade **INSULINDE** Mark

Look for it on the sacks

Java Cocoanut Oil Co., Ltd.
Dept. 10
16 California St., San Francisco
Largest manufacturers cocoanut products in the world.

NOW READY TO SHIP

DRIED BEET PULP

Palatable succulent vegetable feed for dairy cows, beef cattle, sheep and hogs

We can take care of orders from any part of the country

The Larrowe Milling Company
Detroit, Mich. Los Angeles, Calif.

CALIFORNIA HOLSTEINS IN THE EAST.

A recent letter from H. V. Bridgford of the Bridgford Holstein Co. of Patterson calls attention to the winnings of California Holsteins at the National Dairy Show and some of the figures obtained for the same cattle at the sale. Mr. Bridgford says in part, "The National Dairy Show and the Holstein sale were held under entirely separate management. The show cattle were made up largely from various state herds in the given states; not more than two animals were selected from any one herd to make up the state herd. This brought together what was conceded to be the best lot of Holsteins ever exhibited at the National Show.

"I am making this explanation to correct the general idea that seems to prevail that California sent a regular show herd of Holsteins to compete in the regular Show Classes.

"California consigned twenty-four head of cattle to the sale, which made up the 135 head from various states and Canada. Nine were consigned by Toyon Farm Association, San Francisco, six by Allana Farms, Dixon, and nine from Bridgford Holstein Company, Patterson. The California consignors to the sale showed a portion of their consignments in their classes in the show, Allana Farms winning first on two-year-old heifer in milk; Bridgeford Holstein Co. winning second on Junior Bull Calf, and second on Senior Yearling Heifer.

"California cattle topped the sale for both the bull and female; also sold the next highest female and next highest bull, as follows: Sir Pietertje Ormsby Mercedes 43rd, sold by Toyon Farm for $6600; Spring Farm Pontiac Maid 3d, sold by Bridgford Co. for $4200; Josephine Johanna Oak De Kol, sold by Allana Farms for $3150; Count Konigen Pontiac Prilly, sold by Bridgford Holstein Co. for $2200.

"The entire California Consignment averaged $1466 per head. The average of the entire sale was about $700.

THE BENOIT HOLSTEIN SALE.

Once more the Stanislaus County Holstein Breeders' Association have demonstrated that, given the stock to do it with, they can put over a successful sale.

At Modesto last Saturday J. W. Benoit furnished the stock and the Association, through Cols. Geo. A. Gue of Yakima, and Cy. N. Clark of Modesto, sold it to the evident satisfaction of all concerned. The ten highest animals brought an average of $663, while the average for all the females, including mere calves, was about $360. These figures speak for themselves.

The top animal, a granddaughter of Colantha Johanna Lad, out of a 30-lb. dam, went to H. A. Stammerjohan of Turlock for $950, which indicates that prices were fairly even and the average not boosted by one or two sensational sales.

Another fine thing about this sale, which has been noted in others held by the Association, was that foundation stock for several new herds went out from it.

SANTA ANITA RANCHO WINS.

The exhibit made by the Santa Anita Rancho at the recent Riverside Fair in the Poland China swine and Holstein cattle lines was a very complete and satisfactory one. In the Poland China classes, Miss Big Price was senior and grand champion, and an unnamed gilt sired by Orange Boy and out of Santa Anita Orange was junior and reserve grand champion. Santa Anita Orange Bud, senior reserve champion. With eleven entries in the hogs they won 10 firsts, 4 sec-

ECONOMICAL

Pork Producers

The Big Durocs of Diamond Bar have the blood of the best sires in the country. They are long, high and wide, have strong backs, massive bone and good feet.
Such hogs can be raised at a profit. They enable you to increase the size of your hogs and decrease the cost of feeding.

Start With a Trio of
DUROC JERSEYS

The shortest, most economical way to a purebred herd that you can be proud of is to act promptly on this offer. Boar and two unrelated sows, from seven to eight months old, all registered and sired by such famous boars as: Ace of Pathfinders, Mammoth Sensation Junior, Royal Pathfinder and Great Pathfinder. Price for the trio, $500.
We also have unregistered purebred gilts sired by registered boars and out of registered dams at $35 a head. Registered boars to go with these unregistered sows at comparatively low prices.

Act promptly.
Address Department D.

Inquire about other special offerings.

DIAMOND BAR RANCH

SPADRA
Los Angeles County
California

F. E. LEWIS, Owner & Manager
R. K. WALKER, Hog Department

GUASTI BERKSHIRES

Weaned pigs, both sexes, from sows that farrow large litters and raise them. Priced reasonable — they are money-makers.

ITALIAN VINEYARD COMPANY

ALEX. M. WILSON, Supt. Guasti, Calif.

Valuable to Know

whether or not your alfalfa is suited to your land under the conditions of moisture—whether the alfalfa is adapted to your growing conditions. You'll realize the value with added profit when you grow the right alfalfa.

This Booklet---

tells of our seven different types of alfalfa, which have been selected for their production of, over 20 years' practical growing under the different conditions of soil and moisture. This booklet is yours for the asking. Sent prepaid on request.

GREEN BRAND GOLD

BOMBERGER SEED COMPANY

Seeds selected for Soil and Moisture Conditions

MODESTO - FRESNO

Allis-Chalmers
Farm Tractors

The 1830

A four plow tractor with 20% surplus power for ANY unusual load.

H. V. CARTER MOTOR COMPANY • *Distributors*
52 Beale St., San Francisco, Cal.

ORMONDALE RANCH SHORTHORNS
REDWOOD CITY, CAL.

HERD SIRES

BOQUHAN GUINEA STAMP, the great imported young Broadhooks bull.
GOLDEN GOODS JR., sire of LITTLE SWEETHEART, Grand Champion International Show, Chicago, 1919.

Bulls and Heifers for sale.
Duroc-Jersey Hogs for sale.

JAMES McDONNELL, - Supt.

onds and 2 thirds, winning first in all herds and groups.

The Holstein winnings comprised senior and grand champion female, junior champion female and junior champion bull. The entire herd won a gold medal, 6 purple champions, 9 blues, 5 reds and 2 thirds; also a silver cup presented by the Holstein-Friesian Association of America for the best herd exhibited.

Manager Sturgis is to be congratulated on the exhibits they have made at the various fairs this fall, as results show careful selection and fitting of blue ribbon animals.

A BULL DIRECT FROM DUTHIE'S.

Easton & Ward received a few days ago a cable from E. Lovell, announcing that he had purchased a bull for them at the Duthie sale. This bull, Collynie Prince Lavender, a white January calf, was sired by Master Stroke. His dam is Sittyton Lavender 26. He is a brother to the bull that topped the Duthie 1919 sale at $27,825. They will bring with him a few good cows of desirable breeding. This bull, carrying the breeding he does, should be a valuable addition to the Shorthorn cattle of California.

LIVESTOCK NOTES.

Geo. H. Strate, manager of the Wikiup Ranch at Santa Rosa left Wednesday on an extended trip through the eastern states.

C. N. Hawkins of the Pacheco Cattle Company, Hollister, sold three registered Shorthorn bulls recently to Wm. Atkin of Porterville for use on the ranges.

C. E. Rachford, Ass't District Forester, U. S. Dep't. of Agriculture has received the appointment of inspector in the Office of Grazing, U. S. Forest Service with headquarters in Washington, D. C. Mr. Rachford's many friends in California are much pleased at his promotion, but will miss his genial presence in California.

The report of the State Dept. of Agriculture on the subject of Disease Control in the Division of Animal husbandry for the month of September shows 420 herds containing 4274 cattle tested for tuberculosis. Reactors numbered 282. Sheep inspected for scab 139,515 of which number 14,943 were dipped. Special field investigations, 48.

The summary of the tuberculosis eradication work carried on co-operatively by the U. S. Dep't of Agriculture with various states for the month of September shows 5111 herds containing 72,074 cattle tested with 2727 reactors. There are now a total of 21, 800 once-tested free herds and 3892 accredited herds in the entire country.

Jobbers and wholesalers in the dressed meat business are useless parasites according to Fred H. Bixby of Los Angeles county. Mr. Bixby points to the condition in Los Angeles where retailers usually buy from packers direct and the price to producers "is always a half cent higher than in San Francisco".

The milk bottle, if not washed as soon as emptied, should be filled with cold or lukewarm water till it is washed. The albumen and casein harden and stick fast when they dry as well as when heated. So that if hot water is poured in the bottle or can that has had milk in it the albumen and casein will harden and stick. After washing with lukewarm water use hot water, which removes the fat and rinse in boiling water or steam to kill the bacteria.—Extension Div., N. D. Agricultural College.

At a meeting of the Board of Directors of the California State Agricultural Society held in Sacramento, the dates for the 1921 State Fair were fixed for September 3 to 11 inclusive. Another meeting will be held on October 28th, at which time plans will be approved for a new grand stand with seating capacity of 10,000, new cattle barns and quarters for herdsmen and the purchase of additional acreage to include a twenty-five acre park for special use of farmers who desire to camp during the fair period.

62 REGISTERED HEREFORD FEMALES

AT PUBLIC AUCTION

FINNELL STOCK FARM, GALT, CALIF.

Thursday, Nov. 18, at Noon

An offering of desirable young females from their herd of 180 head of registered Herefords, made in order to reduce the herd to the present capacity of their equipment. The offering includes

16 COWS WITH CALVES AT FOOT
25 BRED COWS AND HEIFERS
21 OPEN HEIFERS OF BREEDING AGE

The herd is headed by BEAU BLANCHARD 37TH, a son of Engle's famous Beau Blanchard, and SIR THOMAS, both of which have some good daughters in the sale.

43 out of the 62 Females in this Sale were born in 1917 or later; the balance from 1913 to 1916

This is an especially attractive offering for the buyer of foundation females, especially those who want to start a registered herd under range conditions, for this herd has always been handled strictly under range conditions, and carefully culled down to the females that drop a good calf regularly each year.

Guaranteed Breeders—Tuberculin Tested

28 BULLS FOR RANGE SERVICE

The owners have on hand 28 registered Hereford bulls, bred in this herd, two-year-olds and yearlings, that are offered for sale at private treaty. These bulls may be inspected at any time, and bargained for now or on sale day. The owners will price them in lots to suit buyers.

Owners:
FINNELL STOCK FARM COMPANY, GALT, CAL.

Auctioneers:
COL. BEN. A. RHOADES, Los Angeles.
COL. JOHN A. DAVIS, Manteca.

Management
Calif. Breeders' Sales and P
C. L. Hughes, Sales Mgr., Sacram

NOTE—Finnell Stock Farm is located about nine miles east and slightly so Sacramento County, California; about 35 miles southeast of Sacramento. Pacific trains will be met at Galt morning of sale, and lunch will be provi opening of sale.

Any One of Three Good Breeding

JACKS FOR SALE

Animals in good condition—aged—proved breeders—and well known locally. They are more than are needed on this ranch. Any one—buyer's choice—at

$350 Each

A Bargain Price to move them quickly.

Write or call at the Ranch and inspect them.

ROY M. PIKE
EL SOLYO RANCH
Stanislaus County, Cal.

P. O. Address Vernalis, San Joaquin Co.

Ranch is on the west side San Joaquin River Road near Vernalis — 14 miles south of Tracy — 10 miles north of Patterson — 20 miles due west of Modesto.

HILLCREST STOCK FARM

Shorthorn Cattle

Won at Sacramento Both Championships
7 Firsts and 5 Second Prizes

Shropshire and Merino Sheep

RAMS AND BULLS FOR SALE
Single or in Carload Lots

T. S. GLIDE, Prop. DAVIS, CALIFORNIA

Poultry for Profit

RESULTS FROM ARTIFICIAL LIGHTING.

Taking up the matter of the use of artificial or electric light to increase egg production during the short-day period of the year, Osee C. Frantz of Rocky Ford, Colo., says in the October number of the Reliable Poultry Journal:

"Like our neighbors, we had been averaging ten to fifteen per cent in egg production—some seasons perhaps as high as 20 per cent for short periods in the fall and early winter, but last October, having read up on the subject and being convinced that it was a natural method, not a matter of forcing, I decided to give it a fair test. We used this Quisenberry house for the purpose and it cost us about $50 to install the "lights"—a 75-candle power incandescent globe in each of the five pens, these pens being 12x12 feet in size. In each pen we placed 100 to 110 April-hatched S. C. White Leghorn pullets, and fed them exactly as we had been accustomed to feed during the last several years and gave them the same care as previously but I can assure you that the resul[illegible]re very different!

"[illegible]t long before the good re[illegible] in evidence. By daylight seven and eight o'clock [illegible]e went out to feed the [illegible]s, those not under [illegible]ould find 75 to 100 eggs [illegible] this lighter house, while [illegible] houses the hens had not [illegible] up to that time, not one. [illegible]me there were no males [illegible]e birds. Did not put the [illegible] until February first, when we [illegible] to use the eggs for hatching. [illegible]se 'lighted' birds, which simply shelled out the eggs during November, December and January, earning big profits for us above feed costs, etc., did not lay quite as well as the other birds in March, April and May. These 'unlighted' birds with us went up as high as seventy per cent, but are down now (August 6) while the birds, that were under lights last fall and winter have come well ahead."

FOR GREATER EGG PRODUCTION FEED— COULSON'S EGG FOOD FULL PARTICULARS IN OUR FREE BOOK "CHICKENS FROM SHELL TO MARKET" Coulson Co. PETALUMA, CAL

Dealers in PAPER Blake, Moffitt & Towne 37-45 First St., San Francisco Blake, Moffitt & Towne, Los Angeles Blake, McFall Co., Portland, Ore.

EGG-LAYING CONTEST BEGINS SECOND YEAR.

"The second year of California's big Farm Bureau Egg-Laying Contest at Santa Cruz started November 1st, with a good sprinkling of entries from the northwestern states of Washington and Oregon, says the Santa Cruz County Farm Bureau Monthly. Each hen is leg-banded with her own number and owner's colors, and each hen will do her best to shell out a record-breaking lot of eggs before November 1st, 1921. The hens will do their best because they are housed in beautiful new quarters, built according to latest scientific discoveries for a hen's comfort, as designed by the Poultry Division of the University of California. The building is situated on one of Santa Cruz's choicest spots, sheltered from winds but open to the sun and invigorating sea air.

The hens will be fed only the best of egg-making foods, as directed by the Poultry Division, and the manner of feeding will be that which has been found best by experiment stations and practical poultrymen the nation over.

Prominent and public-spirited poultrymen of California, Oregon and Washington have enterd their birds in the 1921 race. These men deserve a great deal of credit for their effort to improve their flocks. They are the leaders in the poultry business.

"SORE HEAD."

To the Editor: Please let me know the cause and remedy for "sore-head" in chickens. I discovered it first on late baby chicks and now some of the old hens are showing the same disease. They have sores all over their heads and on necks. I have tried sheep-dip on some, but it gets in their eyes and causes them to go blind.—Mrs. J. C., Bakersfield.

In our opinion these fowls are suffering from chicken-pox, which is more or less contagious, depending on the condition of the system of the fowl that is exposed to the disease. Fowls that are not provided with a correct assortment of feeds or otherwise suffer from improper conditions, are more liable to contract the disease. Thrifty fowls are almost immune from all diseases, including chicken-pox and others that are contagious. In our issue of October 2, 1920, we mentioned some simple ointments for the relief of fowls suffering from this complaint. In connection with the use of these ointments it is most important to change the diet to ligh and easily digested feeds, and to supply an abundance of greens. Any reader wishing extended information regarding this subject should address Veterinarian Division, University of California, Berkeley, Calif., requesting Circular No. 145, entitled, "Suggestions to Poultrymen Concerning Chicken-pox."

SORES ON HEAD AND NECK

To the Editor: My turkeys and chickens have a disease among them that is proving fatal: They get wart-like sores on the head and neck and especially around the eyes: I would appreciate any information regarding the cause and cure of same.—H. P. O. Reedley.

The wart-like sores on the head and neck indicate that both turkeys and chickens are suffering from chicken-pox. In our issue of October 2 we published an item regarding this disease, in which suggestions were made for simple treatment of afflicted fowls. Readers who may wish to obtain extended information regarding this subject should send for Circular No. 145, entitled "Suggestions to Poultrymen Concerning Chicken-pox." It may be obtained free by addressing Veterinarian Division, University of California, Berkeley, Calif.

DISTEMPER IN TURKEYS.

To the Editor: I want your advice how to treat turkeys that are affected with big puffed swellings between the eyes and nose. The first indication is the nose runs a little and in a few days this forms a transparent, jelly-like substance and can be squeezed out by pressing, but it comes back in a few days, if the birds are not cared for within a few days. Some cases swell so badly they go blind and cancer forms in their mouth, eyes and in their nostrils, and the result is death when they get to that stage.L. R. S., Turlock.

The distemper from which these turkeys are suffering is commonly known as "swell head," and is almost always caused by an improper diet. It is the result of the trukeys eating materials that are not properly digested, or are not completely assimilated by the systems of the affected birds. In the late summer the turkeys on range are likely to obtain too much grain. Except in cold weather turkeys cannot assimilate much grain. They require a variety of feeds a large share of which should consist of greens and coarse material or roughage. They also require insects or a substitute in the form of cracked bone and meat meal, meat scrap, or fish meal. Clabber milk is also to be recommended. At times the trouble is due to the lack of good hard grit, crushed shells, and charcoal. We advise giving the affected fowls a large dose of Epsom salts in a wet mash; it may be well to give the whole flock a dose. This will cleanse the system and reduce the fever, and thus remove the immediate cause of the disease. Feed an abundance and a variety of fresh greens. Give little or no grain for a week or two. The fowls may be relieved to a great extent by washing the head, eyes, and mouth with a solution of boracic acid, or extract of witch hazel.

POULTRY PRATTLE.

Chas. H. Vodden of Los Gatos recently sent a pen of Barred Rocks to Maui, Honolulu, and showed them at the poultry show there. He won 1st pen, 1st hen, and a silver cup for the best hen in the entire show. Mr. Vodden is elated over his winnings.

The Los Angeles County Farm Bureau sponsored a series of poultry culling demonstrations during the month of August. Mr. R. B. Easson, poultry specialist of the Extension Department of the University of California, conducted the work. All of the meetings were well attended.

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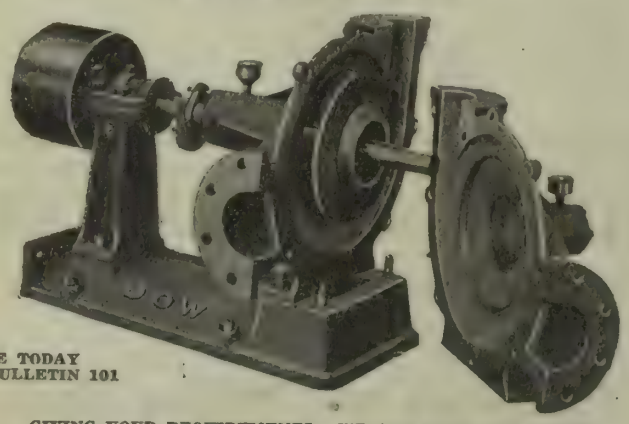

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Home Circle Department

AWAY.

I cannot say and I will not say
That he is dead—he is just away.

With a cheery smile and a wave of the hand,
He has wandered into an unknown land

And left us dreaming how very fair
It needs must be, since he lingers there.

And you, oh you, who the wildest yearn
For the oldtime step and glad return,

Think of his faring on as dear
In the love of there as the love of here,

And loyal still as he gave the blows
Of his warrior strength to his country's foes.

Mild and gentle as he was brave
When the sweetest love of his life he gave

To simple things. Where the violets grew,
Pure as the eyes they were likened to.

The touches of his hands have strayed
As reverently as his lips have prayed,

When the little brown thrush that harshly chirred
Was as dear to him as the mocking bird

And pitied as much as a man in pain,
A writhing honey bee wet with rain.

Think of him still as the same, I say;
He is not dead—he is just away.

—James Whitcomb Riley.

A BOY AND HIS DOG.

Jim Taylor was only fourteen, but he was the man of the family. His mother washed dishes in a restaurant, and Jim sold papers, and between the two they managed to have a home down on Carver Street, and keep the twins, Harvey and Harry, in school. It was hard work sometimes, especially once when Jim was run over by an automobile and hurt in the leg. It gave him a limp, and put him behind with the rent because he was a week in the hospital.

Just after that he found Tim. Tim was limping, too,—a footsore, starved, pitiful puppy, of indescribable mongrel breed. One ear stood up, the other lopped over grotesquely; one eye was encircled by a dark blotch; his wobbly legs were knock-kneed, and an enormous tail, entirely out of proportion, put the finishing touch on his absurb make-up. Tim was a doomed outcast until Jim looked on him.

"Lame things have a hard time," Jim said. His own leg was aching as he stood selling his papers. "Here pup!" and Tim came eagerly. "Gee whiz, but you're a skinny one! Looks as if you hadn't had a meal since you were born."

Tim wagged his tremendous tail in full assent. He had forgotten what a good meal looked like; but that night, after he had finished the scraps, his little body was as tight as a drum, and he was blissfully happy. "If he eats that much every day," said Mrs. Taylor, "we can't keep him, Jimmie."

"But he's lame, mother—who'd take him except us?" said Jim, in a tone that touched his mother's heart; and henceforth Tim's footing was secure.

The twins took to Tim enthusiastically, and spent their leisure time teaching him tricks. Tim could learn anything, and liked it. He was very much in earnest, but the more earnest he grew, the more irresistibly comic he became. "Sure, he's better than the clown at the circus," said Mrs. Moriarity, their next-door neighbor in the tenement.

Tim took a deep interest in selling papers, and soon Jim discovered that the dog could be of great use. Sitting on his haunches, with a paper in his mouth, Tim made an instant appeal to the passers-by. Jim had a good corner near the station, and his sales began to mount from the day that he first made Tim his assistant.

Nothing could make Tim drop a paper—no, not even if another dog came by. He was as loyal as he was clever—and ugly. For there was no getting around Tim's looks. No matter how well-fed and happy he might be, he would always have the same grotesque body and ridiculous head. Though his footsore lameness soon ceased, his "four legs were worse than any limp," as Harvey admitted.

Harvey taught him till he could jump through a hoop, his tail making an unforgetable curve; he could sit up in a chair, he could read the paper in a series of barks, he could play dead, he could shoulder a gun or smoke a pipe, he could march to a tune, he would roll over and over at the word of command, he could fetch and carry, and play hide-and-seek; but to see him sitting up at the corner with the papers in his mouth, helping his master, was to see him at the climax of accomplishment, for he rolled his eyes inquiringly at the public in a way that no clown ever surpassed.

One hot summer day Tim made the hit of his life, for he rolled his eyes desperately at a touring-car with a tall man and a pretty girl in it.

"Oh, stop, Paul, please!" cried the girl. "Just look at that dog!"

"He's the seventeenth, Dot—what's the use?" said the tall man. But he stopped, and the girl flew over and patted Tim, and bought a paper. Tim's tail thumped on the pavement as if he were a Great Dane.

"Oh, what a tail!" cried the girl, "and that blotch over the eye—and the ears! Is he for sale?"

"No'm," said Jim. "He's my dog."

"Oh," said the girl, "he's just what I've been looking for. You see, I'm in the movies, and I have a scenario that calls for a dog like yours—only yours is really better than my idea of one. Couldn't you sell him—for a high price? I'd give you fifty dollars."

"No'm," said Jim. "Tim isn't for sale," but his voice trembled. It could not be true that any one in her senses would pay fifty dollars for him!

"Seventy-five, then?" said the girl, tapping her foot impatiently. She was not exactly pretty, but she had big brown eyes and dimples.

"No'm, I couldn't sell Tim—not for any money."

"Listen, son," said the tall man. "Don't you go to the movies?"

"No, sir," said Tim. "The twins do, but I haven't the time."

"Well, if you did go, you'd know this lady. She plays in all the fine films. It's an honor to have her ask for your dog. He'd be taken care of like a king."

"We can take just as good care of Tim as anybody could," said Jim, stoutly. "After she was done with him, he'd be back on the streets."

Tim thumped his tail heavily.

"He's a bird, sure enough," said the tall man. "Say, son, will you rent him to us for a week? We have a place near the city, where the big film company's studios are. How would twenty a week strike you?"

Tim thought a minute. His life as a newsboy had not given him much trust in promises from strangers, and Tim was the apple of his eye.

"Tim can't go without me," he said. "Harvey might take him, but Harvey's in school. I can't afford to lose my stand at this corner, either, for any twenty dollars. So I guess not, mister."

The man and his wife talked together in whispers. Then she turned on Jim with her prettiest smile.

"How much would you take for you and your dog to come and stay with us for a week? Then, if the firm turned out well, it might be a month. Please do come, to oblige me, won't you?"

Jim considered. After that smile, he liked her. "Well, you see's, I have to make sure of the rent ahead. I couldn't risk it at less than thirty dollars for the week. But Tim has lots of tricks; he's a real wise dog, and he'd do his best."

"Thirty—all right," said the tall man, and with that he took a roll of bills out of his pocket, counted out three crisp ten-dollar bills, and handed them to Jim. "We'll be back at this corner in an hour," he said, "and take you with us, then, for a week."

Jim could hardly believe his eyes as the car sped up the street, leaving him there with the money. But he had no time to wonder. He hurried home, packed a few clothes in a bundle, went to the restaurant to tell his mother and give her the money, and then, a bright thought coming to him, sought out a comrade, a beginner in the news line, and rented the corner to him for a week for fifty cents.

Punctual to the minute, the motor-car came, and Jim and Tim were packed in on the back seat. "Put the robe round you both," said Mrs. Henderson. "You mustn't take cold, for you'll have a lot to do."

"Me and Tim don't take cold," said Jim. "We have a lot to do all the time, for the early papers and the late extras keep us going. Tim never gets tired.'

"Tell me some more about what Tim does," said Mrs. Henderson. "If I put him in a scenario, I must use all his best points, you know."

So Jim talked about Tim—an inexhaustible subject. Incidentally the twins and his mother, and the restaurant and the street corner, and the rent and his accident and lameness, and how his father had died, came in. Mrs. Henderson became interested, for she was kind-hearted, and before the car drew up in front of her pleasant bungalow Jim had made a good friend.

Tim seemed to resolve to do his best for the little lady, and he won golden opinions that afternoon. "Why, he enters right into it," said Mrs. Henderson, and Henderson declared the dog was "great—just born for the films." Unutterably earnest and unutterably comical, Tim took position after position and "registered" it at the word of command.

"Say, where'd you get that pup?" said the head man, strolling in. "That tail is grafted on, and no mistake, but it's fine. There's more than one film in that dog—he's a winner!"

Jim and Tim didn't understand, but they worked their hardest. It did not seem to Jim that Mrs. Henderson would ever get thirty dollars out of pictures of Tim, but he was determined to give her every ounces of energy there was in both his dog and himself. There was a veritable menagerie of animals, and all sorts of people working and playing to make the films. One of the comedy clowns took a great fancy to Tim. "When does your contract with the Hendersons run out?" he asked. "I'll take you on for six weeks, for I've got some ideas for that dog."

Jim reported this to Mrs. Henderson. "Well, I like that!" she said. "Give up Tim to that man? No, indeed, we'll not hear of that. I've been thinking about your mother, Jim—she must miss you. Suppose we go over in the car tomorrw and see her."

Jim was afraid to answer for fear he would choke. He knew how he had lain awake nights and missed her. Only Tim's presence had kept him up. When the car reached home, he limped upstairs, as fast as most people could have walked, and hugged his mother, while Tim capered in rapture about the twins.

"So this is the whole family," said Mrs. Henderson. "Now, Mrs. Tayolr, I've had your boy a week, and he's a good boy. He and Tim can find plenty to do in the films, right along. Why don't you move over to the studios? You live in three rooms here, and you can get a whole house over there for the same money. There's a good school for the twins. As for your work, I'll guarantee to find you something just as good. But I don't see that you'll need to work as long as Jim and Tim have engagements. I'm paying thirty this week, and I'll pay it right along for some time for Tim puts a new idea into my head every day, he's so remarkable!" She smiled at Jim's mother, with her famous dimples, and conquered as usual.

"I can't thank you enough," said Mrs. Taylor. "I'm sure we'd be glad to move and have a house of our own again. It's been a long, hard time. When Jimmie brought the dog home, I was not for keeping him, because we hadn't more than enough for ourselves—and now look at what's come of it."

"Say, can't I go in the movies with Tim sometimes? I taught him all his tricks, and I can teach him lots more," piped up Harvey.

"Why, of course," said Mrs. Henderson. "We'll put you all in with Tim, the whole family, and call it—let me see—'A Boy and His Dog.' We can register a lot of pathos in it too, as well as the funny scenes. It'll make a hit!" She was right, as any one can testify who has seen that favorite film move an audience to laughter and tears.—Priscilla Leonard.

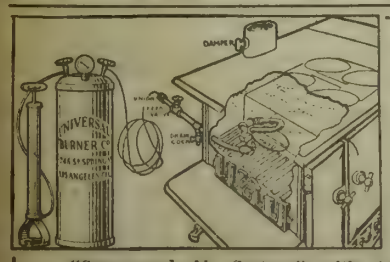
EAT BETTER FOOD AT LESS COST.

(Written for Pacific Rural Press.)

Farmer's wife, do you want to ease up the high cost of eating? You can do it with delicious new dishes in which the cheapest real nourishment today would be the basis. In doing this, you not only benefit your own family, but you help provide a market for a California product at a little above the cost of production. Probably no foodstuff, except wheat, is adaptable as the basis for more different kinds of good eating than is rice. And no food is more vaulable in actual nourishment per pound. No rice is better than what we grow here in California. For several reasons, our rice growers have paid increasing costs of production and got away with it because markets were good. This year the costs were the highest ever, but the markets are worse than in recent years. The only remedy is increased consumption of California rice. Farmers, above all others, should give preference to California farm products when buying supplies; and you can then expect other farmers to help the demand for your products. Buy a Bag of California Rice.

APPLE JELLY.

Apple jelly may be made at any time of year that one can find apples that are not too ripe. Apple juice lends itself satisfactorily to the addition of other fruit for flavoring, thus making variety in jellies with less expense.



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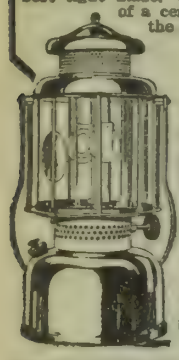

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DIETETICS AND DESTINY

(Written for Pacific Rural Press.)

Livingston, "The Community of Destiny." At least there is some town down the San Joaquin highway with that announcement on a sign board at its portals. If it isn't Livingston, it ought to be and this is why: Community of Destiny though it may be, it is a country town and its school is a country school. The Destiny part comes in with the school lunch. You say, well, then, there are a lot of destinies around, for school lunches are fast coming to be the order of the day. But wait a minute! So far as is known, Livingston is the first country school to go at the thing in a thoroughly scientific manner.

They not only have a school lunch, but they also have a department of weights and measures. To aid in getting off on the right foot, they secured the services of the county nurse whom the Red Cross maintains in Merced county. About seventy-five children were weighed, measured and their deficiencies charted before a single lunch was served. Then a proper diet was mapped out and a chart sent to every mother. By glancing at that, the mother knows exactly what to give the child to supplement the hot dish provided at school, and the child gets a balanced ration. Once a month the child will be weighed, etc., and progress, or its opposite, noted. If necessary, the diet will be changed from time to time to meet conditions.

Defects discovered by the nurse, which proper diet will not remedy, are called to the attention of the parents with recommendation.

Already the interesting fact has developed that these children seem to be getting enough milk but not enough vegetables—home gardens are the exception rather than the rule thereabouts.

And another interesting fact is that all the parents are co-operating (true to Destiny), and what do you think! The foreign-born mothers take to it most readily and are most eager to do their part. Some more Destiny.

MORE ABOUT MOVIES.

(Written for Pacific Rural Press.)

North Carolina is to the front with another plan for getting motion picture entertainments into the rural districts. The state legislature made an initial appropriation of $25,000 for the whole state with the understanding that each county could have $2,000 of it by appropriating an equal amount. The state board of education has supervision of the whole work, while the work in each county is under control of the county superintendent.

Any county putting up $2,000 is entitled to the service. Once in, the county is surveyed and ten convenient centers are chosen. The outfit consists of a specially equipped Ford for each county which carries everything necessary to project first-class pictures. The "Lizzie" is stationed outside, wires run into the building and the show may be given in any building that will accommodate the people.

The films used are bought outright and are the property of the State Board of Education. At present the supply is so limited that the circuits get only one or two entertainments a month.

This plan amply safeguards the selection of films and can be developed into a service that will give to the county districts the blessings without the curses of the movies.

We still maintain, however, that for California the best plan will be to use the Farm Bureau centers as the local organizations with the State Library and County Libraries as the film agency. And all that is needed to start the thing is for somebody to lead off and get an appropriation for the State Library that may be devoted to this work. We suggest that the farm centers already owning movie outfits—and there are several of them—get busy now before the Legislature meets. If we do not get the thing started pretty soon, the middle west, and even the south will put it all over us.

WALL PAPER.

To find the amount of paper needed for a room, measure around it and find how many strips of 18-inch paper will be needed. Then measure the length of the strips. This will be from the base up to within a few inches of the top, depending upon the width of the border, whether nine or eighteen inches. If a wide border is to be cut out at the bottom, do not figure it as full width.

A double roll of paper measures 48 feet, and most rooms will take strips so near 8 feet long that one can only get 6 of them from a roll. So after finding the number of strips, you may divide by 6 to get the number of double rolls needed.

It is always wise to have an extra roll in case there should be much waste in matching or some should be soiled; but if there are four or more openings, doors or windows, measured in, they will leave about a roll; or if you measure only the full height wall, and omit the openings, you can add a roll extra.

The border needed will be the distance around the room in yards and an extra yard for waste and watching. The rolls of ceiling may be found by getting the number of strips and their length, multiply these and divide the product by 48. Or take the square feet in the ceiling and divide by 72 and add another roll.

Paper should not be trimmed until after it is pasted—it is difficult to paste out to the edge of trimmed paper without getting some paste on the face side, but if the paste is applied before the selvage is cut and the paper is then folded and trimmed, a good, clean edge will result and the face will not be smeared with paste.

New walls should have a coating of glue sizing—a pound of ground glue in a pail of hot water, used while warm.

BREAKFAST FOR SCHOOL CHILDREN.

The nutritional expert for the Agricultural Extension Division of one of the eastern states has some very startling things to say about the breakfasts of school children. The time for the preparation and the time for eating seems to enter quite largely into the result, which is that two out of every five school children go every day to school without breakfast and about two more out of five go without the right kind of breakfasts. That is one of the chief reasons why there is so much poor health among school children. They need good breakfasts to give them the energy to work and grow.

Lack of time to eat breakfast may be overcome by retiring a little earlier—then it will not be so difficult to arise.

Well-cooked cereals with milk are almost indispensable for growing children and the cereal may be cooked at night and reheated in the morning where there is need for haste. This with toast and fruit, either fresh or cooked and a slice of bacon or egg makes a good breakfast.

It perhaps is unnecessary to say that no growing child should use coffee or tea—there is no food value in either and milk or cocoa should be furnished.

HARD OF HEARING.

The other day Archie Carson, the mail carrier on R. F. D. No. 1, passed Bill on his out trip, and Bill's horse was standing stock still in the road. As Archie swung back to town again, he passed Bill and the horse was standing still in the road. As Archie drove home to dinner he passed Bill on the edge of town again and stopped.

"Is that horse sick, Bill," asked Archie.

"Not that I know of," answered Bill. "I ain't noticed no symptoms."

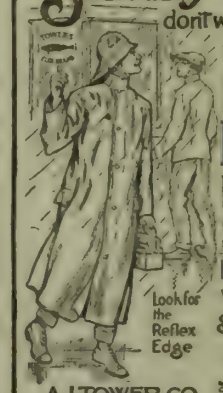
"Does he balk?" continued Archie.

"No, he dont balk. But he's so darn afraid I'll say 'Whoa!' and he won't hear me, that he stops every once in a while to listen."

Doesn't Wait for a Grouch.

To the Editor: Every now and then I read in the Pacific Rural Press a slamming letter from some one who disagrees from you in your editorial expressions. Many times I have read editorials and articles in your "Answers to Queries," that I considered worth more than the modest price of the paper, to say nothing of the rest of its admirable contents. But I have never written to tell you I have enjoyed and been benefited by them. However, it seems whenever a man has a criticism to make, or a grouch to express he does not grudge the time and effort to sit down and write you about it. Now, I certainly do enjoy reading the Pacific Rural Press, whether its expressions always agree with my opinions or not. Sometimes they do not, although far more frequently they do. I believe you are giving us one of the best agricultural papers in the land, and my hope is that you may continue many years doing the excellent work you are now doing. May your vigor of mind and pen never grow less! If some say there is chaff among your grain, we would say the grain also is abundant and good, and not hard to find in rich supply.—E. A. S., Merced.

Stormy Days don't worry the man who works in a Fish Brand Reflex Slicker



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NOVEMBER GARDENING.

Autumn roses and chrysanthemums are in their fullest glory—it is their harvest time. It is the grower's delight to admire them; it is his duty to judge them discriminatingly. Those roses which are best in the lessened heat of autumn should be noted and the thriftiest bushes marked as a source of cuttings to be taken later. Roses should be thus judged at least twice in the year. Chrysanthemums are judged once for all, but be sure to drive a stake which cannot be displaced by spading, beside the plants which it is desired to remember when spring growth is taken for cuttings. The same exhortation, to mark the best and not trust to memory, is made for all the splendid bloomers; the carnations, cannas, dahlias, geraniums and many others which contribute to the glory of the November garden.

November is the beginning of the transplanting season for deciduous trees and shrubs, and when the ground is deeply moistened by rain or irrigation, this early transplanting is particularly desirable in the drier and warmer parts of the state. The transplanted tree soon begins to establish itself with new rootlets if the ground is warm and moist.

November is a month for great activity in bulb planting, which has been delayed, also for open ground sowing of the multitude of native and introduced plants, which make winter growth and early spring bloom. It is also timely to set out bedding plants, brought along in pots or boxes from earlier sowing.

Sweet peas now planted will continue late winter bloom into spring time.

Friesias, held back from early planting, will now go forward into a good later blooming season.

Dahlias, gladioli and cannas should now be taken up and stored in a dry, cool place for planting out after the cold rains are passed; although they will survive being left in place, better flowers come from keeping them out of long dormancy in cold, wet ground. —California Garden Flowers.

WAR ON RATS.

The U. S. Department of Agriculture urges that drastic measures be taken to trap rats, if seen about the premises.

Rats begin to breed at three months and have from 6 to 10 litters a year, averaging 10 young to a litter. At this rate, a pair of rats might be the means of producing hundreds of descendants in a year.

It is recommended that all buildings be built rat proof. Unprotected food and careless disposal of waste food attracts rats.

If poison is used, barium carbonate is recommended. It can be mixed with any kind of food. Since rats may die in the walls, trapping is considered a better means of extermination than is poisoning. Snap or guillotine traps are best. Several traps placed in every part of the house and baited with fresh meat, seeds, nuts, vegetables, or fruits will aid materially in ridding the house of rats.

For further information regarding rat extermination, write to the Bureau of Biological Survey, U. S. Department of Agriculture, Washington, D. C.

SAUCES.

No matter how good a dish may be, a fine sauce makes it better. The extra flavor in foods at the better hotels and restaurants is generally due to the sauces, which seem so unusual, so delicate that they add a zest and pungency to the most familiar foods.

Canned foods are, as a rule, ready for immediate use, but even they are improved by the addition of a fine sauce, and a simple dish may be made to seem quite an elaborate one.

The three foundation sauces—white sauce, brown sauce and drawn butter sauce—are the background for nearly all fine sauces.

White sauce is sometimes called "The Mother Sauce," as it is so essential to the rest of the family of sauces. To make, take 1 tablespoon butter or substitute, 1 tablespoon flour, 1 cup of milk, ½ cup water or liquor from vegetables, salt, pepper, paprika. Cook the butter and flour together till they bubble, add the milk and other liquid, simmer till the mixture thickens, season and serve.

Prepare the brown sauce just as the white sauce, but cook the butter and flour together till a bright brown before adding the liquid.

For drawn butter sauce, use the white sauce recipe, adding a teaspoon more butter and substituting water for milk.

Oyster sauce, asparagus sauce, tomato sauce, egg or parsley sauce are all made with a white sauce foundation adding the desired ingredients.

Brown sauce may be varied by the substitution of tomato juice for other liquids. or by the addition of chopped pimientos and green pepper to tomato sauces.

Hollandaise sauce is drawn butter sauce with the addition of one well-beaten egg and a teaspoon of lemon juice.

REMOVING IODINE STAINS.

Of late years iodine has come to the front as a disinfectant. Its more common use has been productive of an increased number of stains on clothing, but iodine stains are easily removed.

Iodine dropped on unstarched material makes a brown or yellow stain. The presence of starch causes the stain to become deep blue or black, while ironing the cloth sometimes turns the stain to a dark brown. The method of removing these stains depends upon whether starch is present.

For unstarched materials use one of the following agents in removing iodine stains:

Water.—Wash the stain in an abundance of water or soak it for a number of hours in cold water. These stains can be removed also by wetting with water and drying in a warm place, such as over a radiator, repeating this if necessary.

Ammonia.—Sponge the stain with dilute ammonia.

Alcohol.—Sponge the stain. This agent frequently can be used on materials which water would injure.

Starch. — Prepared as for laundy purposes; for washable materials. Immerse the stained place in the starch and boil; it first turns blue and then disappears.

Flour.—Used in the same manner as starch.

For starched materials use one of the following agents:

Sodium thiosulphate ("hypo").—Immerse the stains in a dilute solution of the agent and then rinse thoroughly.

Sodium sulphite.—Applied in the same way as the thiosulphate.

Ammonia.—Soak the stains in dilute ammonia until they disappear.

Water.—Boil the stained material for 5 or 10 minutes.

LAUNDRY HINTS.

Clean flatirons while hot with beeswax. Be sure to rub off the excess wax before using the iron.

Sew old blankets around the ironing board for padding. Make a cover out of sheeting and sew pieces of tape to each side so that it can be taken off to be laundered when it becomes soiled.

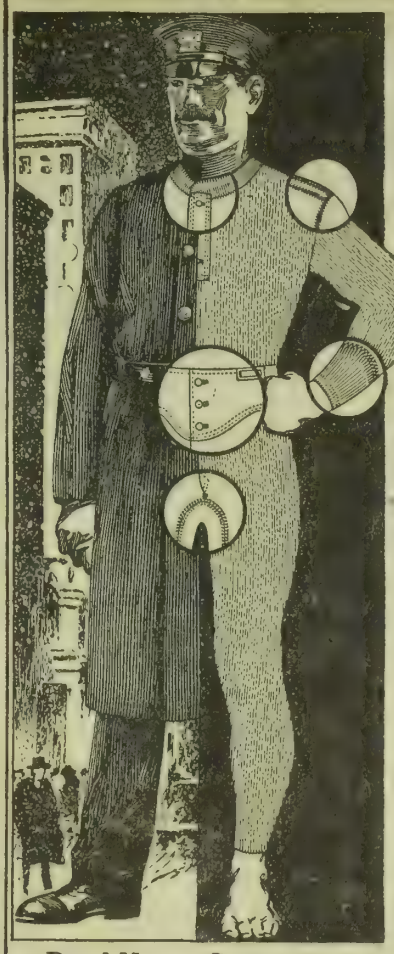
Shake clothes well before hanging them on the line and be sure to hang them on the straight of the goods.

Fold flat pieces carefully when taken from the line and they will require less ironing.

Hang blouses and shirts on a rack or clothes hanger until perfectly dry before folding and putting away, as they will dry in shape.

Nut Bread.—Three cups sifted white flour, 1 cup unsifted graham flour, ¾ cup white sugar, 1 well-beaten egg, 2 cups sweet milk, 4 teaspoons baking powder, 1 teaspoon salt, 1 cup chopped walnuts. Sift baking powder with white flour. Bake ¾ to 1 hour in a very slow oven.

"HANES"—the national nameplate on underwear is an unfailing guide!



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This extra-value underwear duplicates the men's Union Suits in all important features with added fleeciness.

Made in sizes 20 to 34, covering ages 2 to 16 years. Two to four year old sizes have drop seat. Four desirable colors.

See "Hanes" Underwear at your dealer's. If he cannot supply you, write us immediately.

Read Hanes Guarantee:

"We guarantee Hanes Underwear absolutely—every thread, stitch and button. We guarantee to return your money or give you a new garment if any seam breaks."

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STANDARD OIL COMPANY
(California)

THE MARKET REPORTS

SAN FRANCISCO

San Francisco, November 10, 1920.

WHEAT.

The market is weaker than it has been for some time, and trading has been reduced to a minimum with but very few offerings. Prices are nominal

Wheat .....$3.75@3.90

OATS.

Oats are quoted higher and more activity in the market is noticeable but our stocks pale to a return of the former slump in the market which has prevailed for some time

Red Feed, ctl. .....$2.55@2.60

BARLEY.

Call board prices are higher while there is only a negligible amount of trading in spot barley. The market has become weak and dull.

Feed Barley, ctl. .....$2.10@2.15

CORN.

Corn is arriving well but buyers are still holding off and the market is very weak. Quotations are the same. The new crop seems to be going begging. And increased heavy receipts may bring the price down, it is thought.

Egyptian, white ..... Nominal
do, brown .....$2.50@2.60
California .....$3.00@3.10

FEEDSTUFFS.

Rolled oats are up in price with the better situation in the oats market. Quotations on cracked corn are lower, due to heavy arrivals. On the whole, a quiet market prevails

Rolled Barley .....$46.00@48.00
Rolled Oats .....$55.00@56.00
Alfalfa Products .....$39.00@40.00
Cracked Corn .....$58.00@60.00

HAY.

Receipts have been much heavier than for several weeks past, but the market continues strong and arrivals are moving as fast as they come in with no noticeable degree of weakness. Prices are the same. Receipts for the past week were 1997 tons while for the week previous, 1411 tons arrived.

Prices here seem to be governed now by quotations asked by the farmers. It is thought that never before has there been as large a quantity of stored hay in the hands of the farmers on the Pacific coast as now. The farmers seem to have determined not to sell at any lower prices than are quoted now. All trading seems to be in the seller's favor. Dry weather and unfavorable conditions are reported from many sections of the interior. A better tone in the feed and grain market has helped to stiffen the hay situation. We quote prices, f. o. b. San Francisco, less $1 per ton commission charges.

Wheat, hay, new .....$28.00@29.00
Tame oat, new .....$24.00@27.00
Wild oat, new .....$18.00@20.00
Barley .....$17.00@20.00
Alfalfa, 2nd cutting .....$22.00@25.00

RICE.

Market prices are considerably lower and rice is weak, with the exception of the Southern market, which is firm and Honduras is stronger than it has been.

California fancy $5.50
do, Choice $5.25
Southern Honduras, long grain $9.00
China, No. 1, double mat $8.50
Blue Rose, fancy $7.50
Fancy Head (Philips & Co.), 10 lbs. $10.00
California Japanese, No. 1 .....$5.50
do, No. 2 .....$5.25

FRESH FRUITS.

(Wholesale prices paid by commisison houses.)

Berry receipts are extremely light and are meeting with an exceptionally good demand for this time of year. The price on raspberries has advanced. Apples are moving poorly and heavy receipts are flooding the market. Prices on apples, however, are quoted the same as last week. Cranberry prices are from $17 to $18.50 a barrel with fancy higher.

Apples: Wagner's $2.00
do, Spitzenberg .....$2.00@2.50
do, Jonathan .....$2.50@3.50
do, Bellflowers .....$1.15@1.60
do, Rhode Island Greenings ..$1.50@1.75
do, Virginia Greenings .....$2.00@2.25
Pears .....$2.00@3.50
Strawberries, 6 12-oz. boxes.....$1.00@1.50
Casaba, crate $1.00
Raspberries, drawer .....75@90c
do, 8-oz boxes .....30c@40c
do, 8-oz. boxes .....40@50c
Cantaloupes, Standard .....$1.50@2.00
do, Flats ..... 50@75c
Watermelon, lb. .....1@1¼c
Persian Melons, lb. .....2@3c
Grapes,, large box .....$2.00@3.50
do, crates ..... $1.50@3.00

POULTRY.

The market has shown much improvement during the week. Eastern shipments have been light and surplus stocks seem to be about cleaned up. Turkey receipts continue very light. Fancy stock is commanding a premium. The steamer Sonoma has brought 68 cases of turkeys from Sydney. Prices have generally risen, except on turkeys.

Broilers, small .....60@62c
do, large .....47@50c
Hens, mixed color .....38@40c
do, Leghorns ..... 28@35c
Roosters, young ..... 32@35c
do, old 25c
Friers .....40@42c
Squabs .....70@80c
Geese .....30@35c
Ducks .....30@35c
do, old .....28@30c
Belgian Hare, live .....20@25c
do, dressed .....24@27c
Jack Rabbits .....Nominal
Turkeys, young, large, lb. .....50@55c
do, old .....45@50c
do, dressed, lb. 55c

BUTTER.

Prices have all risen considerably due principally it is thought to the fact that Australian shipments through this port were mostly reshipped to the East without delay and a quantity of butter, which will arrive in Vancouver, British Columbia, this week has been routed to San Francisco, but will now be shipped direct to the East. Dealers' stocks show a gradual reduction.

	Thu.	Fri.	Sat.	Mon.	Tu.	Wed.
Extra	51½	51½	..	53	53½	55
Prime 1sts	50½	50½	..	51	52	54
Firsts	49	49	..	49	49	..

CHEESE.

Cheese prices have advanced with the light receipts of California grades which has continued all week. The market however is fluctuating. The demand is active and the supplies of fancy stocks are limited. Better production will result from the increased prices it is expected

California Flats, fancy 28½c
do, Firsts 27½c
Oregon Triplets 26½c
do, Y. A., fancy 31½c
Full Cream Jack 29c

EGGS.

Pullets are very firm with prices advanced on all grades at the week's close. The market is strong with indications pointing to a continuance of this condition. Arrivals from Petaluma have been very light and cold weather is having its effect on production. Heavy shipments continue East.

	Thu	Fri	Sat	Mon.	Tu	Wed
Extra	80½	81½	..	82	84½	85
Ex. Pullet	68	68	..	70	71½	74
Dirties	..	..	..	..	..	..
Undersized	57½	60	..	62½	62½	64½

HONEY.

The market continues weak and prices are falling. Quotations are lower. Cost Honey, however, is enjoying a very firm market, but there is practically no quantity of this grade on the market.

Water White (extracted) .....15@18c
White .....13@15c
White water .....28@29c
Amber Alfalfa .....10@12c
Light Amber .....23@28c

POTATOES, ONIONS, ETC.
(Wholesale prices quoted by commission houses.)

Tomatoes are moving very slowly. Vegetable receipts are heavy with turnips quoted lower. There is no more summer squash on the market and egg plant is scarce, and it is not selling by the box now but is quoted at 3 cents a pound. Potato receipts have been heavy, especially from Oregon and the heavy arrivals are moving extraordinarily well with higher prices quoted. The onion market is steady.

Turnips .....$1.00@1.25
Beans, green .....8@10c
Carrots, per sack .....$1.25@1.50
Lettuce, local doz. .....25@30c
Cucumbers, Alameda, lug box ..$1.00@1.25
Tomatoes, Alameda, large box.... 75c@1.50
Summer Squash, box 35-40 lbs. nominal
Egg Plant, lb. 3c
Potatoes, New River, cwt .....$1.50@2.10
Onions, yellow sack .....50@80c
do, Red ..... Nominal
Green Onions, box, 25 lbs. .....$1.50@1.75
Celery, crate ..... $3.00@3.25

BEANS.

The price on Bayos has risen noticeably. Michigan beans are higher on a basis of $4.75 to $5.00. This price, however, still allows a leeway in sending white beans to shipping points. There is a very good demand for beans, more particularly Pinks, Bayos and Blackeyes. The market on the latter is especially strong, due to the fact that Bayos are becoming closely cleaned up and the demand is exceeding the supply.

Bayos .....$10.50@10.70
Blackeyes .....$5.75@6.00
Cranberries .....$6.00@6.25
Red Mexican .....$6.00@6.50
Pinks .....$5.50@5.75
Large Whites .....$4.25@4.50
Small Whites .....$4.40@4.60
Limas, S. F. prices .....$7.35@7.50
do, Baby, S. F. prices .....$6.85@7.00

DRIED FRUITS.

The new raisin prices have been announced and a half cent advance is quoted on all grades, except layers and clusters. The market is still very quiet, although indications point to increased activity with the new raisin prices.

Apricots.

Extra fancy Moorpark, lb. 30c
Fancy Moorpark, lb 23c

Growers Quality.

Growers' quality—Fancy, lb. 26½c
do, lb. 24½c
do, Choice lb.....22½c
do, Slabs, lb.....20c
do, Standards, lb. 18c

Raisins.—The following prices have been established as the opening prices of the California Associated Raisin Company for the 1920 crop of raisins

Muscat, Sun Maid seeded pkg. 36-16s 20½c
do, Fancy 36-16s 20½c 48-12s 12½c
Bulk seeded Bakers Sun Maid 25-lb. 19½c
do, Fancy Sun Maid, 25-lb. boxes..... 20c
do, 4-crown, recleaned lb. 14c
Loose, 1-crown recleaned lb 10½c
Layers, 3-crown flat pack, 5-lb. box ..$1.30
do, 3-crown, flat pack, 5-lb. box..$1.30
Clusters, 4-crown, flat pack, 20-lb. box $4.70
do, 4-crown flat pack, 5-lb. box, $1.40
Sun Maid 100-lb. boxes $40.50
Thompson Seedless, Sun Maid, recleaned, lb 20c
do, Sun Maid, bakers, lb. 21c
Sultanas, Sun Maid recleaned lb. 19¾c
do, Sweat-box, layers, lb. 18½c

..Figs—Following prices have been established as the opening prices for the 1920 crop of dried figs.

White Adriatic, 12-10 oz. $1.25; fancy, $1.30
do, 12-8 oz. .....$2.00; fancy, $2.05
do, 50-6 oz. .....$3.10; fancy, $3.20
do, 70-4 oz. .....$3.30; fancy, $3.40
Adriatic, bulk, Standard, 50-lb. boxes, lb. 9c
do, bulk, fancy, 50-lb. boxes, lb. 13c
Black Mission, Standard, 50-lb. boxes, lb. 7c
do, Fancy, 50-lb. boxes, lb. 12c
Prices f. o. b. Fresno.

Peaches.—Following prices have been established as the opening prices of the California Peach Growers for the crop of dried peaches

Yellows, Standard, lb 15½c
do, Fancy lb. 17½c
do, Extra fancy, lb. 18½c
do, Slabs, lb. 15¼c
Muirs, Standard lb. 15¾c
do, Fancy, lb. 18¼c
do, Extra fancy, lb. 19½c
The above prices are bulk basis.

Shipment: September, October, November. Seller's option. The above prices are guaranteed against Association decline until January 1, 1921.

Prunes—Following prices have been established as the opening prices of the California Prune and Apricot Growers, Inc., for the 1920 Sunsweet Brand, 20-30s, flat, lb. 25c
do, 30-40s, bulk, lb. 16c
do, 40-50s, bluk, lb. 15c
do, 50-60s, bulk, lb. 12c
do, 60-70s, bulk, lb. 11c
do, 70-80s, bulk, lb. 10c
do, 80-90s, bulk, lb. 9c
do, 90-100s, bulk, lb. 8½c

First half September shipment, ½c premium; last half September shipment, ¼c premium. The above prices apply only to contracts already issued.

CALIFORNIA FARM BUREAU MARKETING ASS'N.

REPORT OF SALES.

Tegner, November 3, 1920.

No. Hogs.	Av. Wt.	Dock	Price
65	214	30	$12.00
83	205		$12.00
1	350		11.00
2	295		11.00
4	140		10.15
13	333	160	10.00

2 Cars, 27 consignors.

Modesto, November 4, 1920.

73	208		$14.00
1	300		13.50
6	167		13.50
6	151		13.00
39	198	30	13.00
8	390	170	10.75

Two cars, 15 consignors.

Fresno, November 5, 1920.

49	188		$13.10
23	170		12.60
2	295		12.60
10	159		11.50
5	310	70	11.10

One car, 10 consignors.

Wasco, November 6, 1920.

23	190		$14.60
24	222		14.60
86	212		14.50

No. Hogs.	Av. Wt.	Dock	Price
46	161		13.00
50	158		12.50
6	142		12.00
50	259	600	11.25
12	313	180	11.25

Four cars, 21 consignors.

Special Livestock Market Report

San Francisco, November 10, 1920.

CATTLE—Not many offered in California. Bulk of supply coming from Nevada and Oregon. Prices, steady, quality fair to good.

Steers, No. 1, 1000-1200 lbs..... 9 @ 9½c
do, 1200-1400 ..... 8½@ 9c
do, 2nd quality ..... 7 @ 7½c
do, thin ..... 5½@ 6c
Cows and Heifers, No. 1..... 7½@ 8c
do, 2nd quality ..... 6 @ 7c
do, thin ..... 3 @ 4c
Bulls and Stags, good ..... 4½@ 5½c
do, fair ..... 3½@ 4c
Calves, lightweight ..... 10 @ 11c
do, medium ..... 8 @ 9c
do, heavy ..... 7 @ 8c

SHEEP. — Not very plentiful but offerings sufficient to meet demand. Prices have an upward tendency excepting ewes, which are not very attractive in this market. Public is buying wethers and lambs.

Lambs, milk ..... 9 @10c
do, yearling ..... 7½@ 8c
Sheep, wethers ..... 7 @ 7½c
do, ewes .....4½@ 5c

HOGS.—Are not offered very freely this week. Quality good, with prices half a cent higher than last week and a probability of still further advance in spite of lower eastern markets.

Hard, fat, grain-fed, 100-150 lbs. 13½c
do, 150-225 lbs. 14½c
do, 225-300 lbs. 14c
do, 300-400 lbs. 13c

Los Angeles, November 9, 1920.

CATTLE—A steady market in cattle with a very good demand being felt for fat steers. Light steers, however, are reported as being dull. Cows said to be quite plentiful and they are dull and weak. All prices unchanged from last week's quotations.

Per cwt. f. o. b. Los Angeles.

Steers, prime to choice, 1050-1000 lbs. .....$10.00@10.50
do, good to prime steers, 900-900-1000 lbs. .....$ 8.50@ 9.00
Prime cows and heifers .....$8.00@ 8.50
Good cows and heifers .....$7.00@ 7.50
Canners .....$4.00@ 4.50

HOGS—There is no change in this market from a week ago. Killers are only interested in the fresh meat trade at present and are only buying for that just now. Curers still holding back and buying very few. Prices remain the same as last week.

Per cwt. f. o. b. Los Angeles.

Heavy, averag'g 275@350 lbs. $10.00@11.00
do, 225@275 lbs. .....$12.00@12.50
Light .....$13.00@14.00

Rough docked 20 lbs. piggy sows 40 lbs. and stags 40 per cent.

SHEEP—Lambs are in very good demand at present quotations and the offerings liberal and of good quality. Ewes and wethers are quite dull. Prices unchanged from last week.

Prime wethers .....$6.00@ 7.00
Yearlings .....$6.00@ 7.00
Prime ewes .....$5.00@ 6.00
Lambs .....$10.00@11.00

LOS ANGELES

Los Angeles, November 9, 1920.

BUTTER.

Butter prices today are the same in the local market as was quoted last week. There was, however, a slight decline in price during the middle of the week, but this decline was recovered on Monday. Extra creamery is in good demand and the market shows firm. Lower grades have a weak tone. Receipts were heavier this week than last, being 116,000 lbs. Prices quoted represent what is paid the producer. We quote.

California, extra creamery 55c
do, prime first 52c
do, first 51c

EGGS.

The egg market is very active and sharply higher under the influence of continued light receipts and the holding up of the demand. Receipts this week were slightly above those of last, and for the week ending today were [illegible] cases. We quote prices paid the producer.

Fresh ranch extras 86c
do, case count 83c
do, pullets 74c

BEANS.

There was some little demand during last week for blackeyes and pinks, and it will be noticed that pinks are quoted lower this week. Limas and whites continue very dull.

Limas, per cwt. $6.00
Large white, per cwt. .....$4.50@5.00
Small white, per cwt. .....$3.00@3.25
Pink, cwt. .....$5.00@5.25
Blackeyes, cwt. .....$5.00@5.25

WALNUTS.

The demand throughout the past week was very good for Association walnuts and at steady quotations. The Walnut Growers' Association are now shipping on an average of 50 cars a day. Today's Associatio prices are.

No. 1 .....22½c
No. 2 ..... 16½c
Fancy budded 25½c

Orchard run walnuts from Independent growers are selling slow, though prices show no change. They are quoted at 12 to 14c a pound.

FRUITS.

Apples now make up about the best of the offerings in this market, and there is a good demand for them. The grape season is just about over. Not many coming in and sales reported to be slow. Figs are dull and lower today. Pears steady and in pretty good demand.

Figs, lb. .....8@10c
Grapes, Malaga, lb. .....8@10c
do, Cornechons, lb. .....9@10c
do, Tokays ,lb..... 9@10c
Apples: Bellflower, 4 tier .....$1.40@1.60
do, Delicious, lb. .....5@6c
do, Jonathan, packed box.. $2.75@3.00

POULTRY.

Receipts in this market were very light throughout the week, ending today. There has been a good demand for all offerings at quotations. Heavy broilers, friers, hens and roasters all being advanced since reported last week. The higher prices effective today

Broilers, 1 to 1¼ lbs. 38c
do 1¼ to 1¾ lbs. 45c
Friers, 2 to 3 lbs. 36c
Hens ..... 32@35c
Roosters (soft bone) 3 lbs. and up ..... .36c
Ducks .....24@25c
Turkeys ..... 40@44c
Geese 25c

HAY.

Receipts in the hay market continue to show improvement. Also the demand has been better lately than for sometime past. Cool weather has stimulated sales. The absence of green feed on the market is lending to a better tone in prices, though they show no change over those of last week.

Barley hay, ton .....$21.00@24.00
Oat hay, ton .....$24.00@27.00
Alfalfa, Northern, ton .....$25.00@27.00
do, local, ton .....$28.00@32.00
Straw, ton .....$ 9.00@11.00

VEGETABLES.

Receipts are light and but few changes are reported in prices. The demand is good for all choice fresh stuff. Potatoes are still dull under very heavy offerings. The same may be said of onions. Peas, summer squash and cucumbers steady and in fair demand and so are green peppers. No. 1 tomatoes are in good demand and quoted a little higher than last week. Celery is steady and selling fairly well. String beans slow sale and quoted lower. Lettuce now coming in freely and lower with fair demand. We quote from the grower.

Potatoes, local, cwt. .....$1.75@2.00
do, Northern, cwt. .....$1.75@2.25
do, Idaho Russett, cwt. .....$1.75@2.25
Sweet Potatoes, lb. .....3@3½c
Cauliflower, large, crate .....60@75c
Onions, Stockton, white, cwt. ....$1.35@1.60
do, yellow, cwt. .....90c@1.00
do, Australian Brown, cwt. ..$1.05@1.10
do, local, crate .....40@50c
Lettuce, crate .....$1.00@1.15
Rhubarb, per 30-lb. box .....80@1.00
Peas, lb. .....12@14c
Carrots, bunches, ...30@35c
Summer Squash, local, lug .....$1.00@1.25
String Beans, green, lb. .....7@8c
do, wax, lb. .....7@8c
do, Kentucky, lb. .....8@9c
Cucumbers lug .....$1.50@1.75
Tomatoes, home-grown, No. 1 lug ..65@75c
do, No. 2 .....25@35c
Bell Peppers, lb. .....3@4c
do, Chile, lb. .....3@4c
Celery, crate .....$4.00@5.00

MARKET COMMENT.

Pool to Finance Live Stock.

A meeting of bankers from the large centers was held at Chicago early this week to complete arrangements to finance a pool, through which it is proposed to loan to breeders of live stock $30,000,000. The plan is an out-

growth of the attempt to have the Federal Reserve Bank at Washington furnish money direct to stockmen, that they could meet the demands for cash during the present stringency and low price of cattle. As no material aid could be had at Washington the bankers have decided to go ahead independently.

Wheat at New Low Level.

At the Chicago Board of Trade this week wheat sold at lower prices than at any time duruing the past four years. December wheat was quoted at $1.77 and March at $1.75 per bushel. Lack of foreign buyers is claimed to be the cause of the slump. Corn also went to low levels along with wheat. December corn selling at 78c per bushel.

Flour Below $10 per Barrel.

Following the slump in wheat in the East this week, flour was quoted at Minneapolis at $9.65 to $10 per barrel—the lowest since 1916.

New Oranges Being Marketed.

Tulare county supplied the San Francisco market with a car load of new crop navel oranges this week. The shipment sold on the basis of $6.75 per box f. o. b. shipping point, and was $1.75 per box above the price made at the opening of the season a year ago. Owing to the fact that the Valencia crop is well cleaned up and the slowness of the southern crop to color is the reason for the high price at this time. A good rain in the orange districts would soon allow of a goodly quantity of sweet, yellow fruit to be shipped, though prices are expected to hold until after Thanksgiving. Several cars from Tulare county are on the way East.

Bean Market Stronger.

Beans are showing more strength in the markets than any of the principal food products. There is some buying by the eastern trade and the expectation is that prices will stiffen as the season advances. It is stated that the Michigan growers are trying to unload their crop at this time, which tends to hold prices down.

BARNGROVER & WRIGHT SALE.

Barngrover & Wright sold forty-three head of registered Herefords for an average of $265.10 in their sale at Sacramento, November 6th. The cattle were from the herd of Cottrell and Packard of Phoenix, Arizona, and although they were thin they had excellent blood lines and should develop well. The thirty-nine females averaged $273.20. The top, $375, was paid by Howard Tilton of Madrone for Miss Columbus 6th, a two-year-old heifer.

C. H. Nortridge of Banta put himself into the Hereford business by the purchase of fifteen females and one bull. Ed T. Morgan of Northam, Nev., bought ten head.

SHORTHORN BREEDERS' ANNUAL.

The annual meeting of the California Shorthorn Breeders' Association was held in Parlor B of the Palace Hotel, San Francisco, Wednesday, November 10th. Directors elected were W. A. Ward, Diablo; Dr. H. M. Elberg, Woodland; Hon. B. F Rush, Suisun; T. W. Dibblee, Santa Barbara; T. L. Miller, Pacific Grove; C. N. Hawkins, Hollister; D. W. McDonough, Redwood City.

After the adjournment of the annual meeting the newly elected directors met and proceeded to elect officers whose names follow: Hon. B. F. Rush, president; Dr. H. M. Elberg, vice-president; D. J. Stollery, secretary. Acting Mayor McLean addressed the directors, assuring them of the assistance of the city of San Francisco in every way possible in holding a livestock show next year. A committee of four was appointed to act with a committee from the city and similar committees from other organizations to select a location—there is a good one in view—raise funds, etc.

BANKERS TO FINANCE LIVESTOCK INDUSTRY.

Bankers of Chicago and other places met this week in the former city to complete arrangements for a thirty million dollar pool to help finance the livestock industry of the nation. The conference is the outgrowth of the plea for aid made to the Federal Reserve Board at Washington by the livestock interests of the country.

TO MINIMIZE FUTURE WATER LITIGATION.

(Written for Pacific Rural Press.)

The time is upon us when water litigation will fill our courts unless constructive laws are soon put onto the statute books and enforced. The conflict between riparian rights of upstream water users and vested rights of downstream users has already inaugurated what threatened to be the most gigantic lawsuit in the State.

Expensive litigation was avoided last season on the numerous canal systems taking water from Kings river, by their mutual agreement regarding the proportion or amount each was entitled to divert, and by their willingness to vest supervision of such diversion in the hands of a watermaster appointed by the State Water Commission in September, 1919. The watermaster's great work then lay in adjusting diversions to conform with the continual variation of flow in Kings river, due to the rate at which snow melted or rain fell.

When the numerous water storage projects now on the way shall have been completed (being paid for by districts on the lower reaches of rivers) the water released from storage through natural watercourses in the irrigation season will be diverted by higher riparian owners, who have paid nothing toward the cost of storage; and then troubles will follow.

Must Protect Water Rights.

We hold it to be self-evident, that when a man has legally used water and has built diversion and distribution works, leveled his land, built up his ranch, perhaps planted orchards or other perennial crops, and developed his land into a better taxpaying property on the basis of continued use of the water, he should have a perpetual right to that much water to the entire exclusion of later appropriators when water is scarce. If he is neighborly enough to temporarily yield some of his rights, he should be commended, but should still be protected. Watermasters in most other western states are generally able to secure among those who have vested water rights, such live-and-let-live agreements as will put all of the water to its best productive use. But in the absence of such agreements and in the absence of an official watermaster on the job, vested water rights are in continual jeopardy from users farther upstream, who either take more than their share or whose rights were established later than those farther down stream. In such a case resort to law is the distasteful recourse.

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Pacific Rural Press:

I wish to let you know, and to thank you, that I have sold my $1,000 Tractor outfit. Your paper is certainly the best advertising medium on the coast, as I have sold many things through it and received many times more answers than from all other papers together.—Mrs. Frances Rosel.

Napa Junction, Nov. 5, 1920.

Mr. Barley Grower

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WILL INCREASE YOUR YIELD 20 PER CENT

RECORDS OF EXPERIMENTS FOR 6 YEARS AT U. C. FARM.

Variety Sown—	1913	1914	1915	1916	1917	1918	Ave.	Comp'tve
	bu	bu.	bu.	bu.	bu.	bu.	bu.	Yield
California Common ..	101.1	54.1	51.9	66.2	104.2	94.0	78.60	100%
Mariout	106.2	50.4	54.6	68.0	103.0	110.0	82.03	104.3% ..
California 4,000	119.6	76.8	52.7	93.2	128.2	98.0	94.75	120.5%

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I Have First-Class Recleaned

California 4000 Seed

From Stock Bought from University Farm, Davis
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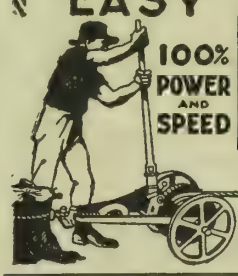

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On boulevard city, only 2 miles R R town; 160 acres include 110 acres rich tillage; this year 70 acres fine wheat, 20 acres corn, 5 acres beans, 5 acres oranges, lemons, grapefruit, olives, almonds, walnuts; 2-acre pepper-tree grove; surrounded by great fruit farms; bungalow 6 rooms bath, cement cellar, piped water, magnificent shade trees; big barn, good cottage, blacksmith shop, poultry house for 1500 birds, new garage; aged owner made money, retiring, quick buyer gets good pair mules, Jersey cow, lot machinery, tools, poultry, etc.; everything $14,750; easy terms. Details this and many southern California orange groves and farms, page 91, Strout's Big New Illustrated Catalog Farm Bargains, 33 States. Call or write for free copy. Copy free. STROUT FARM AGENCY, 503FA Wright-Callender Bldg., Los Angeles, Calif.

FOR SALE BY OWNER—82 acres river bottom, mostly in alfalfa and orchard (walnuts, pears and almonds) yielding large crops. Own irrigation, highway, railroad station, store on place, $850 an acre. 80 acres Linden district, rich soil, close to Calaveras river, $300 an acre. Both places real bargains at price offered. For terms and full description. Box 2260, Pacific Rural Press.

MEXICAN LANDS—400 acres in American colony near Hermosillo and Southern Pacific Railway. Rich river bottom land; will grow anything; two crops each year. Investigate this opportunity to start big farming at small cost. Owner, 329 Ochsner Bldg., Sacramento, Cal.

FOR RENT — 80 acres dairy and alfalfa farm. All under irrigation. 24 cows. Full equipment farm machinery. Cash or shares. Write or call on J. F. S., Box 96, Gazelle, Siskiyou Co., Cal.

FOR SALE—160 A. deep level loam, will grow anything. 70 miles from San Francisco. Reasonable terms. A. M., Box 2230, Pacific Rural Press.

MISCELLANEOUS.

TENNESSEE

WINTER BARLEY

Recleaned seed for sale.
Grown from State Universiay Farm Stock

W. A. BEARD
Marysville, Calif.

PRUNES, LARGE, SWEET, Evaporated French prunes—packed in sanitary boxes; will keep 10 and 20 pound boxes, 22c per pound; 40 pounds and over, 20c per pound—all delivered prepaid any California express station. Buy direct from grower and obtain best fruit at less cost. Sunset Ranch, Live Oak, Calif.

REMANUFACTURED PIPE

All sizes standard pipe and wrought iron screw casing. All kinds of fittings. Guaranteed good as new. Write for prices. **Weissbaum Pipe Works, 160 Eleventh street, San Francisco.**

EXTRACTED ALFALFA HONEY direct from producer—60-lb. can, $8.50; case, 2 cans, $16.00. Sample by mail, 20c. Freight paid 150 miles. Remittance with order. E. Jackman, Firebaugh, Fresno Co., Cal.

PUPS FROM THOROUGHBRED Russian wolfhound and a staghound mixture sire. Best strain coyote and jackrabbit dogs. $5 each. These are $25 pups. P. H. Hughes, Snelling, Calif

CITRUS EXPERT for South Africa. Must be familiar with all phases of the industry. Salary, £800 per annum, three years' contract. Fare both ways. Address F. T. Bioletti, Berkeley.

ALL SIZES OF PIPE and screw casing, both new and second-hand, dipped and undipped. Guaranteed. Prices right. Shecter Pipe Works, 304 Howard St., San Francisco.

APPLES FROM GROWERS—Bulk pack. Bellflowers, $1.50 per box; No. 2 grades, $1.10; Newtowns, $1.75; No. 2, $1.25. Edward A. Hall. Rt. 1, Box 39, Watsonville, Cal.

APPLES FROM GROWERS — Bulk pack. Bellflowers, $1.30 per box; No. 2 grades, $1.00; Newtowns, $1.75; No. 2, $1.25. Edward A. Hall. Rt 1, Box 39, Watsonville, Cal.

FOR RENT—Pasture for 700 head of cattle, more or less, within 50 miles of San Francisco. Also 100 head of red cattle for sale. F. N. Chaplin, Argonaut Hotel, San Francisco.

EXPERT ON TROPICAL and Sub-tropical Horticulture for South Africa. Salary, £450 to £550 per annum and free quarters. Address F. T. Bioletti, Berkeley.

$30 A DAY selling Powerene. Equals gasoline at 5c. The equivalent of 20 gallons, express prepaid, $1. W. Porter Barnes, Box 424A33, Santa Rosa, Calif.

CORY THORNLESS Mammoth Blackberry. Write for descriptive price list. Get your plants from the grower. Wm. Mortenson, Rt. A, Box 209, Lodi, Calif.

FOR SALE—One Midwest Utilitor Tractor Plow and Cultivator, complete, practically new; has been used for pumping. Andrew J. Clubb, Walnut Creek, R. F. D., No. 1.

FOR SALE — Ford Roadster, 1918 Model. Will exchange for stock or small tractor. What have you? E. R. Byers, R. D, Box 153, Tracy.

CROLEY'S BALANCED HOG FEED—The cheapest feed to fatten hogs. Write Geo. H Croley, Townsend St., San Francisco, Calif.

FOR SALE — Mariout Barley Seed—clean and good quality, weighing over 100 lbs. per sack. J. D. Rowe & Sons, Davis.

TREES, PLANTS, ALFALFA SEED, Etc.—Full stock, best varieties now . Write, J. L. Lawson, San Jose, Cal.

36 SHASTA STRAWBERRY PLANTS by parcel post, $1.00. Order now. F. M. Witt, 24 California St., San Francisco.

BUNYIP SEED WHEAT—Recleaned Seed for sale. Fosgate & Lion, Seed Growers, Mountain View, Calif.

STRAWBERRIES — Plant now for good spring crop. Cash Nursery, Sebastopol.

CERTIFIED KADOTA FIG trees and cuttings Beckwith Fig Gardens Co., Reedley.

FOR SALE — A few thousand Loganberry plants. Thor Frevold, Rt. 3, Sebastopol, Cal.

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Call soon on the Columbia dealer nearest you. He will let you test for yourself the wonderful convenience of the *exclusive Columbia Non Set Automatic Stop.* Nothing to move or set or measure. Just start the Grafonola, and it plays and stops itself.

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VOL. C—No. 21 Fiftieth Year

THE PACIFIC RURAL PRESS

SAN FRANCISCO NOVEMBER 20, 1920 LOS ANGELES

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ALTHOUGH the grape and the peach, the orange, olive and fig, may determine the pomological ground-colors of the San Joaquin Valley of the future, the palms will fill the sky-lines with forms of grace and beauty—symbols of the refined tastes and lofty aspirations of the coming generations of California. Such is the suggestion and such the prophecy which our picture conveys, and for this reason we choose it to adorn an issue of our journal which has much to say about the assemblies of fruit-growers gathered at Fresno, the great heart of the valley, last week. Various palms thrive in the valley; spreading great fans or waving graceful plumes beneath a sun of molten gold and a moon of hammered silver, but of them all the date palm is incomparable. And if one should thoughtlessly exclaim: "It is fittingly so, because the date palm is of the desert," let him note well the fact that the date palm is not of the desert but of the oasis: that the summer-desert of the interior valley, as known to the pioneers, has become the summer-garden of the present day—because, by over-flow or under-flow, the beneficence of irrigation has created an oasis—possibly the largest in the world.

But our picture suggests more than these great significances. It is a demonstration of the domestication of the date palm and its service not only as the ornament but the fruit-basket of the home! Such is the conception of the date palm cherished by W. R. Nutting of Fresno, to whom we are indebted for the photograph, and it is the ambition of Mr. Nutting, who has been growing thousands of seedling date palms, that they may demonstrate the quality of their fruit and thus serve as a great source of selection from which the next generation may draw and constitute California dates the best in the world!

New Barleys Excel in Every Condition

(Written for Pacific Rural Press by Prof. Geo. W. Hendry, University Farm, Davis, Cal.)

The fruits of thirteen years of barley breeding and testing at the University Farm are now being realized by the barley growers of California. Extensive experiments and demonstrations have shown that there is no single variety which is best adapted to all situations and conditions of culture, but that to realize the greatest returns from the land, the variety must be chosen which is best for that particular soil, climate, time of planting and system of farming.

Four barleys have been distributed in quantity by the experiment station to date, namely, "Mariout," "Tennessee Winter," "Four Thousand," and "Beldi." Because of the favorable showing these have made among grain growers in the immediate vicinity of the University Farm, chiefly in Yolo, Solano, and Sutter counties, they are now attracting the attention of progressive ranchers in all parts of the state, and a flood of inquiry has come to the institution for information regarding them.

The following paragraphs have been prepared to answer the inquiries most frequently made and to assist growers in the intelligent use of them.

This variety has attracted the widest attention of the four and has been tested in practically every part of the State during the past season. It is an early maturing, short straw variety and ripens about two weeks in advance of Common barley. It is better adapted than common barley to drouthy conditions, and produces more heavily on dry soils and in dry seasons. It makes its best yield when planted prior to December 25, but suffers less as a consequence of spring planting than common barley. Because of its early ripening, it has met special favor in the Turlock and Modesto districts where double cropping is practiced. It has also become the favorite in Yolo and Solano counties where grain land is continuously cropped and the late winter and early spring sowing practiced.

It is an extreme spring type and makes a very rapid winter growth with no dormant period. Consequently like all other varieties of this type, it reacts unfavorably to cold wet soils, and is more subject to winter killing and "drowning out" under such conditions than is common barley. For this reason it should not be used on adobe soils, especially if poorly drained and fall sown. It has, on the other hand, given comparatively better yields than common barley when spring sown towards the end of the rainy season even on heavy soils. Its use in this way is not recommended, however, since Tennessee Winter fall sown under such conditions would generally be satisfactory.

Mariout is a native of a dry desert country and does not thrive best in cool coast or mountainous districts. When sown under adverse conditions it "heads out" very short and cannot be harvested with a binder. It is also poorly adapted for sowing on weedy land, because with its short straw and low draft on soil moisture it is more apt to be crowded out. Fields badly infested with wild oats and mustard are particularly objectionable to it.

It responds well to irrigation before heading, but is benefited less than common barley by irrigation subsequent to this stage of development.

There was a larger average of Tennessee Winter barley grown in California this year than of any of the other new varieties. From a few small lots of seed distributed to neighboring ranchers during the last five years it has gradually increased in popularity until some 50,000 acres were planted to it tributary to the Sacramento river in 1920.

It is, in general, adapted to just the opposite conditions from Mariout barley. While it is not an extreme winter type like Utah Winter, it has a moderately slow spreading, tenacious winter habit, and remains in a semi-dormant condition for several weeks after sprouting before starting to joint. Like other varieties of this type, it resists winter killing in cold situations, and does not "drown out" as quickly as common barley on poorly drained adobe soils when fall sown. It is poorly adapted to spring sowing under any circumstances for the reason that it requires a long season in which to become established and develop to perfection. Light, quickly drained soils are generally unsuited to it for the reason that they loose their moisture too early in the spring. It is especially adapted to early fall sowing on summer fallow land, particularly on heavy soils, which remain wet and cold during the winter. It has met special favor on heavy sub-irrigated soils tributary to the Sacramento River. It should also be planted more extensively in the cooler coast and mountainous regions of Northern California. It responds well to irrigation and may be profitably irrigated at more advanced stages of growth than common barley.

See article on page 608 of Pacific Rural Press, dated November 6, 1920.

Four Thousand barley has been adopted at the University Farm in preference to Common barley for field plantings, under average conditions, but is regarded as inferior to Mariout under very dry conditions or to Tennessee Winter under very wet conditions.

This is one of the earlier varieties tested and distributed by the Experiment Station. It is in most respects similar to Common barley in appearance, but generally produces a plumper, heavier grain. It has proven to be a slightly higher yielder than Common barley, but has been replaced at the University Farm in favor of Four Thousand, which has exceeded it in yield. It has no special adaptations to specific conditions like Mariout and Tennessee Winter, and for all practical purposes may be regarded as simply a productive strain of Common barley.

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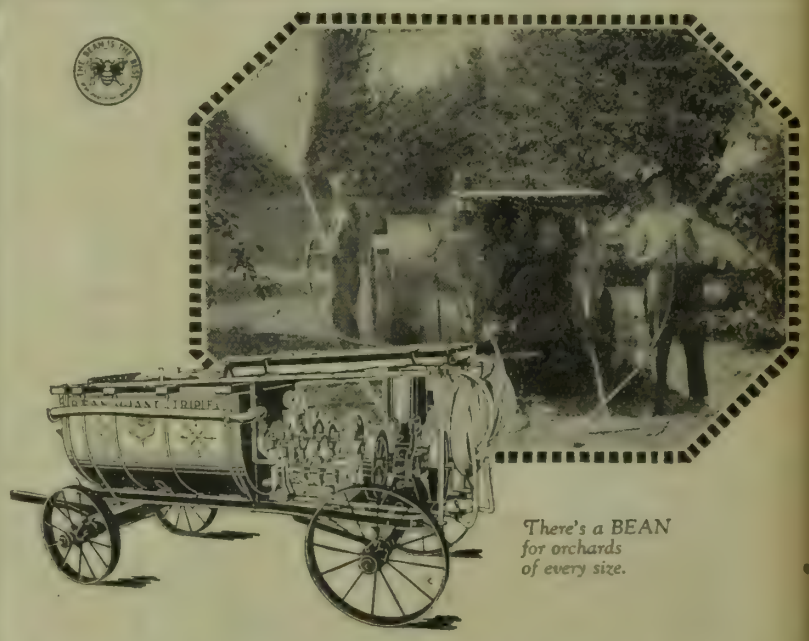

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General Agricultural and Horticultural Review

HORTICULTURAL JOTTINGS.

Raisins are estimated as in previous statements, around 180,000 tons.

From November 11 to 14, inclusive, Southern California shipped 8 cars of oranges and 28 cars of lemons.

The walnut crop is going to fall short of last year, the present estimate is 22,500 tons against 28,000 which is a disappointment.

The almond crop still rests below last year by 10 per cent. The crop is estimated at 65 per cent of normal, while last year it was 75 per cent.

Several cars of Imperial Valley grapefruit have arrived on the San Francisco market this season. It is of good size, color and sweetness.

A plea for the standardization of agricultural courses in the preparatory schools of the state was made at a meeting of more than 100 agricultural instituions at a session held at Chico last week.

Reporting the sale of 400 tons of olives at a fair price, the Lindsay Olive Growers' Association is arranging a second pool. The mutual packing house is being used as a receiving depot.

Placer county fruit farms seem to be in great demand at top notch prices. A late sale by William Jeskey of this forty-acre fruit ranch for $31,000 may be taken as evidence of values and demands.

Loganberry growing has become one of the most profitable crops in the Williamette Valley, Oregon. The Growers' Association received this year 13 cents a pound, compared to 9 cents last year and 5½ cents two years ago.

The Oregon Growers' Co-operative Association with headquarters at Salem, report the shipment of 637 cars of fresh fruit and berries during the months of July, August and September. They will ship 600 additional cars of apples, beginning October 1.

The San Joaquin Valley fig crop will amount to approximately 9000 tons this season. They commenced going into the warehouses last week. The stock is in splendid condition and will now be placed in readiness for shipment.

On account of the unusual condition of the Oregon prune market the Growers' Association at Salem opened its pool during two weeks of October and registered 98 new members whose crop in acreage alone will add 2,000,000 pounds of prunes to the pool.

Coloma, Placer county, where gold was first discovered in California, is fast coming to the front as a fruit producing section and is attracting a number of homeseekers. In the past few weeks more than ten farms have changed hands.

Orange crop is estimated at 82 per cent of normal. Climatic conditions are causing the fruit to color rapidly. There is nothing that warrants a change in the forecast of last month when the total production was placed at 18,500,000 boxes for California.

At the meeting of the County Horticultural Commissioners, held at Fresno last week, William Gould, secretary of the Board of Trade and Yolo county horticultural commissioner, was elected president of the association.

The Department of Agriculture of the University of California makes the statement that two thirds of the figs produced in the United States are produced in California, while first honors in producing English or Persion walnuts can be claimed by this state also. Three counties in the state produce 80 per cent of the state fig crop.

The California apple crop of 1920 falls far below normal. November 1 it showed 69 per cent compared to 100 per cent last year. Quality is below the average. The commercial box crop will be cut heavily on account of rigid inspection. Total production will be about 6,000,000 bushels.

A. W. Hawley of the Rose Crest Farms at Porterville will add to his extensive deciduous plantings 12,000 young French prune trees. Mr. Hawley now has 300 acres in French prunes. He has in addition to this 55,000 Thompson seedless cuttings started as well as 1500 White Adriatic figs set out.

Owing to the lack of Congressional appropriation, the Weather Bureau this year cannot furnish the Southern California citrus belt with frost warnings, as it has done for the past two winters. As appeals from growers to Washington have proved unavailing the fruit growers will indeavor to put in a service of their own.

The first year's operation of the new walnut packing plant at Walnut Creek, Contra Costa county has proven a decided success, is the announcement just made by the association. The management claims that their walnuts are most eagerly sought after and are bringing the highest prices in the history of the industry.

J. F. Neeswander, general manager of the California Peach Growers states that the present season has been rather more profitable than the season of 1919 for those engaged in the growing of peaches and figs. The peach crop he says, for this season went around 24,000 tons against 32,000 tons last season. The peach crop is now about in and the greater part has been shipped.

This is a gala week for Butte county as Oroville's Fifth Annual Orange and Olive Exposition is now in session, with a display of diversified produces of Butte county. Every secton of the county is represented, as well as many large commercial companies in the state. One of the events of the first day's program was the dedication of the large new packing-house of the Ehmann Olive Company.

Due to the lack of storage facilities at the Morgan Hill plant of the Prune and Apricot Growers' Association it has been forced to withhold deliveries. The present crowded condition of the plant given as the reason. The plant has been closed several times during the season due to this congestion, notwithstanding the inconvenience, it speaks well for the association, it shows that it is prosperous in that section.

AGRICULTURAL NOTES.

Wheat exports from the United States are about 5,000,000 to 6,500,000 bushels per week.

Over half of the barley acreage of Stanislaus county will be Mariout next season as estimated by Farm Advisor, A. A. Jungerman.

From November 11 to 14 inclusive, Southern California shipped 111 carloads of lettuce, 127 carloads of mixed vegetables, 53 carloads of cauliflower, and 22 carloads of tomatoes.

Heavy rains of last week have damaged the uncut rice in the Willows district. The ground was thoroughly soaked and much of the rice was badly knocked down.

California's total crop of white potatoes this year will be about 13,289,000 bushels while last year's production was estimated at 11,352,000 bushels. Both early and late potatoes are figured in this estimate.

The yield of beans other than limas varies from two to three sacks to the acre in some sections to over 15 sacks in others, with an average for the state estimated at about 680 pounds or 11.3 bushels.

Calexica, Imperial Valley, reports that there will be an early lettuce crop in that district. The acreage amounts to 600 to 700. Shipments will begin in ten days.

Sugar beet condition November 1 was 88 per cent of a normal crop, compared with 87 last month. The increase promises a very material increase in the tonnage of sugar produced this year.

The average yield of sweet potatoes this year is about 136 bushels or under 4 tons to the acre, which, on the estimate of 8000 acres planted, gives a total production of 1,088,000 bushels, equivalent to 29,920 tons.

With shipments from the University of several large consignments of seed to Tulare county, it is expected that heavy planting of Mariout wheat will take place. Several growers of the county have reported successful results of a recent test.

American cotton exported in August, September and October, 1920, totaled a trifle less than a million bales as compared with a trifle over a million bales in the corresponding period a year ago.

Salve Bue, who owns a farm at Burney, Shasta county, had six acres in potatoes this season, from which he has sold $3000 worth to the Pacific Gas and Electric construction camps in that county.

Rapid growth of membership in the Sutter County Farm Bureau has brought the total list of paid members up to 714. One year ago the membership was 372.

The Australian Government is taking steps to encourage the grinding of their wheat at home in order to save by products and the freight on their weight and to give employment to more men at home.

Nearly one and a quarter million pounds of California raisins were exported to New Zealand in the eight months ending August 1920. Last year a trifle over a quarter of a million pounds went thither.

Trade Commissioner, C. C. Batchelder, from Kioto, Japan, states that as far as information can be obtained, bean growing has been practically abandoned in Japan, the country relying on Manchuria for its bean curb, the substitute for meat and for bean oil.

"Sun-raysed" raisins to the value of nearly $7,000,000 were raised in an irrigated section of Australia last year. The Australia Dried Fruits Ass'n controls about 95 per cent of the total crop and markets under the brand mentioned; California may not always retain her monopoly on raisins.

To Yolo county belongs credit for proving in a preliminary way the commercial value of Mariout barley previous to the 1920 season. During this season, 15 per cent of the total acreage of barley was Mariout. Next season it looks as if half the acreage will be of this variety.

With the approach of harvest time for the digging of the fall crop of potatoes in the Winsdale district of Sutter Basin. News comes that potato prices have begun to rise. The crop is of the improved British Queen variety, which is very popular with the trade.

The Board of Supervisors of Sutter County have voted five hundred dollars out of the advertising fund to be paid to the executive committee of the Yuba-Nevada and Sutter Water and Power Association for advertising and exploiting the resources of Sutter County.

F. W. Read, in charge of the Standardization service, has issued a ruling with reference to tomato packing, stating that if tomatoes are packed 6x6 in the bottom layers it will be satisfactory to pack them 5x5 or 5x6 in the top layer. It is held that such a pack contains "approximately the same numerical count in each layer."

Due to the recent cold weather in Colorado, that damaged the potato crop greatly, potatoes have advanced in the local markets 25 to 40 cents per hundred pounds during the past week.

Sixty thousand bags of rice has been placed in the warehouse at Doty, Sutter County. Crop is not all harvested. The average for this is 40 bags per case. The mill has not started yet.

The Fenstermacher Bros. have sold their 20 acre alfalfa ranch "Chula Vista", east of Chino, San Bernardino county, to Augustus Hoberg, manager of the Patton ranch, for $16,000.

Alfalfa lands in the Byron district of Contra Costa county, are in great demand. Recently 78 acres belonging to A. Alexon, 50 of which are in alfalfa were sold to Silva Bros. of Dixon for $42,900 with no improvements.

According to Dean H. E. Van Norman, five hundred and sixty-two students are enrolled at the University of California Farm. Thirty-six students come from nineteen other states, twenty-two from eleven foreign countries, while 504 from forty-four counties in California. In addition there are 261 short-course students registered in special work in tractors, general agriculture, poultry husbandry, and dairy manufacture.

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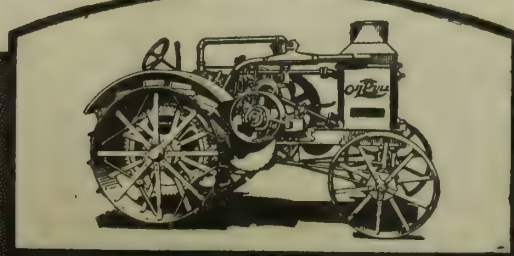

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EDITORIAL

THE PRESCIENCE OF THE SPHINGIDAE.

DO YOU know the sphingidae—those large, bird-like moths which hover and dart in such fashion that people call them "hawk-moths" or "humming-bird moths"—according as their individual psychologies lead to thoughts of murderous prowess or of airy innocence and beauty? Of course, the term "humming-bird moths" best befits them of all their many analogies, because they hover and dart, not to destroy their fellows of the animal kingdom, but to multiply them—not to call forth the death-shriek of life's tragedy, but to make sure that the birth-cry of their offspring shall be quickly hushed in the satisfaction with which the infant creature, when fortunately born, accepts its entrance to a hungry world. For the humming-bird moth hovers to choose the best pasture for its coming offspring and darts to place the egg upon the leaf which its instinct selects. It is this foresight of the moth which leads us to indulge in reminiscence.

About thirty-five years ago we went southward in the San Joaquin valley to attend a Fruit Growers' Convention in Fresno—just as we did again last week. Then it was that we gained our first demonstration of the prescience of the sphingidae, for it was of a character which none could overlook. Smething like five thousand acres of grape vines had been then recently planted in the first colonies around Fresno and the planters called upon the State to admire and partake of their new vine and raisins and to rejoice with them in their mastery of desert wastes by work and water. But, unfortunately, what the Fresno pioneers called their fellow Californians to observe and admire, the sphingidae had already observed for themselves. They had lived for ages upon the weeds of the Fresno plains and had never multiplied extremely because they had spent their lives in dodging the jumps of the horned toad as they darted to lodge their eggs upon the narrow leaves of the desert vegetation. Finally there came a great change in the ground-cover: leaves became broad and juicy; upright plumes of them waved in the wind and flat branches of them covered the earth. Such horned toads as had escaped the plow and the cultivator could no longer see the sky through the dense leafage of the vine and therefore the sphingidae airplaned in safety and placed their eggs upon the leaves of the vines as easily as one plants plums in soft frosting on the upper deck of a birthday cake—and soon there were birthdays innumerable and then some more. When the convention assembled the vineyards were largely defoliated. It was said that in a single large vineyard five hundred men were plucking the great fat worms from the vines in the hope of saving part of the leafage. Among the decorations of the convention were five-gallon oil cans full of the gathered worms—each of them as large as your finger and striped like the band-wagon of a circus. The sphinx-moth had foreseen the opportunity for its offspring. They constituted the great show of the convention.

GROUND-FLIERS RIVAL AIR-FLIERS.

As we undertook the negotiation of Fresno streets last week the sight of the sphinx-worms of more than a third of a century ago returned to us—not in actuality, of course, but by suggestion. The worms of the desert have gone, but one is now impressed by the memory of their discernment of a great opportunity, just the same. Fresno has now not worms but wheels. We have seen some wheels before and fortunately have not yet met the mishap of not seeing them in time for a jump, but we never saw so many wheels in actual daily traffic use, away from a metropolis, as in Fresno. As nearly as we could figure there must have been ten miles of auto-vehiciles nosing the curbs as closely as they could head-in on both sides of the streets, within sight from one point—without thought of those beyond nor of those which were always flying past, brushing the tails of those which were standing-in. It was an impressive sight and though the resemblance of them was clearer to miles of black-beauties crowding the troughs of a porcine feed-lot, than to lines of worms on vine foliage—still they made us think of the worm invasion of thirty-five years ago. Then, of course, it was an opportunity for destruction and now it is the opportunity for development which has been discerned and seized, which makes all the difference in the world. Thirty-five years ago a few planters feared as they girded themselves to fight the worms; today the planters and those who minister to their activity, rejoice and are confident in their achievements—for Fresno has increased about 100 per cent in population during the last decade and probably 1000 per cent since the wormy date which we are recalling. Fresno numbers now about 50,000 people and has jumped over seventy American cities by her attainment during the last decade. But in one respect they have not gained much. The worms of a third of a century ago knew just as well that the grapevine is a good thing.

A CONVENTION WITH FORESIGHT.

All that this writer has to do is to dream a little about the convention, for Mr. Killingsworth, on other pages, undertakes the serious work of it in a skillful outline, which will be filled in, in relation to special features, in later issues. But before we recite our dreams, we must mention the fact that there were other sleepy things about the event. The local committee which made the arrangements for the assembly had a bad dream about it for they secured the municipal auditorium with a seating capacity of several thousand and a prize-ring in the center, as though matters were to be handled with gloves. The outcome was that the convention held its meetings in a corner of the gallery and handled things without gloves. Another feature was the fact that the Fresno farmers slept through the proceedings on their farms and probably at no time constituted half the audience instead of four-fifths of it as they should have done. Still there was a good, active, outspoken and representative assembly, for people came from all parts of the state to take part in it. It is just possible, of course, that Fresno is getting too large for such a convention. Perhaps there is coming about too marked a differentiation between city and rural interests, or there are so many attractions and distractions that farmers are lured away from things to which they would give full attention if brought nearer to their actual environment. We have attended great assemblies of Fresno farmers in the smaller towns of the county—greater, in fact, in the city itself when its dimensions extended only four blocks instead of, perhaps, four miles from the railway tracks. Even the great wormy convention of about thirty-five years ago had a great deal more resident life in it. In spite, however, of the local deficiencies the convention did notable things. Director Hecke was justified in a side remark he made that these conventions always started great things and he had faith that something great would follow this one. There were indeed several things which are very important to the future of fruit-growing and are quite indicative of the confidence which the industry has gained in itself in a new insistence for fair play from other interests and from the public which it serves.

NEW FIGHT FOR FAIR TRANSPORTATION

One of the issues raised in the convention which is of immediate and overshadowing importance is the resistance of the increase in the overland freight rate which was put into effect last August. It seems necessary that the fruit growers and shippers should take up again the contest which they had continually on their hands from the very beginning of long-distance shipments until fairly satisfactory arrangements were reached in the operations prevailing at the time the railways were taken over by the government. With the increases and reduction of privileges by such control and more of the same things which has been applied since the return to private operation, there is great danger that most fruits cannot be produced with any profit, unless the cost of present means of transportation is reduced or new and cheaper carriage can be secured. The outlook for success in such a contest for fair play is, of course, much better than it was in the former wars of this kind, because growers are not now only spasmodically associated, as they formerly were, but have strong co-operative organizations manned and munitioned for the war and sharp and persistent warfare will be undertaken by all these organizations toward the same end. There will be the closest investigations undertaken to show whether the claims of justification made by the transportation companies are well founded or not, and growers may be sure that their representatives will find out for them more about the cost and methods of movement of produce than they ever knew before. That will be one of the products of the co-operation in which they are now participating. It is altogether improbable that they can be unfairly treated in the future as they have sometimes been, when, as unorganized individuals, they lacked insight and influence. It seems possible that the old issue of policy may have to be revived in the consciousness of the transportation interests, for it is clearer than ever now that the fruits and fruit products of California must be maintained on a basis of fair profits to producers or practically all lines of transportation traffic will decline and the development of the state, conditioned as it is upon long-distance transportation, be arrested—thus rendering transportation properties and operations unproductive. Considering the volume of the traffic, its influence upon other sources of income to the companies, the fact of its movement of about 2,500 miles in full trains, it seems little less than a calamity, both to the transportation interest itself as well as to the producers, that the increased rates and the reduced privileges to shippers in getting the fruit to the markets which can best consume it, should ever have been promulgated. The Fresno convention started effort to free the products from its latest handicaps and it cannot easily be stopped short of success.

Just think of the boldness of the initial transaction! The California fruit growers and shippers have summoned the national transportation authorities and the traffic directors of all the railway lines participating in fruit transportation to come together for a show-down on the costs and privileges which they propose to inflict upon this business. Thirty-five years ago a convention would have hardly been bold enough to send a hat-in-hand committee to the nearest railway president! The change in attitude of this generation could not then have been dreamed of. Such a proposition as calling the whole transportation outfit of the United States to show cause to them, would have paralyzed the former Fresno convention quite as completely as if all those sphinx-worms in the oil-cans had burst out in singing, "Marching through Georgia!" Surely we are now living in a new day—the fruit-worm has turned!

THE FARMERS AFLOAT!

But the reading of the riot act to all authorities regulating transportation and all railway magnates concerned in the operation of it, was not the most picturesque boldness of the convention. Superior audacity must surely be awarded to the action looking to the establishment by the growers' co-operative organizations, as presented by Mr. Teague of Ventura county, of a special line of refrigerated fruit carrying steamers to run from California ports via the Panama canal to the great seaport markets

of the Atlantic states and of European countries. Thirty-five years ago the growers began to pass resolutions calling for an isthmian canal, hoping that when the canal was built some accommodating marine magnates would carry California fruits with other cargo items. Now the growers are proposing to run their own steamers with their own produce in the refrigerated chambers below while their own sisters, cousins and aunts rustle their silks and puff their cigarettes in the sumptuous banquet rooms overhead! And this is no pipe-dream. It was confidently declared by serious men, the present leaders in fruit production and distribution, that the enterprise can be easily financed and that the government, in its marine policy of ruling its share of the waves, would take part in the outfitting of such a line of steamships for domestic and foreign trade. The convention concluded that it was merely a rational business proposition and should be proceeded with forthwith. The co-operative organizations of fruit producers, and the other co-operative organizations of California producers who might be interested in such produce-movement, have capital and credit which they can easily turn in the direction of marine equipment and there is no reason why they should leave the pathway to great ocean enterprise open only to shoe-string promoters of the commercial complexion. It is a thoroughly rational and practicable undertaking There is no good reason why all our perishable products should be left to bump their way to the eastern markets over two or three thousand miles of railway, subject to expensive periodic icing (or the lack of it, which is often more expensive), while a good share of such production can ride smoothly and with the advantage of evenly low sea temperature, to the same markets. It was perhaps a question formerly, when the railways were not dominated by politicians and their proteges in railway operation, and were able to do their best for the development of the country, whether ocean movement could be had at a cost to compete with the rates which then prevailed. This question seems now to have disappeared and if the railways, by necessity or otherwise, are no longer able to pursue the policy which built up the business, then producers, for the preservation of their industries, must seek the open ocean in their own vehicles Fortunately, there are several ways to skin a cat and the present fruit situation is a cat which much be skun!

ANOTHER GREAT WATER ENTERPRISE.

But the convention was not satisfied with the great sea-route to better things which it discerned. It was also strongly affirmative of the great and unique plant for complete watering of California lands which Col. Marshall of Sacramento has drawn from his close and prolonged study of the topography and natural water supply of the state. In his address before the convention, Col. Marshall voiced these, among other impressive propositions:

The plan is to distribute the water from natural streams through canals at proper levels so that twelve million acres in the great central valley of California shall be fully supplied. Nowhere in the world is there a stretch of land, comparable to this great 'Valley of California' in its pledge of hope and opportunity for millions, if we but measure up to our obligation.

He laid stress on the injustice of compelling the agricultural community to carry the whole burden of water development, in view of the fact that land values are the basic values of the state, and that the commercial and industrial community shares in the benefit of water conservation and should bear a just share of the cost.

It is provided in the plan that any diversion of water from any basin would be more than replaced by water from some other basin; that the cost must be distributed over the entire state and should not be borne by the farmers alone; that the state could do the big job by going into business and selling water and power and that the project would guarantee absolutely scientific storage, control and distribution of virtually all the water of the great watershed.

This proposition is now being promoted by a strong association of public-spirited Californians, and the convention reaffirmed the strong appeal made by the Chico convention of last year that such an enterprise should be earnestly looked into, for it promised that no one would get less water but everybody would get more!

TO WORK FOR THE FARMERS' SHARE.

It was apparent from the showing made by the Legislative Committee appointed at the Chico convention that systematic effort is to be put forth at this winter's session of the California legislature to secure for the agricultural industry its full share of public expenditure. Detailed investigation is being made of the provisions now made for research, educational and executive work in the interest of agriculture and showings will be made to the committees of the legislature. The relation of agricultural production to the various agencies, which minister to it in the line of supplies, service, transportation, etc., will be clearly made out and claims made upon the basis of existing situations in the producers' expenditures and receipts. The outlook is that the coming legislature will have a more complete and comprehensive knowledge of the farmers' needs and problems than has ever been laid down before, and therefore provision for agricultural promotion, which is a great duty of the state, may be made with great wisdom and a maximum of efficiency. It is clear that the committee is going deeply into the fundamentals upon which a great agricultural state of the future must arise. The committee is large and is composed of delegates selected by all the co-operative organizations which desire representation, and its work is financed by contributions from these associations. In this way perhaps not less than fifty thousand producers are represented in the transactions of the committee, and it is justified in acting with authority and confidence. The committee was called into existence by the conception of Director of Agriculture Hecke last year and was strongly commended by the Pacific Rural Press at that time. Such commendation seems to have been fully justified.

THE NURSERYMEN'S ASSEMBLY.

While the general convention of fruit growers and farmers was closing its sessions, the California Association of Nurserymen was getting underway with its Tenth Annual Convention. It is notable for California to have maintained an associaton of her nurserymen for a full decade. On several former occasions the state has attempted this achievement but hitherto the members have not held together ten minutes after their first adjournment. This fact is probably due to the succession of admirable presidents which the association has had, for they have put forth strenuous and successful efforts for the good of their craft and of the state, but the whole double-hand of them has probably not over-matched the service rendered by the permanent secretary, Henry W. Kruckeberg, who has applied "the art preservative of all arts" to nursery organization as he regularly does to everything else which makes appeal to his metropolitan printing joint in Los Angeles. The arrangements for this year's convention were contrived by Past President Kirkman, after President Bergthold had taken the sky off the expenditure-limit, and the result was that the nurserymen lolled in elegance and comfort in a society hall while the main convention sat up and took notice from an outfit which was first cousin to a lot of baseball bleachers. But their sumptuous surroundings did not prevent the nurserymen from doing many interesting and important things which we cannot compass in this issue. Probably if this writing had not been so wormy at the beginning it might have reached a sounder ending!

QUERIES AND REPLIES

By the Editor.

Inquirers Must Give Full Name and Address
Answered Questions also on other pages.

Grafting-Over Apricots.

To the Editor: I have 400 Tilton apricot trees, 6 years old, that have hardly bore any fruit, and I intend to graft them over either to Royal apricots or to Tuscan cling peach. Will the peach start just as easily as the apricot grafts, and which would you advise me to try to graft on? When should the grafting be done and when should the grafts be cut? If shown how, could most any person do it, or does it need to be done by an expert?—C. E. N., Zelzah.

We would much prefer to keep the apricot to the apricot if your conditions suit that fruit, and if the Royal behaves well it settles that point. Peaches usually take to the apricot and hold on but the peach is apt to over-grow. It is also a little harder to make a good strike with a peach scion and there would probably be more misses. You can easily graft in apricots (amputating in the branches just above the forks) and using the ordinary top-graft which any one who understands grafting at all can easily practice, but in such a large and expensive job as you are thinking about, you ought to have an experienced grafter, and, preferably, one who can cite instances of his work. There are men in all fruit districts who will do the work by contract. In the south January and February are good months for such work and the grafts are cut before the buds swell—in your case just before you use them unless you should be delayed. The stock may be active, but the scions should be cut in advance of that condition.

Working Over Almonds.

To the Editor: I have almonds, one, two and three years old. I would like to graft or bud them to either prunes or cling peaches. Would they bear well if I did so, and would the portion of almond wood between the root and prune or peach affect its bearing fruit? I do not know what root the almond trees are on.—R. E. S., Chico.

The French prune takes very, very kindly to the almond; other prunes are uncertain. The peach on the almond is less used than formerly though there are many good trees on the almond. The intervention of almond wood or the whole almond bottom will not affect fruiting, if the tree is thrifty.

Figs and Alfalfa.

To the Editor: We are going to set out twenty acres of adobe land to Kadota figs. Do you consider a strip of alfalfa between rows a detriment to young trees? If so, why? Is there any other crop besides milo maize or cotton that could be planted between young trees to bring in an income?—P. A., Visalia.

Alfalfa-middle will not hurt young fig trees if you keep the trees in a well-worked strip; keep the irrigation from drowning the trees and kill the gophers in the alfalfa before they get a chance to eat up the fig roots, of which they are very fond. We cannot tell what crops will pay—that is a matter each planter has to decide for himself. Of this, however, we are sure—no crop which the grower thinks more of than he does of the trees will pay in the long run.

Melilotus Not for Alkali.

To the Editor: I have alkali land, which has been farmed with beets for a number of years and it seems to have reached the end. Would you advise to plant melilotus to improve the soil? Are there chances to get it started in better than beets? —E. N., Hynes.

Such data as we have indicate that melilotus will not stand one-tenth as much alkali as beets and not one-fourth as much as alfalfa. We see no reason to expect anything from it in the way you suggest.

Fine Feijoas.

To the Editor: I am sending a sample of feijoa from grafted stock. This fruit can be grown in any part of the state where oranges and lemons grow, and can be put up like any other fruit. I see that Hoening & Cooper are going to try out the guava at Bangor. Why not plant the feijoa? It is better for jelly than the guava and a good bearer. Most of this sample is from a 2-year-old bush.—W. Boyes, Torrance.

The fruit is as fine feijoas as we ever saw—as large as a standard lemon. We incline to think that our correspondent makes a good point as compared with guavas, of which the best kinds are less hardy than oranges, and the hardy guava is smaller and has more waste than the feijoa.

CALIFORNIA WEATHER RECORD

The following rainfall and temperature record is furnished the Pacific Rural Press by the United States Department of Agriculture Weather Bureau at San Francisco for the week ending November 15, 1920.

Station—	Rainfall Past Week	Rainfall Seasonal To Date	Rainfall Normal To Date	Temperature Highest	Temperature Lowest
Eureka	1.09	8.38	6.05	62	36
Red Bluff	1.50	4.61	3.66	62	34
Sacramento	1.64	3.02	2.18	64	38
San Francisco	1.64	3.53	2.41	62	47
San Jose	.82	3.19	1.82	66	38
Fresno	.52	1.73	1.37	68	41
San Luis Obispo	.53	2.53	2.34	74	40
Los Angeles	.02	1.72	1.33	80	50
San Diego	.04	.43	.85	72	48
Winnemucca	.75	.79	1.50	50	18
Reno	.32	.51	1.29	56	28
Tonopah	.06	.45	2.49	52	30

State Fruit Interests Ably Represented At Fresno.

Written for Pacific Rural Press by W. S. Killingsworth.

The fifty-third Fruit Growers' and Farmers' Convention, held in Fresno, November 9-12, will go down into history as the greatest ever held in the state, and is conceded to be the greatest—not in point of attendance, but in the good that will be derived from it—in Fresno's history. The agricultural and horticultural interests of the state were well represented, and Fresno did herself proud in entertaining her guests. The meetings were held in the spacious auditorium, morning and afternoon. William Glass, past president of the Chamber of Commerce, opened the convention. His remarks were timely and to the point. He said in part:

Co-operative Marketing Is Right.

"It is not the problem that we had five or ten years ago. Then the problem was to get the growers to understand the advantages to him of co-operative marketing of his products. Having succeeded with these great co-operative marketing companies and having by that very success caused some antagonism our problem now is to allay that antagonism and convince the country that co-operative marketing is right. We must convince the world that we are right by being willing to have all other productive industries go on a basis of co-operative marketing. We must not only be willing, we must take the lead in bringing their industries into the co-operative field, thereby demonstrating our sincerity and our belief that the method is correct for others as well as ourselves."

Mayor W. F. Tormey welcomed the delegates in a talk that was most appropriate, telling of his connection with the first co-operative movement to be inaugurated in Fresno. He then introduced State Director of Agriculture George H. Hecke, who said in part:

World's Dependence on Agriculture.

"One year has elapsed since our successful convention at Chico. At this time I may say that we can view the past year as one of the most momentous that ever has had bearing upon the great business of agriculture in the State of California. During this formative interval much has been accomplished toward bringing forward the industry of agriculture, its kindred activities and its proponents, not only in California, but indeed in the entire United States. At no prevous period of history has the world been so forcefully brought face to face with the fact of its entire dependence upon its agriculture, and best of all our endeavors gradually are culminating along lines that eventually will place the former, whether fruit grower, stockman, or dairyman, in a position to which he has long been justly entitled and which to the present time has been deprived him."

Legislative Work.

Mr. Hecke discussed at length the many matters of importance that had come to the attention of the Director of Agriculture during the past year. He spoke of the Legislative Committee that was created at Chico during the 52nd convention. It is supported and aided financially by the several co-operative fruit growers' and farmers' associations of the state. It is not affiliated with any state department, but acts independently. The Western Plant Quarantine Board, that is doing much to aid the quarantine work, said Hecke, was co-operating between the various Western States. This is readily illustrated in connection with the alfalfa weevil quarantine. This weevil is gradually spreading in some of the mountain states and every effort has been made to determine accurately and carefully the limits and trend of distribution for the information of these states and districts as yet uninfested.

The quarantine regulation of cotton seed was urged, as the cotton growers of the state are finding it a difficult matter to secure a local supply of pure strain cotton seed for planting purposes in California. Strict quarantine regulations governing the introduction of cotton seed make it practically impossible to get seed elsewhere on account of the danger of introducing the cotton boll weevil and pink boll worm into California. The State and Federal Department of Agriculture are working together, and have undertaken to secure clean seed and insure its propagation in sufficient quantities in California for future planting. Hecke stated that the Plant Pest Control Service is closely related to the Quarantine Service. The biological control of insect pests have been most successfully begun in this state and very encouraging progress has been made in the extermination of some of the worst pests. The control of rodents and predatory animals in this state has progressed excellently.

Supreme Value of Real Co-operation.

The salient feature of the year's work, and one that has been amply demonstrated, is that of the vast possibilities accruing from properly directed and well-placed co-operation. Hecke said: "I will venture to say that there is no problem confronting the agriculturist of today, whether affecting his individual business alone or that of his producing and marketing association that under properly administered and well directed effort will not be solved through the efficacious intervention of real co-operation."

Hecke dwelt at length on the importance and advantage to both seller and purchaser of the Shipping Point Inspection Service, an agreement reached with the Federal Bureau of Markets, whereby active co-operation has been brought about in the standardization and inspection of deciduous fruits and vegetables. He spoke of the activity of the Viticultural Service in its study of the control of the grape mealy bug, that has become a serious pest in portions of the San Joaquin Valley. The State, he said, is greatly in need of a pure seed law, and hoped that the measure would be provided for by the coming Legislature. Mr. Hecke dwelt at length and decidedly to the point on many questions of vital importance affecting the state of California, all of which are of direct interest to the agriculturist and horticulturist of the state.

The Great Obstacle to Co-operation.

F. A. Seymour, assistant to the president of the California Associated Raisin Company, under the general subject of discussion at the morning session, "Our Present and Future Problems," read a very interesting paper telling of the many difficulties that overtake the various co-operative organizations. "The greatest single problem of co-operative marketing, present and future," said Seymour, "is to secure and maintain co-operation and the obstacle to this is the common weakness of human nature—the ever-present fear that the other fellow is going to get more than his share and the unwillingness to divide equally the assured profits from a common product."

Price on Raisins a Knotty Question.

"To refer now to local problems, as applied to the raisin industry," said Seymour, "one of the most difficult questions which the directorate ever had to decide was that of price on the crop now being shipped. The price question is all important each year, but never before were there so many conflicting elements to be reconciled. In the first place the Department of Justice of the United States (referred to by one of our local newspapers as the Department of Alleged Justice), notified Mr. Giffin, our president, that if we would name a price on this crop lower than on the 1919 crop, and then do a few other little things calculated to disrupt our organization, the Department would negotiate with us regarding the proper form for a reorganization of our Association." Mr. Seymour's paper was full of food for thought, dwelling largely on the importance of sticking together and upholding the principles under which co-operation has been so well worked in many of the products of the state.

Face Forward, Not Backward.

"Our Present and Future Problems" was also splendidly handled by F. H. Wilson, president of the California Peach and Fig Growers' Association: "I am glad we are confining the discussion of this subject to present and future issues," said Mr. Wilson. "The past is behind us—the present are the living issues—the future is always a problem. Too much prominence has been given to our past achievements in the discussions affecting the welfare of our organizations. The present issues are the live ones and these vitally affecting us. I shall not attempt to deal with matters which are effecting our organization through the prosecution brought against the California Associated Raisin Company by the Department of Justice. National interest has been aroused by the prosecution of this case. The result is being awaited with much interest by both friend and foe of the co-operative movement.

"You are now doubtless aware that a merger is being effected between the California Peach Growers, Inc., and the California Fig Growers. In view of the deplorable condition of the fig market, an active sales organization seemed necessary—the Fig Association, up to this time, acting only in an advisory capacity had not attempted the marketing of the product. With the peach interest our difficulties have been largely solved.

The consolidation of the peach and fig interests brought many new problems. No food product offers greater opportunities for exploitation than does the California fig. Few have received less attention. No special effort has been made to popularize this wholesome fruit. With the heavy new planting of figs now coming into bearing, the tonnage will, in a short time, be greatly increased, and provisions must be made for the handling of this added tonnage; a national advertising campaign must be inaugurated.

"The big problem confronting us today is not so much with the growing and manufacturing—for here we get earnest co-operation—but rather with a certain branch of our marketing agency, which I regret to say, in many cases, has shown no sympathy with our work and leaves very much to be desired from a merchandising standpoint. I refer to the wholesale grocerymen and their attitude toward our grower organizations as voiced in their trade journals, public utterances and in many other ways. Let us hope that these seeming differences may be speedily overcome. For the past few years the people of this country have been experiencing prosperity, and we have been carried along in the flood of high prices and reckless extravagance. I believe the period of adjustment is at hand. The pendulum is swinging backward. Conservatism should be our watchword. We should adopt a conservative policy, yet one tinctured with optimism."

Our Best Markets Are Remote.

Wilmer Sieg, sales manager of the California Fruit Distributors, read a paper filled with genuine "pep." "Conventions are wonderful agencies for good," said Mr. Sieg, provided we come to honestly convene, as collaboration of thought and purpose are dynamic forces for good and the thoughts we leave and the purposes put into action by those whom we put in authority to act take some of the sting out of the past and oil the road of the future. You are producing a wonderful product fully 3,000 miles away from the natural market and with your questions governing production in fully competent hands, I am sure the question that concerns us is the bank balance at the end of the season and how to stay on the credit side. The question I am asked to handle under the heading of 'Our Present and Future Problems' means the future surpasses man, therefore the present tense might be used to advantage as a guide for the future. Our future depends on the confidence built on present transactions and with a realization of our necessity, let me urge what I consider to be the two great factors.

Standardization Marks Failure or Success.

"First: The production of variety of fruits suitable to the locality of the production. Second: A loyal allegiance to standardization of grade and pack. Standardization is the line of demarkization between failure and success. Every section produces more or less of some variety unsuited to its conditions. It is cruel to say, 'Take them out,' but let me urge you to study your conditions and don't increase the planting under such conditions.

"San Joaquin produces a Tokay grape which is an infringement on the rights of Lodi, and perhaps in order to retaliate Lodi produces an Emperor, which is a libel on the San Joaquin. In either case you are trying to fool the buyer, so keep well in mind the immortal sayings of our old friend, P. T. Barnum. San Joaquin Valley produces an Elberta peach that in my opinion the Lord intended for a dried product, and certainly He gave to this valley climatic conditions for drying. Placer county produces an Elberta peach intended for green shipment, with no other alternative to it. I am dealing purely in generalities. I have seen some wonderful peaches from the San Joaquin valley, but it is the rank and file that governs. Under the head of Standardization, let me speak of the Emperor grape in drums. We are getting careless. This style of pack is bought by the eastern jobber for storage only. Can you blame a buyer for being careful before he locks up nearly $4,000 in a product he may not be able to handle for 30 or 60 days? There are only a certain quantity of Emperors suitable for a drum pack. Why try to force the issue? All trade papers this year are reeking with scandals of the cash buyer. Be honest with yourself and your commodity by working in co-operation with your organization and your neighbor."

W. E. Sprott, of the California Fruit Growers' Exchange, read an interesting paper on the citrus industry, dwelling on the problems, the industry, the lemon in particular

Walnut Growers and Their Problems.

Carlyle Thorpe, manager of the California Walnut Association, spoke of the many difficulties crossing the path of the walnut grower, saying that walnuts are in a class with beans, almonds, cotton and rice, affected by the break in the foreign exchange, which seriously hurts any production in this country that is produced in competition with foreign countries. Wholesalers will buy only just enough to keep the retailer in stock, and retailers will buy only from day to day. It will cost more to handle the product this year, on account of storage and additional high-priced help. "We are past the slogan of more production, but want more consumption," said Thorpe. "We must find more outlets and more intensive sales methods. The day of order-taking is done; it is real salesmanship that counts now."

G. B. Daniels, State Marketing Director, presided at the afternoon session. A number of valuable addresses were delivered.

George W. Pierce, president of the Almond Growers' Exchange, spoke of the many difficulties the Almond Growers were meeting with in the marketing of almonds under present

conditions of foreign exchange and foreign competition.

Prune and Apricot Interests Well Represented.

H. C. Dunlap, manager of the California Prune and Apricot Growers, Inc., spoke at length on the marketing of dried prunes and apricots. He spoke of the standardization of dried prunes as a great problem to be solved, on account of the new methods now being used in the drying of some. He urged that the different organizations lay aside all jealousies and get down to real co-operation and work for the good of all. Dunlap dwelt at length on the amount of business now being done by the association, the amount of money they had invested in plants, how products were being packed, and what they were doing with the small prune after it was pitted, heretofore a drug on the market, but is now being developed by an excellent sales department.

George Cutler, president of the California Fruit Exchange, gave an interesting history of what the Exchange had accomplished during its twenty years of existence. He asked all who were present at a meeting at which he presided over in Fresno twenty years ago, for the purpose of organizing a local exchange, to stand. Three arose out of that vast body, showing that there has been some changes during that length of time.

Wednesday's session of the convention began by discussions on "Standardization, Transportation, Freight Rates and Protective Tariffs." Dr. J. C. Whitten, University of California, Berkeley, read a valuable paper on "Commercial Value of Standardization." Dr. Whitten's long experience in the school of pomology has placed him in a position to discuss the matter of standardization as to its commercial value, from all angles. "Anyone who has had opportunity to visit and study the large markets, at intervals, for a third of a century," said the Doctor, "must have a vivid conception of the commercial value of standardization. Anyone who saw the miscellaneous masses of horticultural products thrown on the markets a quarter of a century ago can understand why fruit-growing did not pay. One who sees the uniform packages of standardized fruits, attractively labeled, and carrying a brand, which is a guarantee of quality, on the market today, can understand why the fruit growers are making money. California, which has led the world in co-operation and standardization in marketing fruits, has pointed the way to success. All the work of originating improved varieties of plants and breeds of domestic animals has been an effort toward standardization, securing individuals which are alike, and therefore better adapted to a specific purpose.

Standard is based upon uniformity and characters known to be most valuable for a specific use or purpose. What constitutes the best standard thus becomes known. The efficiency with which our standardization laws have been administered and enforced is a measure of the benefits shared alike by producer and consumer."

Our Fruit Canning Interests.

C. H. Bentley, of the California Packing Corporation, spoke on the "Problems Confronting the Canning Industry." Mr. Bentley's remarks were listened to with close attention, as his subject was one that the fruit growers of California are vitally interested in. "It was customary in the earlier years of the industry," he said, "for speakers at Growers' Conventions to deal in terms of golden prophecy and glittering generalities, but the discussions which have proceeded indicate clearly enough that the real facts and problems, with frank discussion, are expected. The concern with which I am connected is farming some 35,000 acres of land in the growing of fruits and vegetables for canning and drying. In order to have a clearer understanding of the situation today, it should be borne in mind that prior to the war, California was exporting about 25 per cent of her canned fruits. During the war the demands of our own Army and Navy and of the Allies was greater than the supply. Production was encouraged and greatly increased. Following the armistice, the commercial trade, which was largely restricted during the war, reopened. The year 1919 witnessed an active market with speculative features and the entire pack of canned fruit was absorbed. The most serious problem confronting the fruit industry today is that of securing adequate and profitable markets."

Better Freight Service Promised.

William S. Sproule, president of the Southern Pacific railroad, who was to have spoken, was unable to appear at the convention. However, J. H. Dyer, general manager of the Southern Pacific, who was present, ably discussed the subject allotted to Mr. Sproule.

"California is a state of tremendous possibilities," said Mr. Dyer, "and, more important than all, tremendously progressive people. Transportation has played an important part in the development of the fruit business in California. The Southern Pacific welcomes and applauds your achievements as a challenge to keep step. If we have fallen behind in the past, or if in the future, we fail to keep abreast, it will not be because of lack of earnest effort, but rather because of your extraordinary, and I may say, unmatchable zeal and enterprise. The Southern Pacific has earnestly endeavored to accommodate not only your immediate needs, but anticipate your progressive requirements, recognizing in this both a great duty and privilege, and comprehending with full measure the blame rightly attaching to the public service corporation, which to the best of its ability does not undertake to faithfully serve the public."

Freight Service for Perishables.

In the discussion of the "Prospective Freight Service for California Perishables," Senator C. B. Bills read a most interesting paper—"Prosperity and Safety First." Senator Bills said in part: "That the railroads have helped to make California what it is today is a fact, familiar to those who have been identified with the agricultural, horticultural and viticultural interests in this state in a commercial way for the past forty years or more. However, these interests have been conducted in a way that has recompensed the railroads to the extent of millions of dollars through freight and refrigerator charges on the perishable commodities handled for state and interstate shipment without one dollar's loss to the railroads, as all charges were guaranteed by the consignor or consigneee, and in many instances they were prepaid, so it may be seen that the railroads have at all times adhered strictly to the slogan, 'Safety First.'"

"What the railroads secured was an increase in freight rates, amounting to $1,200,000,000 annually. Now what we want—and what we expect to get—is an increase in rolling stock and better facilities for loading and handling.

"The railroads now back under private ownership after enjoying the generosity of the government, prompts the producers of California perishable commodities in registering a complaint against the increase in freight rates. They feel more than ever that they are entitled to equitable consideration. They were taxed to assist in meeting these vast expenditures, and now to be confronted by additional taxation in the form of an exorbitant increase in freight rates, they feel is an unjust and uncalled-for act on the part of the railroads to say nothing of the shortsightedness or bitter arbitrary rulings of the Interstate Commerce Commission. Viewing the situation as we do, not from a selfish standpoint, but from an equitable one, we hope—yes, believe—that there will be a readjustment in the near future of the present freight rates, for unless this occurs, it will mean that the industries that have made this state the richest and its inhabitants the most prosperous of any state in the Union must retrograde, and incidentally its people as well."

Geo. P. Weldon spoke on the great importance of standardizing our products, whether they be fruits or vegetables. Thomas O'Neill discussed the "Interesting Factors in Vegetable Marketing." W. D. Bennett, sales manager of the California Fruit Exchange, dwelt at length on "The Marketing of California Deciduous Fruits Under Increased Freight Rates."

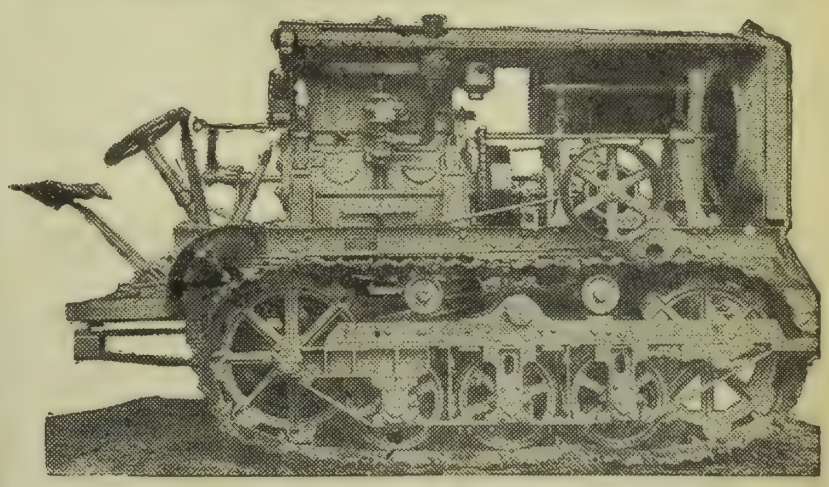
F. W. Read, in discussing "Standardization, Transportation, Freight Rates and Protective Tariff," explained how he as specialist in Standardization of the State Department of Agriculture, would like to see the standardization law carried out. While there would be no unjust demands made that the law should be obeyed, however, those who flagrantly disobeyed it would be called to account, and he urged co-operation in his work.

California Pear Association.

Frank T. Swett, president and general manager of the California Pear Grower's Association, enumerated solid facts and figures in connection with the successful handling of 75 per cent of the Bartlett pear tonnage in the valley and coast counties of California, but not yet including the foothill counties of the Sierras or Lake county. Mr. Swett said in part: "What the California Pear Growers' are accomplishing with a couple of men and a couple of stenographers I'll try to tell you. The strength of an association is in the loyalty and collective efforts of its membership expressed through its Board of Directors. The office and the management are simply the implements used to carry out the will of the growers—sometimes leading and sometimes serving. In 1918, 175 pear growers, whose product had sold at less than cost of production in 1917, organized with an acreage of 5,000 acres, and less than half the total pear tonnage of California. That membership has grown to 550 members. During three years we have marketed to canners at prices set by the Association, about $3,000,000 of pears without the loss of one cent in bad accounts—growers have prospered. The marketing expense has been less than 1 per cent of the growers' output. The Association has paid all its bills, and has $60,000 in the bank, the greater portion of which is available for use next fall, or before, if it be deemed advisable to start creating a demand for pears by advertising.

"We have paid all of our obligations that are financial," said Mr. Sweet, "but we haven't paid all of our obligations. I want to make a partial payment to some of our friendly creditors by expressing our appreciation to State Director of Agriculture Hecke and Standardization Deputy Read for their prompt, intelligent and fruitful action in jumping into the thick of the fray at Boston where wholesale and ill-advised condemnation of pears was under way by local authorities. A rational solution of the problem by sensible action at both ends of the line will ensue, and the result will be worth hundreds of thousands of dollars to our growing." Mr. Swett spoke of the great help that had been rendered by the horticultural commissioners and the State Department of Agriculture in their persistant fight against codling moth, which saved to the Sacramento river pear district, alone, in 1920, $200,000. He also spoke of the valuable assistance rendered by the Fruit Products Laboratory of the University of California, of researches in methods of evaporating pears and making pear spread, and a promising new product, pear syrup; of Marketing Director Daniels, for his sound business judgment as to the financial and credit conditions; to the Canners of California for their high standard of dealing, and appreciation for their efficiency in handling over 13,000 tons of the Association's product; and particularly for their promptness in paying the Association for the million and a quarter dollars sold them, at a time when they labored under enormous difficulties in disposing of canned goods.

However much we desire to give the proceedings of the convention in detail, that wish is confronted by a lack of space at this particular time. Never before in the history of the Department of Agriculture has there been assembled such an array of agricultural and horticultural talent, and from which came messages that will go down into history, messages that told of the great work that has been accomplished by co-operation and standardization the leading factors of today. These and other truths told will not grow old until something better may be suggested; therefore it is our intention to keep some of the more important matters, brought before the convention in the limelight.



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Fruit Growers' and Farmers' Resolutions

The Resolutions Committee duly appointed for the 53rd California State Fruit Growers' and Farmers' Convention, and consisting of Wylie M. Giffen, chairman, Charles H. Bentley, H. C. Dunlap, H. J. Ryan, George W. Pierce, Howard C. Rowley, C. B. Messenger, George E. Ferrand and F. T. Swett, met November 11, 1920. The committee requests that such resolutions as are adopted by the Convention which refer to action required by the Legislative or Administrative officers of the State or Nation be called to the attention of such authorities and representatives by the State Department of Agriculture, and that the Fruit Growers' Legislative Committee of California be furnished with copies of all Resolutions of this Convention germane to their activities for further development:

I.

Whereas, the 52nd State Fruit Growers' and Farmers' Convention requested the Congress of the United States to make adequate appropriation for the purchase of experimental vineyards in California operating under the Bureau of Plant Industry of the United States Department of Agriculture, and which are now only covered by leases which will soon expire, and whose grape variety collections and experimental results should be permanently preserved through the purchase of these small properties, particularly the two more important sites near Fresno and at Oakville, Napa county, and

Whereas, action has not yet been taken by the Congress on this matter,

Resolved, that we reaffirm this position and request substantial consideration of this Resolution.

II.

Whereas, the farming industry is a basic industry of the Nation and of this State particularly, and essential to the welfare and prosperity of all:

Resolved, that we suggest that due recognition of this be given in the election and appointment of public officers and administrative officials in state and national affairs wherever their duties are germane to the end that adequate representation of this important industry may be had in the councils of our affairs political.

III.

Whereas, the practice of woolen manufacturers too frequently seems to be to use virgin wool only when they cannot easily use shoddy or substitutes, and

Whereas, this very great use of shoddy masquerading as "all wool" has crowded out the sheep industry to such extent that a pound of wool sells for hardly more than half the price of cotton, and

Whereas, such "shoddy" cloth sold as "all wool" works a hardship on purchasers of woolen goods and garments as well as on wool growers,

Resolved, that this Convention of Fruit Growers and Farmers of California, urgently requests our Congressional representatives to use their utmost efforts to secure the passage of the "truth in fabrics" bill requiring manufacturers to stamp upon their cloth statement of the composition of same—a law such as is now effective here in the manufacture of fertilizers.

IV.

Whereas, under the constantly increasing production of fruits in California the problems of fruit production and the manufacture of its by-products are becoming of greater and greater importance, requiring more and more scientific investigation by trained experts. Be it

Resolved, that we request the Board of Regents of the University of California to include an item of $10,000 annually in its budget in order that the fruit products laboratories in Berkeley and Davis may increase the scope of their work, which is efficient but not sufficient.

V.

Whereas, our State Director of Agriculture is charged with the responsibility of enforcing our fruit and vegetable standardization and horticultural laws, but lacks sufficiently complete authority in instances, as the several County Horticultural Commissioners are responsible in the last analysis to their County Boards of Supervisors rather than the State Department of Agriculture, which condition results at times and is possible of resulting in varying local standards;

Resolved, that we favor such change in our laws as may be necessary to confer upon the State Department of Agriculture all necessary authority in these matters.

VI.

The Fruit Growers of California assembled in convention called by the Department of Agriculture of the State of California, having in mind the impending revision of the Tariff laws of the United States, have accepted the following resolution:

Whereas, the permanent prosperity of our Nation rests fundamentally upon the welfare of the farmer and producer, and

Whereas, the emergencies of war have greatly increased the production of the fruits and nuts of California in the face of greatly increased costs of labor, transportation and materials incident to production, and

Whereas, gradual return to normal conditions has been accompanied by an unprecedented fall in the rates of exchange with foreign countries, which are thereby encouraged to ship competitive products, such as lemons, raisins, figs, canned fruits, olives, olive oil, rice, beans, walnuts and almonds to this country, and

Whereas, these products are produced in countries where the wage scale is on a comparatively low level not compatible with the standards of living enjoyed in this country, and

Whereas, there are other fruits being produced in increasing quantities stimulated by market conditions which prevailed duuring the war—fruits such as dried prunes, dried peaches, raisins, dried apricots, canned fruits and vegetables which were largely exported prior to the war and which for the welfare of producers require the recovery of foreign markets formerly enjoyed, as well as the development of new markets; therefore, be it

Resolved, that the Ways and Means Committee of the House of Rrepresentatives be petitioned to give special consideration to the necessity for so revising our Tariff Laws as to give adequate protection to those products first above named, to the end that our producers and wage earners may not suffer in competition with like products produced in foreign countries where the wage scale is on a lower level, and where the conditions of exchange are already starting shipments of products to this country in such volume as to demoralize the domestic market and bring serious financial loss to the producers of this country.

Be it further resolved, that the Ways and Means Committee of the House of Representatives be petitioned to give particular attention to the need of maintaining international trade relations to the end that favorable consideration may be shown to countries which in turn show favorable consideration to the products of this country produced far in excess of domestic demand and which require foreign markets, such as the dried prunes, apricots, peaches, pears, raisins, canned fruits and canned vegetables of California. It is recognized that permanent foreign trade of value can only be developed on exchange of commodities, but it is believed that these should not be of a competitive character. To rehabilitate exchange as well as the buying power of foreign countries, they must be permitted to sell their products, but it is believed that special consideration should be given in tariff relations to countries offering products not grown in this country and that in general, our foreign markets can only be developed by most painstaking study of the intricate and complicated questions involved supported by a consistent foreign policy in our International relations to the end that our producers and manufacturers may hope for the protection and development of the fruit industry of California—its principal asset.

Be it further resolved, that a copy of these resolutions be sent to each Representative of California and to the United States Tariff Commission with the request that they give it their earnest consideration and persistent support.

VII.

The Fruit Growers and Farmers of California, in convention assembled, wish to express their high appreciation and approval of the valuable service rendered to the State by G. H. Hecke, Director of the Department of Agriculture, and by his organizations, and to request that more adequate financial support be given to this department in the development of its activities; it is therefore

Resolved, that the Legislature and the State Board of Control be requested to give favorable consideration to the budget as presented by the Director for the coming session of the Legislature.

VIII.

Resolved, that the thanks of the convention be extended to the Chamber of Commerce, to the Press and through them to the people of Fresno for the courtesies and the hospitality extended during the period of the convention.

Whereas, the State Railroad Commission of California is about to hold hearings for the purpose of possible readjustment of rates of Hydro-Electric Power, and, whereas the utmost economy must rule in production of farm products, and, whereas, we wish to be assured that the proper needs of agriculture will receive full and fair attention, and, whereas, it is recognized that fair returns must be given to power companies to warrant investment and needed development, be it resolved, that this Fifty-Third State Fruit Growers and Farmers' Convention does hereby petition the State Railroad Commission of California to give due consideration to the needs of agriculture, at present faced with rapidly declining prices on its products, whose costs depend in a large measure on irrigation and power.

Be it further resolved, that we urge in cases of shortage, that water and power service for none-essential purposes be restricted to such extent as may be determined upon at the time until requirements of agriculture, and other essential uses have been adequately supplied.

Resolved, that a copy of these resolutions be sent to the State Railroad Commission of California.

Resolutions were also adopted asking for an increase in salary of the county horticultural inspectors, now fixed by statute at $3.50 per day, which is not comparable with present wages paid untrained laborers. Also commending Frederick Maskew, Chief Deputy Quarantine Officer of California, State Department of Agriculture, for his valuable work in behalf of the agricultural and horticultural interests of the state. Also Colonel Marshall, formerly chief of the U. S. Geological Survey in California, for the action he is taking to unify the great irrigation systems of the Sacramento and San Joaquin Valleys of California.

EIGHT-POUND CLUSTER.

The Exeter Mercantile Company of Exeter, Tulare county, has on display an eight-pound bunch of Emperor grapes. This bunch is the product of the celebrated Giant Oak Ranch, the property of Pinkham and McKevitt, large growers, packers and shippers of California deciduous fruits.

Miss Lanie M. Wilbur, who took so many cups for her peach display and timely work in her orchard at the first annual peach growers' contest in Sutter county, spent $3,000 for props to hold up the heavily laden limbs that produced an average of 16 tons per acre of Tuscan cling peaches.

The Source and Guardian of Quality

There is in the factories of this Company a section occupied entirely by men whose business it is never to be satisfied with things as they are.

These men, constituting the Development Department, are charged with the creation and improvement of Goodyear products, processes and factory equipment.

Out of their devoted labors have come not only the present excellence of the things Goodyear builds, but the very machinery by which these things are made.

Not the least of their accomplishments has been to deliver to the public a steadily increasing value in these products without proportionate increase in cost.

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Which Source of Ammonia is Best?

Think what it means to have a top-dressing ammoniate that is ready for use without pounding of hard lumps,—one that is fine and dry and which can be applied easily and uniformly by hand or machine.

Then think of having a fertilizer that contains one-third more nitrogen (one-third more active plant food) than any other nitrogenous top-dressing—25¼ units of ammonia guaranteed.

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To all these advantages, add low price per pound of *actual* plant food and you have in mind "The Great American Ammoniate" *Arcadian Sulphate of Ammonia.*

The efficient top-dressing for orchards vegetables, and general farm crops. It is quick, enduring and satisfying.

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Write for free instructive bulletins on the proper use of "The Great American Ammoniate."

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BUNYIP, BAYAH and DART IMPERIAL SEED WHEATS

California acclimated Australians; best milling; higher prices for product; yield well; shatter less in wind than other varieties known to us.

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There is a large demand for this early maturing, drouth resistant barley. Carload just shipped Miller & Lux averaged approximately 130 lbs. per sack. All our recleaned Mariout, when well-pigged, has approximately such weight.

All our seeds grown on new soils, one irrigation only. All water from deep wells. No Bermuda, Johnson, or Morning Glory.

No more Sonora or Early Baart wheats. No Beldi, Tennessee Winter or Four Thousand Barleys. Small lots only remaining of the so-called Diener Hybrid wheats.

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Fully matured seed from purest Durango strain known to us; grown in selected fields hand-rogued for typical plants of greatest yield and earliest maturity. We operate our own gin. No seed mixing.

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Write for prices, stating quantity desired.

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Calif. Ass'n. of Nurserymen in Convention

(Written for Pacific Rural Press by W. S. Killingsworth.)

Not a coincidence but premeditated that the California Association of Nurserymen should be in session at Fresno at the time selected by the State Fruit Growers' and Farmers' Convention A splendid idea, for those attending both conventions are as much interested in the welfare and prosperity of either convention as they are in the one they are allied with, for one without the other would be like the play of Hamlet without Hamlet. ' It goes without saying that the fruit industry of California may attribute its success largely to the efforts manifested by the nurserymen of the State, as they are constantly bringing to light new ideas and new productions that are and will continue to make California the leader in horticultural activities throughout this country. Delegates from all parts of the state, and some few from adjoining states, were in attendance at the convention.

The program was a "live wire" from beginning to end. Every paper read, every extemporaneous talk, and every moment of discussion was filled with food for thought, not only for the nurserymen but the fruit growers of the state. The feature of the first morning session was the report of the standing committees of the organization by Secretary H. W. Kruckeberg. In this report there was not a single tinge of pessimism. "There is much for the nurserymen of California to be thankful for," said Kruckeberg; "there is a hopeful outlook and we may look for it in the immediate future. I am not speaking of the matter of organized efforts alone, but for progress in the nursery industry and its individual units. The nursery business is again coming into its own; the demand for its products has regained its buoyancy and prices and demand have been correspondingly good. All of these things have brought about conditions whereby the association is stronger today than ever before in its history."

"The Connecting Link."

Emphasizing the fact that nurserymen are "the connecting link in the chain of human activity that on the one hand ties a vast volume of human fruit food and an industry great and munificent to nature's storehouse, and on the other unfolds to humanity nature's bounties in plant life," President J. H. Bergtholdt, opening the tenth annual convention of the California Association of Nurserymen, asked the question, "Is the California nurseryman a profiteer?" If he is, the figures given out by President Bergtholdt are void of any such earmarks for a comparison showed in figures quoted, that notwithstanding the unprecedented demand and a corresponding shortage of trees, the fruit growers of California are paying over 50 per cent less for their nursery stock than is being paid for eastern stock. Not only is this the case with nursery stock but ornamentals as well. "The grower of trees and plants is a farmer, the same as a grower of cereals and livestock," said Bergtholdt. "With this very vital distinction, however, the grower of cereals and livestock can always convert 100 per cent of his product into cash at the prevailing market prices, whereas, the grower of tree and plants, after having two years run the gauntlet of endless vicissitudes in the growing of a crop that never yields him, on an average, over 70 trees for sale out of 100 planted, and whereas, unlke the farmer of cereals and livestock who realizes 100 per cent of his crop, the nurseryman, on an average, over a period of years, will never sell over 49 trees out of the 70 of the original 100 he has succeeded in growing. This loss of over 50 per cent of time and expense being a dead loss and an added expense on those he succeeds in selling. That annual brush pile—you all know it—the rock upon which two out of every three nursery enterprises founder. Who therefore, will begrudge him a year or two when he can dispose of 90 to 100 per cent of his crop at a price that pays him a profit and enables him to accumulate a surplus against future losses, and help him to render more efficient service to the industry he fathers.

Unlimited Possibilities.

"The unlimited potential possibilities of commercial horticulture in California have not yet been touched. California fruit supplies an indispensable necessity to the world's diet. The California Association of Nurserymen has been fed too long on a milk diet. It must grow teeth. Until you make it a man's organization with a man's work and a man's responsibilities you offer no incentive."

"Resistant Stocks as a Factor in Pear Blight Control" was a subject ably handled by A. L. Wisker, who has made a study of this dreaded disease since it first made its appearance in California in the early part of the present century. Wisker laid special stress on the pear varieties that vary to some degree in blight resistance. "Experiment with the Chinese pear seedling," said Wisker, "further strengthens my opinion that the cultivated types of this blight-resistant species provided pear stocks decidedly superior to any now generally used by nurserymen." We will take occasion to bring this matter to the attention of our readers later, as it is a matter of vital importance to every pear grower in the state

Charles E. Virden made it plain that the practice of naming fruits for every member of the family should by all means be discontinued, as it was confusing, while at the same time it was not deceiving the eastern buyer as they are equally as familiar with the varieties as the grower. In dealing with the subject, "California Commercial Horticulture," Mr. Virden took occasion to roast the railroads for the poor service they were giving. "What is the trouble?" said he. "It is not for the lack of money as Woodrow and McAdoo gave them all they wanted during government ownership. The western roads have not the proper connections with the eastern roads, therefore, all the cars on earth would do no good. Growers must get behind a movement and demand better service. I believe that the growers should pass resolutions demanding that cars should be unloaded within 72 hours, or be fined $500 for every violation. Cars that were bought f. o. b. California last season stood on eastern terminal tracks for 15 days before being unloaded. The roads must go back to pre-war schedule. It can and must be done."

Quarantine Laws.

Owing to sickness George C. Roeding was unable to be present at any of the convention meetings. However, a paper prepared by Mr. Roeding was read, the subject being, "Why Not Grow Root Stock in the United States." "The quarantine laws which have gone into effect prohibiting the importation of many classes of nursery stock in the country," said Roeding, "will probably be the cause of developing the growing of seedlings as root stocks very rapidly. Possibly in no other state outside of California is there such a demand for fruit trees grown on different roots as we have it here. We have every reason to believe that California will become a very important center for the development of seedling orchards of all kinds and particularly for the Myrobalan, because of its tendency towards early blossoming. It is hardly necessary to dwell to any extent on the seedlings which are grown from the peach, apricot and almond, for all of this seed is available in this country."

"Nurserymen's Bud Selection Association of California" was a subject well handled by Max J. Crow. He urged all nurserymen to help the good work by joining the association, as 95 per cent of the work will be for the benefit of the orchardist, as he will have access to 20,000 trees with one-year record production. In 1921 the association will have enough men in the field to obtain enough buds for the use of all members of the association. Only trees grown from selected stock

will be sent out by the nurseries Should any member be found guilty of violating rules governing such he will be dropped from the association. "Whether we get additional membership or not, this organization will go," said Crow, "for we intend to put the job over, as it means too much to the nurserymen as well as the fruit growers of California. I predict that in 10 years from now it will be impossible to sell a tree unless it bears the 'O. K.' of the Nurserymen's Bud Selection Association of California."

"Fruit Bud Selection and What May Be Expected of It," was handled by W. T. Kirkman, Jr., the president of the association, and his enthusiasm over its success is exceeded only by his determination to make a go of it. He told of the loyal support that was offered by the growers, bankers and business men when it was first known that the association was to be formed, they realized the importance of such a move and the absolute benefit that the growers would receive when they were made sure that nursery deliveries would be true to name and from stock that had been carefully selected and subsequently tested out.

General Approval.

Every paper read as well as every discussion on the subject met with hearty approval.

Professor E. J. Wickson read a most interesting paper, giving the history of the nursery business from 1890 to 1910.

"Factors for Nurserymen to Consider" was ably discussed by Dr. J. C. Whitten So thoroughly did Dr. Whitten go into the matter that we feel we would not do the subject justice in the few words we might say at this particular time, consequently we will reserve the right to enter into it more fully at some future time. Numerous other papers were read on various subjects in connection with the nursery business, and we regret very much that lack of space prevents our giving same the attention they justly deserve. However, our close attention and observation of the proceedings of the convention reminds us of what Mark Twain said of the Atlantic Ocean the first time he looked out upon it. When asked what he thought of it, he said, "It's a success." So was the Tenth Annual Convention of the California Association of Nurserymen.

Pasadena was the successful bidder for the next convention. That city put up a lively campaign, and the nurserymen decided to accept the invitation extended by Pasadena. Roy F. Wilcox of Montebello was elected president of the association Other officers are: Vice-president J. W. Barnicott, Newcastle; Secretary-Treasurer, H. W. Kruckeberg, Los Angeles; executive committee, J. D. Meriweather, Ontario; J. E. Bergtholdt, Newcastle; Fred H. Howard, Los Angeles; Max J. Crow, Gilroy, E. D. Washburn, San Francisco.

INDUSTRIAL ACCIDENTS DECREASED.

The Industrial Accident Commission paid $5,621,828 to the 108,947 injured workers and dependents of those accidentally killed in California during 1919. During that year there were 586 industrial death-accidents as compared with 706 in 1918. Permanent injuries in 1919 numbered 1714 as against 2100 for 1918. Agriculture was responsible for 40 deaths. Apparently the safety-first precautions of the Commission are bearing fruit in the large number of homes which would otherwise have lost fathers and brothers. Of the estimated 1,000,000 employees in the State 100,000 are more or less injured every year on the average.

KINDLY WORDS FOR SKUNKS.

Now comes information from the Department of Agriculture at Washington, D. C., that farmers are overlooking easy side money by neglecting to raise skunks. This, despite all that has been said and thought of them. A circular explains that the effort should net from $50 to $100 yearly while aiding to stabilize "a depressed fur market." Also, incidental information is given to the effect that all that is necessary for success is to respect the animals' dens, keep the poultry locked up, feed them an old horse or such every fall, and use judgment when meeting them personally.

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Noted for It's Smoothness and Evenness of Fit

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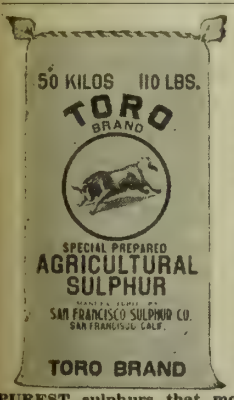

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ANCHOR Brand Velvet Flowers of Sulphur, also EAGLE Brand, and Fleur de Soufre, packed in double sacks, are the fluffiest and PUREST sulphurs that money can buy; the best for vineyards; the best for bleaching purposes, LEAVING NO ASH.

VENTILATED Sublimed Sulphur — Impalpable Powder, 100% pure, in double sacks, for Dry Dusting and making Paste Sulphurs.

For LIME-SULPHUR SOLUTION, use our DIAMOND "S" BRAND REFINED FLOUR SULPHUR. We can furnish you this sulphur at such a low price that it would pay you to mix your own solution and net you a profit equal to the amount paid out for labor in spraying your orchard, even if you pay your men $5 per day for making the solution and applying same.

To create additional available plant food, and prevent smut in grain, drill into the soil 110 pounds per acre of TORO BRAND SPECIALLY PREPARED AGRICULTURAL SULPHUR or our DIAMOND "S" BRAND REFINED POWDERED SULPHUR. This soil treatment has increased various crops up to 500 per cent. Send for Circulars Nos. 6, 7 and 8.

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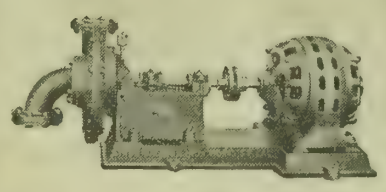
Ask us for prices for Carbon Bisulphate, the surest remedy for destroying ground squirrels.

CRESOLITE
makes
STUMPS HUMP
also willows and all brush. Money back if it don't.
LOUIS BAHRS, Loomis, Cal. Agents wanted.

Centrifugal and Deep Well Turbine
PUMPS

EFFICIENT



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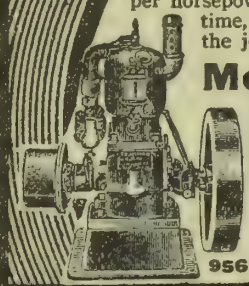
Cushman Engines, recognized everywhere as The Original Light Weight Power, give dependable, economical service on every power job on the farm. Cushman Engines weigh only 40 to 65 pounds per horsepower. The Cushman owner saves valuable time, because he can easily move his engine to the job, instead of hauling the job to the engine.



More Power Per Pound

Cushman Engines weigh only one-third to one-fourth as much as ordinary engines, and they run much more quietly and steadily. Better design, better materials and better workmanship give the Cushman more power per pound. Equipped with Throttling Governor, Carburetor, Friction Clutch Pulley and Water Circulating Pump without extra charge. Send for Free Book on Light Weight Engines.

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Fruit Trees

That Produce

Healthy, Thrifty Trees

The only kind to plant. The trees we grow are strongly rooted, healthy and vigorous, and budded from trees of known productivity. They grow—and produce—and bring a big return!

Write for Price List

We are still accepting orders for Peach Trees (June buds); and for Pear and Prune Trees. Don't spend a dollar on trees, till you hear from us.

Elmer Bros. Nursery
"The Nursery That Helped to make Santa Clara Valley Famous."
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Melilotus Indica Supplies Both

Now is the time to plant it. Buy only seed that has a quality test tag on every sack. It protects you against seed of low germination.
Buy from your local dealer or from

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Look for the Tag LOS ANGELES, CAL.

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NURSERIES—VENTURA and LOS ANGELES COUNTIES
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—land similar to that which through many years has **yielded from 20 to 45 bushels of wheat to the acre.** Hundreds of farmers in Western Canada have raised crops in a single season worth more than the whole cost of their land. With such crops come prosperity, independence, good homes, and all the comforts and conveniences which make for happy living.

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are sources of income second only to grain growing and stock raising. Good climate, good neighbors, churches, schools, rural telephone, etc., give you the opportunities of a new land with the conveniences of old settled districts.

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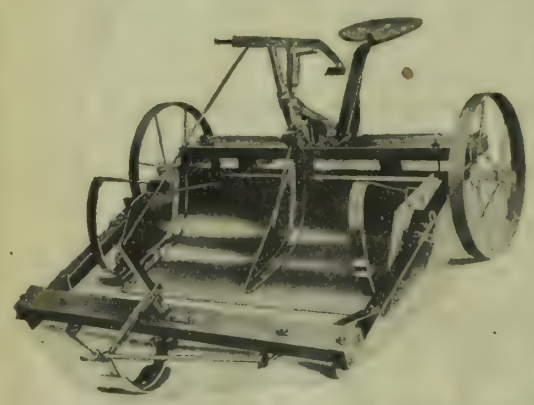

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Made in 2-horse, 3-horse and 4-horse sizes. Can be operated by small tractors from the tractor seat by the tractor driver.

Send for descriptive circulars, with prices, or ask your dealer to send for one on approval. We pay the freight.

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HARDING GRASS—PLANT IT NOW

ADVANTAGES: is a perennial—grows all winter—endures quite heavy froste—grows all summer with little moisture—"Animals are crazy for it"—is easily eradicated—On good soil will produce 3 tons to the acre from one cutting—Does well on granite soil. Furnishes a rich abundant pasture without irrigation for 7 to 10 months, according to conditions and locality—Multiplies rapidly—"Try again."

Strong, well-rooted plants, price—100, $1.00; 1,000, $4.00; 10,000, $30.00

A. LAFORGE, NEWCASTLE, CALIF.

Agricultural and Mechanical Service

Partnership Orchard Development.

I have 80 acres that a neighbor wishes to develop on shares. He has figured out that it will cost him about $50 per acre to finish clearing, plow, plant, cultivate, and water an orchard for three seasons. The cost of the land is $50 per acre and we would each pay half the cost of trees. I assume, then, that our equities would be about equal, I paying the taxes and interest. The agreement should protect me if he fails to continue, and should provide some manner of dividing our interests if we should wish to discontinue the arrangement before the development is complete. He expects to clear and plant 20 to 25 acres per year. Can you outline the requisite features of such an agreement?—E. E. L., Yuba county.

You seem willing to give him a half-interest in the property after he has brought the trees to three years of age. This would be the first feature of the agreement. The second feature would provide that after any block of trees has become three years old, the partnership would be considered as the landlord and the man who works it would be considered as the tenant even though he may be part of the partnership. Share or cash rent could be arranged according to conditions existing at that time and should not necessarily be fixed now. In case you and your neighbor should fail to agree on methods of planting, pruning, cultivating, etc., before time to convey him the half-interest, your agreement may well provide that you will both accept advice of an authority such as farm adviser or other neighbor. Failing in this you can pay him going wages for his work up to that date and keep your title clear. This would require a strict accounting of time spent on the job. You certainly would not want to convey him a partial interest if you could not agree on operations.

Farm Concrete Mixing.

Some of the hardest, strongest concrete the writer ever saw contained a much larger proportion of crushed rock than most of the concrete mixed under his direction. Concrete consists of cement, sand, and "coarse aggregate," which may be gravel or crushed rock. The strength of concrete depends on the tenacity with which the mixture of cement and sand binds together the coarse aggregate. On rounded pebbles it cannot hold as tenaciously in general as it can on crushed rock, although we have seen broken concrete in which the pebbles had broken in two rather than to separate from the cement. In order to stick best to the aggregate and still be most economical for farm structures, the cement and sand should be in proportions not leaner than one to three by volume. Then a great saving of high-priced cement may be accomplished by using all the coarse aggregate between which a given amount of the cement-sand mixture will fill all the cracks and still practically surround each piece with at least a film of the mixture. Thorough mixing gets each piece of aggregate coated with mortar. Thorough tamping then gets the pieces packed closely enough so that a solid mass is formed with a minimum of the cement mortar and no air spaces. Too much water is a curse of concrete construction. The mortar should be just a little wetter than would permit it to crumble in the hands. It will then run if piled up, but will not spread out much if shoveled into a pile. Any dirt or other foreign matter in the sand or any other part of the mixture weakens it correspondingly.

Wants to Buy from Producer.

I formerly bought rice by the sack direct from a grower in Texas, for use in my family. Now I would like to buy some direct from a grower in California for myself. With a truck I might also distribute a lot of rice to other consumers in this vicinity.—F. L. P., Los Angeles county.

One trouble would be that you could not use the paddy and the grower could not mill it for you. Another trouble with such transactions is the main trouble with the parcels post distribution of farm products direct to consumers, viz.: the seller wants his money before shipment and the buyer wants the goods before he sends money to a stranger. If any of our readers wish to play safe by availing themselves of Pacific Rural Press service, we will hold their checks or money orders for them until the goods arrive and are found as represented by the sellers. Upon notification of such receipt of the goods we will forward the checks or money orders to the sellers. We cannot, however, operate an inspection service to adjust disputes as to grade or condition.

Broom-Corn Threshing.

Please tell me the American method of harvesting and threshing broom corn.—R. L., Nimes, France.

When the brush within the sheath has become green all through, its fiber is tougher than at any other stage and it is generally cut or pulled at this time. Tall varieties are bent over about three feet above ground, and the heads are cut off by hand and may be ricked between the stalks for further curing out of the direct sunshine. The short growing varieties are pulled by hand, a sharp bend at the joint causing it to break off easily. Curing is finished later under shade to retain the green color and avoid brittleness. Seeds are threshed by two cylinders studded with spikes and revolving so the spikes intermesh. The operator grasps the basal stalk of the brush and holds the seedy part where the revolving cylinders will "comb" or strip the seed out without pulling the brush far through. For large quantities the brush may be fastened to a belt, which runs along in front of the cylinders close enough so the seed is caught and stripped.

Dyed Broom Corn Seed Poisonous.

We have allowed chickens to eat broom corn seed from a broom factory. Their combs have turned white and they have stopped laying, though they do not seem otherwise ill. The seeds were dyed green along with the straw. Can you tell us if the dye was arsenical or otherwise poisonous?—H. B. H., Marin county.

The dye now generally used by broom-makers is malachite green, a carbonate of copper, mixed in process of manufacture with aniline, etc. The aniline is poison. The copper is poison to some extent. It may be that paris green has been used at some stage in this particular dye, but that seems unlikely, and any other form of arsenic seems unlikely to be of any use in a dye. The whitened combs may be due to arsenic from other sources or to another cause.

NEW FEATURES IN AUXILIARY ENGINE.

Any kind of harvesting machinery and some other farm implements require some sort of power to keep them working as they move forward over the ground. The old way and the hard way is to gear or chain them to the wheels, whose turning would thus keep the machinery in operation. This does not work well when traction is poor, or when workstock find poor footing or insufficient space to work or when workstock or tractor power are inadequate for the job in hand. Thus it was that the light-weight auxiliary engine designed a few years ago by E. B. Cushman to ride on such machines and furnish power to run them and reduce the required tractive power, found a quick and popular demand. The Cushman engine is well known on California ranches, where it is used on harvesting machinery, potato diggers, and all kinds of small jobs.

Mr. Cushman has within the past

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PEAR and APPLE PLANTERS

We solicit your inquiries regarding your needs in Pear and Apple plantings, either for home or commercial orchards. Our trees are especially fine this year and feel certain you will find ARENCO TREES just what you want for your orchard needs. Oregon trees mature early, thus enabling us to deliver them to you in time for early planting.

Good Trees at reasonable prices.

OREGON NURSERY CO.
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BARTLETT PEAR ON JAPAN ROOT:

We have a fine lot of yearling Bartlett, as well as Bosc, Anjou, Comice, Flemish Beauty and Winter Nelis.

These trees are grown on new soil, never before in nursery stock, are well rooted, clean, healthy and hardy. Hundreds of thousands of our trees in all parts of the west are now bearing profitable crops for their discerning owners.

We also carry a complete line of general nursery stock, all of which is guaranteed to please you.

Remember our prices cover freight and packing charges.

WASHINGTON NURSERY CO.
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NITRATE OF SODA FOR FERTILIZING

It will give you the quickest and best results, as it contains NITROGEN, the most important element of plant food in immediately available form.

Write or call for information or free literature.

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FRUIT TREES
BERRY PLANTS
SEED POTATOES
Order Early

RHUBARB Wagner's GIANT
—NOW BEST TIME TO PLANT—
Growers Harvested 15 Tons per Acre First Year—So Can You
ORDER YOUR BERRY PLANTS NOW
Send for Special Rhubarb and Berry Price List. J. B. WAGNER, Rhubarb and Berry Specialist, 1550 E. Villa St., Pasadena, Calif.

year completed the design of another lightweight engine for similar purposes and engaged The Piersen Co., an old-established concern putting out fine machinery, to manufacture the new engines, which are called the "Superior Piersen." These have been on the California market for several months, particularly in the Sacramento Valley, and over 500 of them have been put into rice binders, potato diggers, pumping plants, etc., to make work easy. Distinctive features of these engines are their weight of 500 pounds per horsepower, including oil, gas, and water, the absence of oil holes or greasecups due to the interior automatic lubrication of all bearings, and the radiator in the flywheel, a feature which reduces weight of water required and uses the weight of water as an elastic factor in the flywheel, thus reducing the weight of iron necessary in the latter to insure smooth running. It develops five horsepower; and may be quickly attached to any suitable machinery by chain or belt.

BUTTE COUNTY MARIOUT BARLEY

(Written for Pacific Rural Press by County Agent H. E. Drobish.)

Mariout barley yielded an average of 7 sacks more per acre than did common barley in the Farm Bureau Mariout Barley Demonstrational plantings in Butte county this year. Seventeen farmers planted Mariout and common barley in adjoining fields as a Farm Bureau Demonstration and kept a careful record of the yield per acre of the two barleys.

In sending in reports several farmers stated that the Mariout weighed 10 to 15 pounds more per sack than did common. This report was not anticipated but might naturally be expected under the circumstances. The Mariout ripened two to three weeks earlier than the common and escaped the hot north wind that caused the common barley to shrivel and shoe peg.

This early characteristic of Mariout barley not only causes the kernels to fill out better, but also enables the farmer on the irrigated land to get his soil in shape for the fall crop a little earlier. One farmer said that this feature alone, if there was no increase in yield, would cause him to plant Mariout barley.

Mariout barley originally came from the desert regions of Africa. It was introduced because it seemed to be especially valuable for poorer soils in a region of light rainfall. The Mariout barley has a much shorter straw than common barley but the heads are heavy and the kernels grow very compact in the head. It is not as good as common for a hay crop

This barley is adapted to the lighter types of soil. In Butte county this year excellent results were secured on the heavy adobe soils Such results should not be expected, however, in ordinary wet years when seeding is done prior to January 1st.

TRACTOR AND STOCK SHOW COMBINATION.

Already the much-desired co-operation of the Los Angeles Tractor Show and the Los Angeles Livestock Show for an unparalleled combined event next year is being brought into the realm of probability. The Livestock Show people have expressed approval and the Tractor and Implement Dealers' Association of Southern California is discussing plans for an even more representative exhibit than the magnificent one at Verdugo Woodland, last fall, according to Robt. H. Green of the southern association. To get things better systematized well in advance of actual arrangements, the Association is considering employment of a full-time secretariat, similar to the one now employed by the California Tractor and Implement Association of San Francisco, where George Collins is showing the value of such an office.

There is also some talk of reviving the general field demonstrations next season.

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Is the aim of all.
It is our only excuse for existence.
Improvement in method,
Improvement in quality,
Improvement in accomplishment,
These are the aims of ZENO.

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Miscible oil spray, and these are reasons why
It has proved the best by years of test.

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GOLD BEAR FERTILIZERS
FOR CALIFORNIA SOILS

for a bigger yield

Gold Bear Fertilizers are scientifically prepared to meet California soil conditions and crop necessities. Made from animal products containing the necessary elements to feed your crops.

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FREE BOOK ON LAND CLEARING

MAKES HARD WORK EASY
WRITE FOR THIS BOOK TO-DAY
IT ALSO TELLS ABOUT THE WORLD FAMOUS
LABOR SAVING FULLY GUARANTEED
SINGLE-DOUBLE-TRIPLE POWER
100% POWER AND SPEED
BULL DOG SUPERIOR ONE MAN STUMP PULLER

BULL DOG pulls largest, smallest, low cut, green, rotten, tap-rooted stumps or trees, either in swamp or on hillsides in minutes. Other methods take hours. Made of tough steel. Weighs less. Will last a life time. *You alone* can yank out biggest stumps quickly and cheaply. Plenty of the strongest cable, blocks, hooks and guaranteed "Take-up." Root Hook FREE with every outfit.

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THE only pruner made that cuts from both sides of the limb and does not bruise the bark. Made in all styles and sizes. All shears delivered free to your door. Write for circular and prices.

Mariout Barley

Good clean seed from heavy yielding stock

KARL A. HESS, Dixon, California

Significant Agricultural Pointers

American Farm Bureau Meeting.

The American Farm Bureau Federation will hold its annual convention December 6, 7 and 8 at Indianapolis. Formulation of a definite, representative, and well-backed national agricultural policy is the big job before the convention. This is where farmers will make their voices effective if the meeting and discussions are really representative. Speakers of national and international fame, including the British Ambassador, will aid in pointing out national and international facts on which the Farm Bureau may base its judgment. Some of the topics to be discussed are Tariff, Transportation, Taxation, Labor, Financing, Marketing, Collective Bargaining, Merchant Marine, Foreign Markets, and Governmental policies and legislation on these subjects

FOUR THOUSAND and MARIOUT SEED BARLEY
Limited surplus of high-class seed of these two heavy producing varieties, grown directly from University Farm Stock.
Car Lots (400 sacks or more) $4.00 per cwt. F. O. B.
Smaller Amounts ..... $4.50 per cwt. F. O. B.
Samples on request.
F. P. Wray, Davis, Calif.

RELIABLE MARIOUT BARLEY SEED
HAS
Greatest Yield Record. Our Seed Is COMPETENTLY TESTED FOR HIGH PURITY.
H. G. STEVENSON, JR.
Winters, California

Montana Fertilizers to California.

Phosphate mines and sheep manure deposits of Montana are to help fertilize the soils of California as planned by the Butte Fertilizer Co. of the northern state, whose deposits are among the greatest in the country. Packing-house products and lime also are to be handled by this company. "As very little soil is fertilized in the Northwestern states, the products of this company will be shipped to California and the East," says J. Chase of the fertilizer concern.

Finance Farmers for Marketing.

The sudden and rapid decline in farm crop prices is due, primarily, to two causes: first, the deflation policy of the Government, particularly the policy of credit restriction; and second, the absence of customary markets for certain surplus American farm products, says a statement issued from the Washington office of the American Farm Bureau Federation. Aggravating the results of credit restriction, is the fact that we have in this country no credit system designed to provide funds to enable farmers to market their crops in a gradual and orderly manner. The present commercial credit system furnishes credit mainly for the passing of farm products from the hands of farmers into the hands of dealers or speculators who ordinarily hold them until finally consumed. Little provision is made to enable farmers to hold certain portions of their crops and thus regulate the flow of their products to market in proportion to consuming demands. To accomplish this, an amendment to the Federal Reserve Act is advocated, giving the Federal Reserve Board power to classify loans and vary interest rates to give primary production prior consideration.

Big Subdivision in Fresno.

One of the most significant developments in California agriculture is the breaking up of the large ranches. Among several such projects now in action the James Ranch, comprising seventy-two thousand acres in Fresno county is one of the most recent. River and pump irrigation are available, the latter by means of 80 pumps already installed. The land is being sold in lots as small as 20 acres on ten years' payments.

Canadian Field Crops Increased.

Canada has this year produced 25,000,000 tons of hay and corn and 1,250,000,000 bushels of other field crops, a 25 per cent increase in both figures over those of 1919, as reported by Consul General J. I. Brittain, of Winnipeg.

Retail Food Prices Increased.

The average retail prices of 22 articles of food, mostly meat and dairy products, have increased 15 per cent in the United States in the year ending July 15, 1920, as surveyed in figures of the U. S. Bureau of Labor Statistics. Prices to producers of most of those foods went down in the same period while middlemen fattened on the increase.

Rust Resistant Oats.

Algerian oats, grown by a member of the Santa Cruz County Farm Bureau for two years, seem to be rust resistant and good producers, as reported by Farm Adviser Henry Washburn. Some of the seeds are for sale through the Farm Bureau Marketing Department.

U. S. Buys Egyptian Cotton.

About 626,090,900 pounds of cotton were exported from Egypt between September 31, 1919, and July 31, 1920, as reported by the U. S. Bureau of Foreign and Domestic Commerce. Of this, 205,971,800 pounds were sent to America and 310,190,900 pounds went to the United Kingdom.

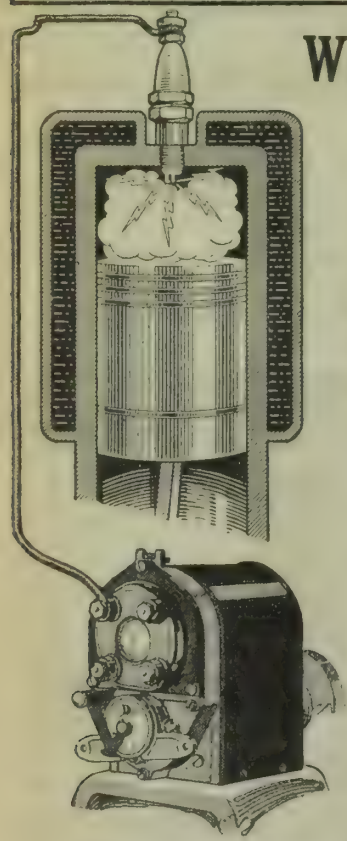
Highway Foundation Troubles

Soft or shrinking foundations are responsible for most of the holes in our concrete pavements, except the breaks along their edges, which are due to heavy loads running onto or off the pavement. The State Highway Commission has this year been aiming to enable their cement pavements to bridge cracks and soft spots in the dirt under them by using steel reinforcement in the concrete. Whether such "bridges" will hold will be known within a year or two. Meanwhile, it is known that asphaltic concrete would sink into those soft spots without fracturing the pavement; and when such sinking has hardened the foundation sufficiently, the asphaltic concrete is patched smoothly, cheaply, and permanently, with not more than a day's detouring necessary. The problem of unstable foundations is being studied now by a committee appointed at a national transportation conference recently held in Akron, Ohio, at the call of the Federal Highway Council. The problem is, "How shall soils be treated in order to prevent damage to pavements resting on them?" Field tests will be made to determine the bearing power of various kinds of soil, the best methods of drainage, and any possible chemical treatments of soil to increase bearing ability.

University Seed Goes Abroad.

One of the really practical activities of the University Farm at Davis, besides giving practical farm instruction to students, is their testing of new varieties of grains and grasses, which might possibly prove valuable here. These tests include keeping records of the seed, and this "pedigreed" seed is attracting world-wide attention.

Would You Judge a Team by the Harness?



It might be the finest, strongest harness in the world, but what good would that do if the team didn't get into the collars and pull?

Just so with the tractor. The motor is the harness and it must efficiently apply the power to the work, but the power is produced from fuel by ignition.

It is the magneto which shoots the hot, flaming spark into the vaporized fuel, changing it from a simple mixture of gas and air to a powerful force which is controlled and applied to farm work by the gas engine. Unless the spark burns all this fuel quickly, completely and at just the right time the tractor will pull like a poor team of horses, no matter how well the other parts do their work.

That is why you should thoroughly study the magneto on any tractor you own or intend to buy.

Many tractors have been on the market for years. What magneto do they use? You have neighbors who have used tractors for some time. What is their experience with the magnetos? You know that a farmer must take care of his own machinery. What magneto is the simplest and easiest to understand?

The deeper you search for magneto knowledge the surer you are to find why K-W Magnetos have been used on the majority of tractors and have given the most reliable service.

Since the magneto is the thing which must make the power, why not insist upon a K-W Magneto on your tractor?

THE K-W IGNITION Co.
2889 Chester Ave. CLEVELAND, OHIO, U.S.A.

TRADE K-W MARK Magneto

Fires Any Fuel—Gets Maximum Power Out of Every Drop.

Prof. G. W. Hendry, who has immediate charge of the experiments, subject to the supervision of Prof. J. W. Gilmore of Berkeley, tells us that requests for various seed have this season been received from all parts of the State, from Arizona, Nevada, Texas, Ohio, Oregon, Washington, and many of the experiment stations. About 3,750 small lots of seed have been sent to these states and to New Zealand, Cape Colony, Madagascar, Transvaal, East India, China, Japan, France, England, and Switzerland, besides gifts to visitors from other parts of the world

Noxious Weed Introduced

Careful inspection of seeds brought into Monterey county by Horticultural Commissioner J. B. Hickman and his assistants was not effective in preventing a Monterey county farmer from buying alfalfa seed just over the line. The field on which this seed was planted has recently been found infested with Napa thistle, a noxious weed unknown here until this farmer introduced it. Mr. Hickman says that we surely need a State pure-seed law.

MORNING GLORY SAYS, "GOOD NIGHT."

(Written for Pacific Rural Press by O. G. Marlsbary, Tulare, Cal.)

Seeing in your issue of September 18 that a subscriber wants to know how to kill morning glory, my experience may be interesting. I absolutely killed all the morning glory in a patch about 40 feet square in the first season, though it was of old standing and accustomed to being fought. I had the blacksmith take a steel blade ¼x5 inches, four feet long, turn eleven inches at each end to a right angle with the 26 inches thus left as a cutting blade. I made two sled runners of 3x8's, four feet long, beveled at one end from both sides to a point, and with a handle fixed to the other end. An eight-inch notch, about four inches deep, with sloping sides, was cut into the under side of each runner at its center, and the section above the notch was strengthened by an iron plate. The eleven-inch ends of the cutting blades were bolted to these plates, angled backward and projecting about four inches below bottom of runners, so it runs that far under the surface when in operation. It is angled backward slightly to give a lifting, loosening effect on the soil and morning glory. The notch is put in to help avoid clogging the blade. Between the front ends of the sled, a rod of ¾ inch round iron holds them apart by means of a nut inside and outside of each runner. The operator stands on the sled and drives over the morning glory, cutting it four inches below the surface and lifting it up. After each trip lift out all vines and roots with a close-tined fork to prevent horses trampling the plants back into the softened ground. This work is best done in the spring shortly after an irrigation. I sowed my morning glory spot thickly to alfalfa the same day I worked it this way last spring. Probably barley or some other good grower would do in the fall.

Three or four weeks after working the ground this way it may be necessary to inspect it carefully for strips missed with the cutter. Morning glory will be coming through. Pull it out and you will have finished it; for the new crop will have a head start and the morning glory says, "Good night." The machine makes a very good general weed cutter and it cuts green standing cornstalks quite well. Turn it over when moving it from one job to another, so the blade will ride in the air.

Likes Our Rapid-Fire Gun.

To the Editor: I certainly enjoy reading your editorials, especially when you train your rapid-fire Wickson word-gun on a foe or critic. Your gun is certainly a silencer. Every time you pull the trigger down goes a foe. They go down as if shot with grape and canister. I herewith hand you a dollar to help your good work along. Always wishing you good luck and success, I am, with best wishes, your friend.—J. H. K., Arvin, Cal.

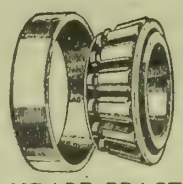
Do You Know—

that the freight carrying capacity of America's motor trucks is practically equal to that of all our railroads?

that the great majority of these trucks have Timken Tapered Roller Bearings at points of hard service?

that Timken Bearings are notable for their *compactness;* their *ability* to carry radial load, or thrust load, and all combinations of the two; and their *easy take-up* for wear?

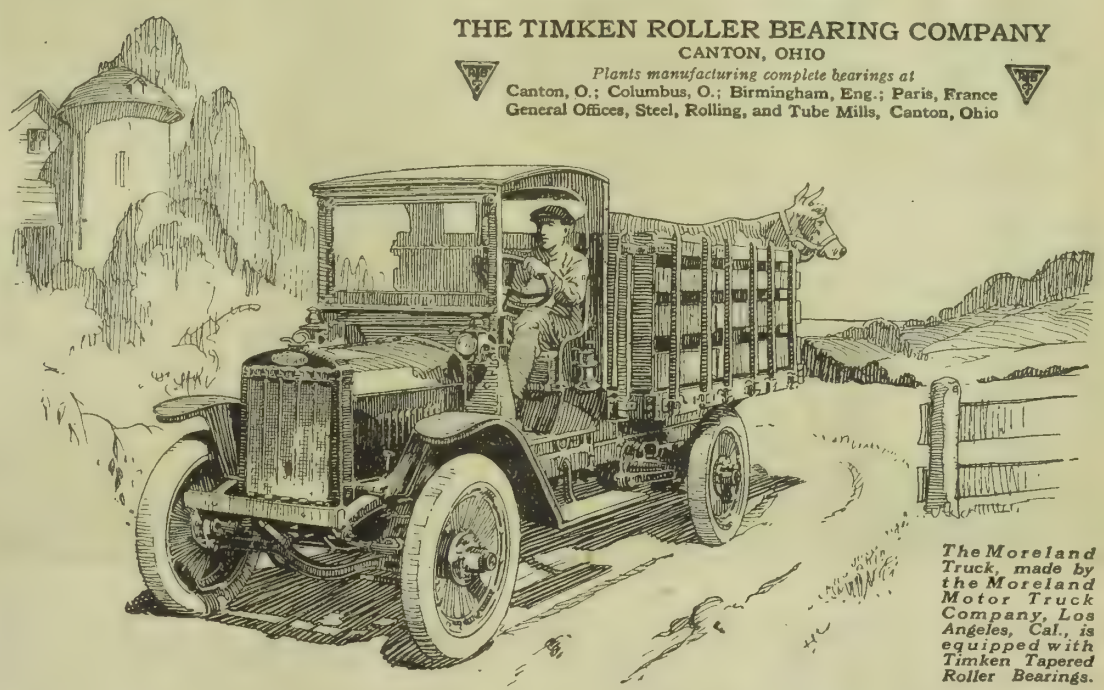
that Timken Bearings mean dollars and cents in the owner's pocket because they permit of *adjustability* instead of expensive *replacement?*



STANDARD PRACTICE

The use of Timken Tapered Roller Bearings at points of hard service in the great majority of automotive vehicles is proof of leadership established on the tapered principle of design, quality of manufacture, performance on the road, and service to the automotive industry.

THE TIMKEN ROLLER BEARING COMPANY
CANTON, OHIO
Plants manufacturing complete bearings at
Canton, O.; Columbus, O.; Birmingham, Eng.; Paris, France
General Offices, Steel, Rolling, and Tube Mills, Canton, Ohio



The Moreland Truck, made by the Moreland Motor Truck Company, Los Angeles, Cal., is equipped with Timken Tapered Roller Bearings.

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DO YOUR PLOWING

Cultivating, Discing, Harrowing and All Field and Orchard Work With Your

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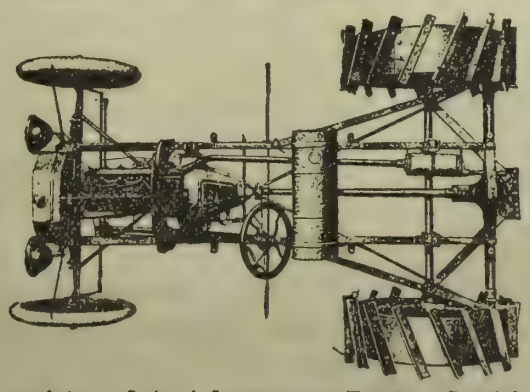

For converting any Ford car into a 3 to 4 horsepower Tractor—Special Pre-war Price, $100.00

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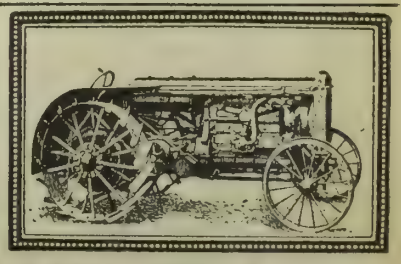


Allis-Chalmers
Farm Tractors

The 1830

A four plow tractor with 20% surplus power for ANY unusual load.

H. V. CARTER MOTOR COMPANY • *Distributors*
52 Beale St., San Francisco, Cal.

Mechanical Power on the Farm

HOW TO PURCHASE LUBRICANTS.

(By C. W. Stratford, Consulting Engineer Associated Oil Company.)

Prepared at request of the California Tractor and Implement Association, to increase public knowledge of the practical points of Power on the Farm.

The psychology involved in oil purchases is a subject of lively interest. There is the careful buyer and the careless buyer. The one who has acquired a clear conception of the real significance of oil tests as a guide for his selection, and the other who naturally has a disinclination toward the slightest consideration of such confusing technicalities. To the latter all oil is oil, and "Give me a quart of oil" represents the extent of his interest, for which omission he dearly pays. Carelessness in making oil purchases is happily on the wane.

In making a purchase, the usual sequence of ideas involves the brand, grade, appearance, and cold test of the oil desired. The brand or name of an oil secures the confidence of the prospective purchaser in the refiner or manufacturer through advertising, the advice of friends or others or chance use. The fact that the oil is manufactured from crude petroleum of paraffin, asphaltic or cyclo-naphthenic base is merely incidental to the brand. Good oils as well as poor oils —may be manufactured from petroleum of any of these bases. Regardless of brand, users have become accustomed to manufacturers arbitrary grades of their oils as light, medium, heavy, etc. In this connection, users should not overlook the fact that medium oil of one manufacturer may correspond to either the light or the heavy grades of another manufacturer or vice versa.

How Sticky Is the Oil?

It would be wiser for the purchaser to specify the viscosity rather than to place all dependence on the manufacturer's grading when making choice of an oil appropriate for his use. Viscosity is one of the most essential properties of a lubricating oil. The viscosity must be sufficiently low to allow the lubricant to reach all surfaces to be lubricated and at the same time be sufficiently high to hold the bearing surfaces apart and prevent metallic contact. With negligible exceptions, all hydrocarbon oils become thinner and less viscous when heated. Therefore, for the lubrication of internal combustion engines it is necessary to choose a correct viscosity for normal average operating temperatures.

Can't Judge by Appearance.

After fixing on a given brand and grade of oil, the user becomes familiar with the appearance of that particular oil, and if he secures good service with it, all reputable oils having the same appearance would in his judgment be classified as good oils. Any variation in appearance is at once noted with suspicion and considered by him as a probable indication of inferior quality. While useful to the experienced oil refiner as a general means of judging oils, appearance, that is, color by reflected or transmitted light, does not conclusively indicate quality or inferiority.

The temperature at which fluid oil becomes solid is often unduly dilated upon by oil salesmen as an essential property of an oil. It is only necessary that an oil possess a cold test below the lowest temperature at which an engine is started.

How Fast Does Oil Evaporate?

The temperature at which an oil gives off sufficient vapor to flash but not continuously burn when a flame is applied is known as its flash point.

When the oil has reached a temperature where vaporization is just rapid enough to support continuous combustion when a flame is applied, this temperature is known as the fire or burn point.

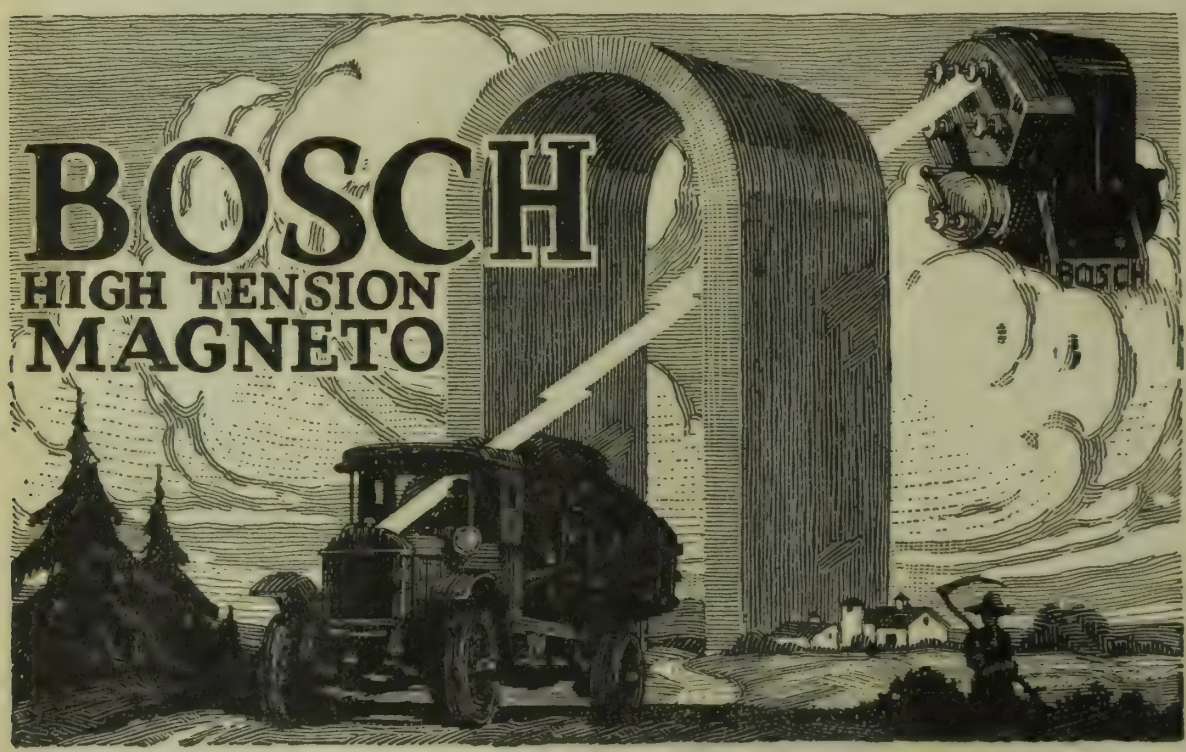
In judging fresh oils, the flash point is of importance; while in used oil the fire point gives an unvarying indication as to the extent to which the degree of decomposition has progressed. Used oils contaminated with fuel or other low-boiling-point hydrocarbons may have very low flash points, but practically unchanged fire points, indicating that the oils have decomposed but little if any.

Oil vapors escaping from the breather pipes of an engine in small or large volumes is a familiar sight of daily occurrence. Some oils resist the effects of heat and give off vapors at a very slow rate, while others readily evaporate at the same temperatures. This property of volatility—rapid or slow evaporation—is an unfailing forewarning of high or low oil consumption. The property of volatility may or may not be closely related to flash point. It is distinctly a duty of the refiner to manufacture oils having degrees of volatility appropriate to the service to which they are to be put.

With the first explosion, when the engine is started, decomposition of the lubricating oil—be it the best or the poorest—begins. The difference in the decomposition of good and poor oils is a question of rate only. The operating temperatures of internal combustion engines are the causes of this progressive chemical decomposition taking place within the oil, which results in a corresponding progressive alteration of the original properties of the oil. The products of decomposition consist chiefly of black carbonaceous matter in part or wholly soluble in the hot oil and is commonly called crank case sediment. When the oil cools, the sediment settles out. Again starting the engine and heating up the oil, most of it dissolves. Chemically, this carbonaceous matter is caused by partial oxidation and polymerization of liquid hydrocarbons into solid hydrocarbons. With a properly selected crude petroleum, the rate of oxidation which will occur in a finished lubricating oil made from it is usually determined by the refiners' manufacturing methods. In a well-equipped petroleum laboratory, the rates of evaporation and oxidation of oils can be determined by the refiner prior to their ultimate sale and use.

Good engine oils should not readily mix or emulsify with water. A thorough discussion of emulsions is beyond the scope of this paper. The general statement should be made, however, that oils which easily emulsify with water are subject to rapid decomposition and for that reason give less satisfactory service.

Simply stated, gravity is the ratio of



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Oakland	The Motor Car Elec. Co.	2324-30 B'dwy.
Oxnard	Herbert Hedges, Inc.	427 A St.
Pasadena	Guarantee Auto Elec. Wks.	97 W. Colorado St.
Red Bluff	Hartman's Electrical Machine Works	600 Main St.
Redlands	Ray Ignition Works	338 Orange St.
Riverside	Mission Auto Elec. Co.	450 Main St.
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A truck is made for profitable work—not play. The stalling of your motor car may cause inconvenience, but the stalling of your motor truck causes actual financial loss.

If it refuses to work—on the farm or on the road—it not alone fails to do its job, but it wastes your time and causes expense. It may also result in damage to the load through decay, rain or exposure.

Your truck, like your tractor and stationary engine, must more than "pay for its keep." And, as ignition is the chief factor in engine dependability, it is important that you use Bosch Magneto Ignition.

Nearly four million users have learned that Bosch Ignition gives utmost dependability, power and economy in an engine. Be positive about dependability; insist that your engine be Bosch Magneto Equipt.

A Bosch Service Station can install a Bosch Magneto on practically any gas engine.

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the weight of one substance to that of a standard like water. It is a property of oils which has no bearing on the efficiency of lubrication and has no significance in the selection of lubricating oils.

Carbon Dissolves in Oil.

The maintenance of high efficiency in the lubrication of automotive engines is not nearly so difficult of attainment as it appears at first glance. This remark must naturally be qualified with the assumption of good mechanical condition of the engine and the use of good oil of a suitable grade. Filling the crank case with oil up to the proper level is a detail of operation that should receive more than passing attention.

Engine tests on the test block, as well as engine tests in motor vehicles and farm tractors, have demonstrated the fact that any surplus oil filled into the crank case above the normal level is soon lost through leakage from the case or past the pistons and through the cylinders. On the average, the time required for such loss rarely exceeds one-half hour operation. Not only is the surplus oil wasted, but it gives voluminous deposits of carbon in the cylinders, fouls the ignition plugs, and soon clogs up the muffler.

It would be difficult to attempt to fix a definite time limit to the operation of an engine before the oils should be drained out and replaced, because of the great variation in the use to which different types of automotive engines are put. Engines which operate continuously at nearly full load, use more oil and alter the condition of the lubricating oil at a more rapid rate than engines in pleasure cars which operate at a fraction of their full load rating. Therefore, experience will furnish the best information as to the proper time for drainage. Engines should always be drained when the oil is at its highest temperature in order that the carbonaceous matter may be carried out in solution. While not absolutely necessary, it is good practice, when convenient, to also flush out with kerosene the sediment clinging to the sump after the old oil has been drained. Care should be used in this flushing and no pools of kerosene allowed to remain in the oil ducts, splash pans or sump before refilling with fresh oil.

The lubricating efficiency of fresh oil is maximum, but this lubricating efficiency falls off slowly or rapidly depending upon the severity of service. The useful life of engine parts subject to the wear of friction may be more than doubled, by the use of good judgment in the frequent draining of oil and refilling with new.

ELECTRICITY IN PLACE OF OIL.

California produces about 20 per cent of the total oil of the world and about 28 per cent of the total oil of the United States, said State Power Administrator H. G. Butler recently. No single community uses oil in such large quantities in proportion to population as California. We have over 500,000 motor cars. We run trains with oil. We use it in all large heating plants. We use it for tractors and stationary engines. The electric companies themselves are using a third more than they did five years ago. The need of substituting any other available source of energy in place of oil unquestionably applies with more force to California than to any other State in the Union or to the country as a whole. Mr. Butler then referred to the enormous waste of water power which could be generating electricity.

ITALIANS USE AMERICAN TRACTORS.

During the war the Italian Government bought 6,500 American tractors and put soldiers at work plowing from farm to farm as plowing was needed. Many of the soldiers were not mechanics and the tractors were badly abused. But when peace came, the Government began selling the tractors to farmers on a liberal credit system and 3,500 of the original 6,500 are now being operated by private owners

Clean Furrows

BEHIND P&O Little Genius Tractor Plows you will always find clean, smooth furrows of uniform depth and width, with weeds and trash tucked snugly under the freshly-turned blanket of soil.

Bottoms that scour under adverse conditions; quick-detachable shares that enable you to replace dull shares with sharp ones in a hurry; a positive power-lift that gives high level clearance—plows are raised high on all three wheels, ridding bottoms of trash; sure penetration, the whole weight of the plow being utilized to force the bottoms into the soil—these are some of the features that account for P&O Little Genius satisfaction and clean furrows.

Aside from **P&O Little Genius tractor plows,** which are made in 2-, 3-, and 4-furrow sizes, the P&O line contains Mogul power-lift tractor plows ranging from 4- to 8-furrow sizes, tractor grub breaker, and riding and walking plows of many types—a plow for every soil and for every plowing purpose.

Two famous reputations—P&O and **International Harvester** — stand back of every P&O plow and are your assurance of efficient, satisfactory service from these plows and dependable after-sale service from your nearby International dealer and from us at all times, in any emergency.

Anticipate your spring needs *now.*

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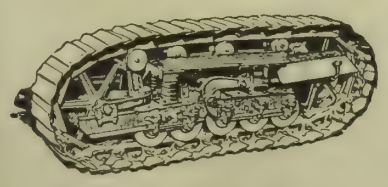

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The "Caterpillar" Tractor's track provides a sustaining surface so great in area that the "Caterpillar" Tractor's ground pressure to the square inch does not exceed that of a man.

Avoiding the concentration of ground bearing surface on a small area also prevents slippage. Slippage, a dangerous thief of power in most tractors, is unknown to the "Caterpillar."

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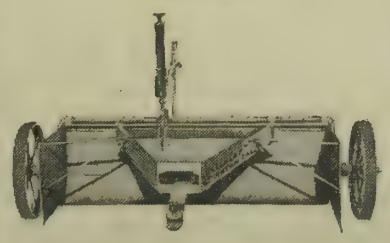

The **PURVIANCE** has made good. Sold on money-back guarantee. We will ship anywhere C. O. D. If not entirely satisfactory return to us within 10 days, freight prepaid, and full purchase price will be refunded. Order a **PURVIANCE** now and get your leveling done on time.

6 Ft. $225.00 F. O. B.
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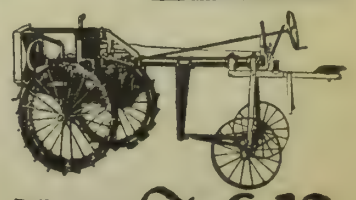

The **6-12**

Pulls two 12 - inch plows, a two-row cultivator with 26½ inch clearance, mower, rake, binder or any standard four-horse implement. Delivers 12 H. P. at the belt—a one man tractor with any implement.

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Tuberculin Testing Cattle Under State Law.

(Written for Pacific Rural Press by Dr. J. P. Iverson, State Dept. Agriculture.)

The Pure Milk Law enacted in 1916 declares that it is unlawful for any one to sell, expose for sale, or cause to be sold, any milk from cows that have not passed the tuberculin test, until it has been pasteurized by the holding process at a temperature of not less than one hundred and forty degrees Fahrenheit for twenty-five minutes. In other words the dairyman may have his cows tuberculin tested (removing any reactors), or he must pasteurize the milk as defined by the holding method, but pasteurizing the milk costs him money. Of the two, testing generally is the most economical, provided he is careful about buying cows only from herds in which no reactors or very few have ever been found.

The tuberculin test is made free of all cost to the dairyman, but he is required by law to make a written application to the State Department of Agriculture, Division of Animal Industry, after which an inspector will call and do such testing. It may happen that an application is received after the inspector has finished his work in the particular district; thus, it may be six months before the herd is tested, during which time the law permits the milk to be sold.

It occasionally happens that a person who does not believe in the tuberculin test is opposed to having the work done, arguing that the test may be detrimental to the animal. This statement, of course, is absurd, since after testing and retesting hundreds of herds, no such case has ever been found.

Considered Highly Dependable.

The reaction to the tuberculin test is known as an anaphylactic one and is not peculiar to this test alone. The phenomenon of the protein shock is used in other ways and is considered highly dependable. If a guinea pig is given a small injection of egg white (diluted), he shows no indication of any illness or change of disposition, but goes on as happy as ever, but three weeks later, if he is given a second injection of the diluted egg white, he shows within a few minutes a peculiar nervousness, scratches his head and body, lays down and rolls, breathes rapidly, and may die within a few minutes. If the guinea pig does not die he is then immune to the egg white protein and other injections will have no further effect. The tuberculin test is the same phenomenon only on a smaller scale; the body of the tubercular cow is being saturated with the protein of the tubercle bacilli. When a small amount of tuberculin (extracted bodies of tubercle bacilli grown artificially) is injected into the skin, a local anaphylactic reaction occurs—reddening the skin, and infiltration with serum, making a small swelling that varies in size from a pea to a walnut. If larger amounts of tuberculin are injected subcutaneously, the cows show general symptoms such as rise in body temperature, lack of appetite, and general depression.

Statistics show that of the babies who die in many hospitals a large percentage succumb as a result of intestinal tuberculosis. Physicians who have had an extensive baby practice will tell you that many babies who die of other diseases may also show lesions of tuberculosis in the intestines. Lesions in such a location in babies that have had no other food than cow's milk can only be accounted for in one way, especially when it is shown that practically all of these lesions are of the bovine type.

I am sure that no thinking person will under-estimate the need of careful supervision of our milk supply. If milk from known tuberculous cows is to be permitted to go on the market after pasteurization, then pasteurization must be done carefully or it gives a false sense of security. If milk is to be sold raw, the cattle must be tested regularly and the reactors removed.

Dairy Cattle Population.

The conclusion should not be drawn that every herd of cattle in the State of California is tuberculous. On the contrary, the results of the past four years' testing show that of more than 26,000 herds tested over 20,000 were clean; showing, therefore, that in the remaining approximately 6,000 herds were the tuberculous cattle which had made our general average for the state seven or eight per cent.

The following figures show the results accomplished by this work since the tuberculin testing feature of the law became effective: Number of cattle tested, 220,323; number of cattle free, 197,009.

Statistics compiled by the State Department of Agriculture indicate that our dairy cattle population in California is about 750,000 head, which is many times larger than the population in any of our neighboring states. Our records show during the five years that the tuberculin testing provision of the law has been enforced, our inspectors have tested about 250,000 cattle, an average of about 60,000 a year, a feat that is worthy of commendation. All raw milk dairies in the state are now regularly tested, and it is worthy of note that probably no other state in the Union can boast of a similar accomplishment

Silage Crops in Southern California

(Written for Pacific Rural Press by R. E. Hodges.)

[Dry years are not without benefit although at the time of their occurrence it is hard to see the silver lining of the dark cloud of adversity. Many lessons are taught the stock man about the feeding value of otherwise neglected crops. The silo has made it possible to utilize plants that would not be palatable otherwise. The following articles note at one instance at least the use of a crop that could hardly be fed at all without disastrous results.—Livestock Ed.]

Bean Straw Silage for Cattle.

Small-white bean straw is dangerous if fed dry to cattle; but it becomes a safe and palatable maintenance ration for stockers if properly siloed. This is the experience of the Hollister Estate Co. in Santa Barbara county, as stated by Ranch Manager O. A. Collier. During a dry year, when some loss was experienced in California from lack of feed, the Hollister Estate lost some also. But they had grown a crop of "bluepod" small white beans and they fed some of the threshed straw to their hungry cattle. They lost as many cattle by feeding bean straw as they did by starvation, according to Mr. Collier.

Some barley straw and some brush browsing went along with the bean straw. The cattle soon developed looseness of the bowels; but peculiarly in 35 or 40 carcasses inspected by Mr. Collier, in all of them death was due to intestinal obstruction caused by masses of undigested bean straw four to six inches in diameter or even bigger. This is a totally different effect from that gained by feeding dry lima bean straw, which had fattened cows while they were milking, and is commonly used for stock feed in the southern coast counties.

Last year another effort to use bluepod straw proved more satisfactory because it was ensiloed. The dry straw was run through a cutter like corn and about twice as much water was used as corn would need. About 40 days passed before any of it was used. The juice leaked out around the silo and a few weanling calves drank the black liquor with impunity. They were kept sixty days on the bean straw silage alone and did fine on it. But a lot of stocker cattle four to six years old acted differently. They were fed corn silage from the top of the silo until that was gone. Then they ate about nine tons of mixed corn and bean silage. which seemed to suit them equally well. But shortly after they went into the pure bean-straw silage they began to gaunt up. They ate it well enough and no disorders developed, but there was nothing fattening in this feed. This year the ranch produced no beans and the silage is not deemed worth buying straw for the purpose. It would pay, says Mr. Collier, if there were nothing else for the cattle to eat.

The Rancho San Julian finished filling a silo with dry small-white bean straw to which "lots of water" was added, so it made silage all right. But Ranch foreman, George Gauld, said it did not smell very good and the cattle did not eat it well. A great deal of it was simply thrown out into the barnyard to be picked over by the cattle.

Sorghum Silage for Beef.

Silage for beef cattle is proving popular and profitable with many of the leading cattlemen of the State. Among these are the Greening boys, who have large ranges in Southern California, and who feed cattle almost by the train load at Norwalk in Los Angeles county under the name of the Rock Springs Land and Cattle Co. According to Paul Greening, they will have at least 2500 tons of silage this year. This is composed mostly of Indian corn from seed of their own selection; but about 50 acres, mostly of Texas Seeded Ribbon sorghum cane were produced this year to mix about 30 per cent with the corn. The sorghum cane showed a thick stand of tall stalks heavily bent with brownish black seeds when seen by the writer late in September. It was the best variety of four that had been grown on the ranch in 1919 as a test. Some Texas Red Top cane was grown this year to mix in. The cane last year yielded twenty tons per acre as against twelve tons of Indian corn. Its heads grow so heavy that the tall stalks can scarcely stand in a heavy wind. Otherwise, it is well to let the cane ripen well; for even then there will be a great deal of sweet juice in the stems. It mixes well with the dry fodder from a strip of white Dent Indian corn planted primarily to produce seed for next year's crop. This is from selected ears, is planted thinner than the corn for silage, and is suckered. When about ripe, it is shocked and cured. After the seed ears are picked off, the remainder goes into silage. Prolific White Dent and Eureka corn are grown for the Indian compart of the silage on this ranch.

LIVESTOCK NOTES.

Harry F. Robb, for many years with Milbrae Dairy, is now in the employ of Faxon & Montague with headquarters in San Francisco. This firm has ranches at Orland, Colusa, Artois, Grimes and Visalia. Much of their holdings has been devoted to barley and rice, but with 5,000 acres under irrigation, an alfalfa acreage of considerable area will be developed along with a market hog business of no mean proportions. Mr. Robb is an enthusiastic believer in livestock and it would not surprise his friends if the ultimate production on these ranches would not tend in this direction.

Cattlemen who are obliged to drive bands of cattle on the highways of the State in taking them from one pasture or range to another or to market are finding it increasingly difficult, owing to removal of fences along some orchard lands. The cattleman is supposed to be liable for damage done to property outside the highway limits not protected by a fence. The cattleman stands to lose, under present conditions, the profits on a bunch of cattle in a few minutes and those conditions should be remedied.

The American Royal Livestock Show staged at Kansas City, Nov. 13-20 reports 60 Hereford exhibitors this year with 554 cattle in the breeding classes and 50 steers in the fat classes. This is an increase of 100 head over the show of last year. Of the animals in the breeding classes 224 are bulls and 330 are females. In the carlot classes there are 4000 high grade Whiteface feeders, calves and yearlings. A sale of high class breeding Herefords will be held on Nov. 19 under the auspices of the American Hereford Cattle Breeders Ass'n.

The American Aberdeen-Angus Breeders' Association is again importing a foreign judge to pass upon the breeding cattle at the coming International Livestock Exposition, to be held at Chicago, Nov. 26 to Dec 4, next. Mr. John Philip, of Dandaleith, Craigellachie, Scotland, who last year judged the Aberdeen-Angus at Argentina's great show at Palermo, will do the work for the Yankee Doddie men at Chicago. This is the third successive year that American Association has called in a foreign judge to place the breed award.

READY for MARKET

with firm, solid, healthy weight —and ready sooner, because of more lusty growth—when the growing pig is fed.

Lactein

Health for the Sow and for the Pigs—

Feed LACTEIN to the sow—and start the foundation of healthy, husky, free-from-disease pigs. LACTEIN so thoroughly cleanses the sow's system, and furnishes the means of perfect digestion of all food. In this way, the sow receives the full benefit from all food — LACTEIN also supplies the element that prevents pig eating. Free the sow from all disease and the pigs will be most healthy. LACTEIN also enables the sow to produce more milk for the pigs. Weanling pigs should be put on LACTEIN.

YOUR DEALER CAN SUPPLY LACTEIN—AND YOU'LL FIND IT A MOST PROFITABLE INVESTMENT IN YOUR HOG RAISING OPERATIONS — START TODAY WITH THE USE OF THIS PROCESSED CONDENSED BUTTERMILK.

LACTEIN CO.

Main Office and Factory, MODESTO, CALIFORNIA

K12

CURING HAMS AND BACON.

In response to requests for methods of curing pork we republish the formula given below.—Livestock Ed.

A formula given in "Southern Pork Production," by Prof. P. V. Ewing, of the Texas College of Agriculture, is perhaps as well adapted to California conditions as any. We give it below:

"For every 100 lbs. of meat, 8 lbs. of clean rock salt, 2½ lbs. sugar, 1 quart sugar cane molasses, 2 ounces baking soda (saleratus) 1½ ounces saltpeter, dissolved in 5 gallons of soft water. Put in a kettle or other vessel, and bring to a boil, skimming until clear. Place hams and bacon in the receptable, placing a weight on them so that they cannot float in the brine. When the brine is cool, pour over the meat, being sure that all is covered."

In the above formula the molasses may be omitted, but many prefer the meat with it in. The recipe calls for soft water, but tons of meat have been cured successfully with hard water. Watch the meat to see if there are any signs of fermentation shown by froth on top of pickle or ropiness in the brine. In warm weather this may occur. If it does show, either the brine must be boiled or new brine made. Six weeks is about the right length of time to keep the meat in the brine, although very large hams and shoulders may be left in a week or two longer.

Smoking.

If the meat is to be smoked, it should now be taken out of the brine, and hung up in the smoke house, and allowed to drain a day or two before commencing to smoke it. Care must be taken to prevent flies from depositing eggs and worms developing. Smoke with apple, prune, or apricot wood, or corncobs, avoiding all pitchy, resinous woods. The amount of smoking depends on the taste. Judge by the outside appearance or by cooking and tasting some of the meat.

In the colder climates the meat may hang in the smokehouse until warm weather, but in the Southwest it should be taken down and, according to Prof. Ewing, before quoted, painted with a mixture of molasses, 9 parts, ground black pepper, 1 part. Then wrap closely in heavy wrapping paper, after which it should be placed in a heavy muslin or paper sack, tying so that no insect can possibly gain entrance. Now the package should be completely and thoroughly covered with a mixture of 50 parts powdered barytes, 1 part each of glue and lead chromate, and 5 parts flour. Make the flour into a thin paste with water, then add the dissolved glue and chromate, and finally adding the powdered barytes. The different pieces should now be hung in a cool, dark place and so that they do not touch.

CALIFORNIA LIVESTOCK WINS.

The Western Royal Livestock Show at Spokane, Wash., has put itself "on the map" this year by giving an exhibition of purebred animals of all kinds second only to the Chicago International. Herds from California, Colorado, Utah, Montana, Oregon, Idaho, and Washington each contributed their quota resulting in a truly wonderful aggregation.

California Shorthorns were "in the money" in several classes. T. S. Glide's Little Sweetheart was first in "cow with calf at foot" class but failed for grand championship honors being defeated by Hercules Matchless, exhibited by Day and Rothrock Mr. Glide also had 2d in aged herds.

Pacheco Cattle Co. of Hollister had junior champion female in the senior yearling heifer White Pacheco. They also had first on senior female calf in Sultan's Dale, first on young herd and second on calf herd.

California cattle seem to give a good account of themselves wherever they go and we expect to hear even a better report from the Pacific International.

NOTED HORSEMEN MEET.

Horsemen from many states will be present at the annual meeting and banquet of the Horse Association of America, to be held December 1st in Chicago, during the International Live Stock Exposition week.

In less than ten months' existence, the Horse Association of America has grown to a strength of over 1,400 members—individuals and firms directly and indirectly interested in horse production and use. Its primary aim is to encourage both the breeding and use of horses of all types. So meritorious has been the service rendered that the Association has the official endorsement and support of each of the breed registration societies, national and state veterinarian associations, the National Team and Truck Owners' Association, the National Stock Yards Mule Exchange, and the American Remount Association.

SAN FRANCISCO LIVESTOCK SHOW.

Acting Mayor Ralph McLeran addressed the Shorthorn breeders at their annual meeting last week on the subject of a livestock show in San Francisco next year. He assured the breeders present of the anxiety of the Muncipial Administration's desire to co-operate with all livestock men in "putting over" a show next year. He even went so far as to say that the city had a Bay view site in contemplation that had excellent transportation service and in many ways. A little co-operation of the livestock men of California and adjoining territory and the city of San Francisco would put over a show the equal in a short time of any in the country.

Swine and Swinemen.

The annual meeting of the stockholders of the National Duroc-Jersey Record Association will be held at the offices of said Association in Peoria, Illinois, December 3, 1920, at 9 a. m.

R. K. Walker of the Diamond Bar Ranch at Spadra reports the sale during the Los Angeles Livestock Show of their State Fair second prize Duroc senior boar pig Performer's Model and three fall sows, one of them bred to the Ace of Pathfinders. They went to the Brook Hollow Farm of Hollister at a fancy price.

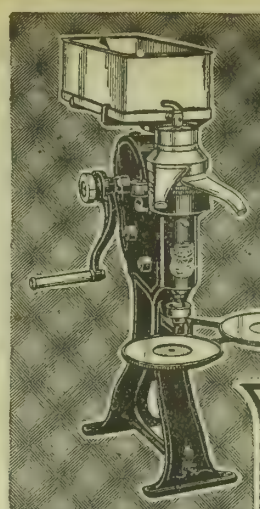
W. E. McManis has recently taken charge of the Poland Chinas and Duroc-Jerseys owned by C. N. Clark, Jr. Their place east of Modesto will be known in the future as the Rialto Hog Ranch. Mr. McManis, who used to raise hogs back in Missouri, is planning to fit a few choice ones for the shows next year.

There are forty boys and girls in Santa Barbara county now who are entering purebred Poland China gilts in a litter contest and there will be probably ten more enter. They have some very promising pigs which will be the foundation of some purebred herds in the county in which at present there are but two or three herds of all breeds.

Out of 247 head of very high-class sows, the Diamond Bar Ranch have selected 48 head to make up their purebred herd. The rest will make up their pork herd, and in the case of the better females to be sold as unregistered breeding stock, competent authorities say there is no herd in the country that could pick 48 head of such good sows from their herds.

Prospects should be of the best for swine sales from now on. Feed is low enough so that pork can be produced profitably at present prices for pork, especially if the hogs fed are of the kind that will be sold at the Poland China sale staged by Marshall & Son at Santa Rosa on Monday next. The offering is of the type that have become so popular in the last few years.

Beans form an important part of the hog ration on Brook Hollow Farm near Hollister. They are cooked in a fireless cooker as noted elsewhere, then dumped into a wagon with two sacks of home-ground alfalfa per sack of raw beans. A bucket of Hawaiian cane molasses diluted with a bucket of water is poured over this, and the whole is mixed into a palatable growing feed for young hogs.



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Four Daughters of the above Cow, one with a splendid yearly record
Daughters of Prince Gelsche Walker Korndyke, including a 27-pound 3-year-old
Daughters of King Aaggie Mead, full brother to Aaggie Acme of Riverside 2nd

Females bred to SIR AAGGIE DE KOL ACME, SIR AAGGIE MEAD, SIR PIETERTJE ORMSBY CANARY, KING SEGIS ALCARTRA PRILLY, and other sires of outstanding merit.

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Registered Holstein Friesians
Prize winners at all the Shows. Inspection invited and satisfaction guaranteed.
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Are you getting them? Calf profits mean more to you now than ever before.
BLATCHFORD'S CALF MEAL has been known since the year 1800 as the complete milk-substitute. Costs less than half as much as milk—prevents scouring—promotes early maturity. Sold by dealers, or direct from us.
Write for New Data *See actual figures showing how to increase your calf profits.*
COULSON CO. - - - Petaluma, Cal.

The Latest in Cow-Testing Associations

(Written for Pacific Rural Press by Ralph Newman.)

He must have peculiar eyes who does not see that the cow-testing association has done much to improve dairy stock, and who would assume the role of knocker toward any kind of a cow-testing association. Any kind is vastly better than none.

On the other hand, he must be an optimist of the optimists who does not see that the thing as we have known it has not gone as far as we had hoped it would go by this time.

The trouble has been that we have allowed our cows to be tested, have paid the bill (that is most of us have), and have stopped there. Here and there a man, with the records in hand, has conscientiously weeded out the poor cows, but many of us "have been too busy" to study the records and have made little or no use of them. Much of the culling of the past year has been done from lack of feed rather than from definite knowledge that certain cows were boarders. Now and then a man, generalizing from the testor's figures, has worked out a better system of caring for his cows, but many of us are still trusting to nature to balance the ration. Once in a while a man is found who knows what it costs to feed his cows, but more there are who couldn't tell on a bet.

To be sure, all this is the dairyman's fault, and not that of the tester. What shall be done about it? Give the dairyman up as a bad job and set the tester doing something else?

There is one association anyway that says No! Maybe the fault isn't all the dairyman's. Maybe the cow tester should do something beside just test cows. Maybe he should also test dairymen. Maybe if he were himself an expert dairyman, and had time, he could help the dairyman to interpret the records, inspire him to "get shut" of boarder cows pronto, advise him about feeding methods, and assist him in getting a line on production costs.

With these maybes in mind the Sacramento-Yolo Association is launching a new idea in testing associations. Not just theoretically, but in actual practice the cow tester is to become a regular dairyman's advisor. He will test the cows; he will tabulate the results of the tests; he will take the tabulated results to the individual dairy, and, with the dairyman, spot the cows that should go and show why so plainly that they will go. He will be an expert feeder and his knowledge will be at the service of the men he serves. He will have had experience in figuring production costs and will assist the individual dairyman in working out these problems.

In order that he may render this service, he will be limited to 650 cows and to dairymen wise enough to want his services, brave enough to carry out the mutual findings, and progressive enough to pay for the work. Four dollars a year per cow, payable in bankable notes, signed with the contract, due quarterly, and collectable at the bank on presentation—that's the way it will be done.

The dairy advisor will spend about half his time testing and the other half carrying out the rest of the program. The man has been obtained, the cows are about all signed up, and probably by the time this is in print, the work will be on. Keep your eye on the cow-testing association backed by the Sacramento and Yolo County Farm Bureaus, and wish it well if you can't do anything else to help it along.

Calco Farm Products make and save you money - -

—because Calco Farm Products, made of galvanized Armco American Ingot Iron and cast iron, **last.** They resist rust, and hogs or stock cannot chew them to pieces.

—because, being metal, they are easily washed and cleaned. There are no cracks in which germs can hide, and clean feeding and watering equipment make sure a big animal—and more profit.

—because they save the time of yourself and costly farm help. The watering fountain—the automatic grain feeder—save hours—and money.

—because these feeding products are so constructed that they save grain and other feed—another vital saving advantage.

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The Calco Line includes metal feeding and watering tanks and troughs for hogs, cattle, horses, sheep and poultry. Made from pure and lasting Armco-American Ingot Iron.

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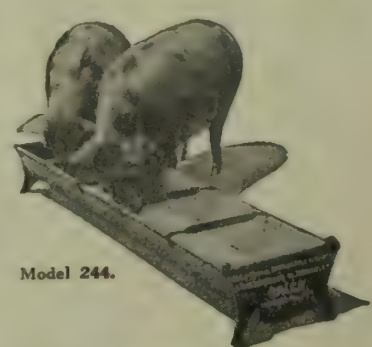
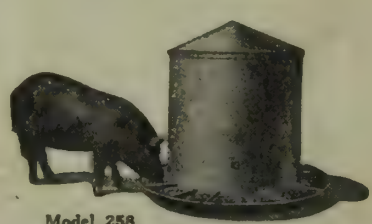
Model 200
Calco Stock Watering Trough

Model 257
Calco Sheep Trough



Model 244.
Calco Hog Trough



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HAWAIIAN LIVESTOCK CONDITIONS.

In a recent letter from Prof. G. H. True, who is sojourning for a time in the Hawaiian Islands, judging stock at the Maui Fair and visiting ranches, he comments upon livestock conditions as he finds them.

One island in particular of some 90,000 acres, Prof. True remarks, will probably carry 10,000 when fully stocked, but 8,000 head, under present drouth conditions, are having none too good picking He further says in regard to ranching there: "You would be surprised at some of the methods of development of the ranges. Cactus—the real spiny sort—is encouraged and in some cases planted. It occupies some of the best land on the island and there are hundreds of acres of the living barbed wire growing twice the height of a man on horseback."

The grasses being put out on the ranges are not common to the main land, but mostly of origin south of the equator, Rhodes grass being one of them.

"In the past the island was heavily stocked with sheep, the last of which are now being hunted as game. Before the sheep, were goats, I am told, and they were hunted to extermination. What denuded the once heavily wooded island and depleted the once dense population the present inhabitants do not seem to know.

"The county fair at Maui was a great one, the result of the fine spirit of co-operation that in the Islands is commonly characterized as the Maui spirit. . . . The show of Herefords was particularly good and a California bred bull was champion, beating high-priced Parker Ranch and Mousel bred bulls. The Ayrshire show was strong and a cow sold by McFarland won, as did a Napa Hospital bred cow for the Holsteins. A Jersey cow bred at the University of California and a Guernsey, bred at the University of Hawaii, also were placed at the top.

"Among the hogs only Berkshires were shown, and it was a strong show, including over 30 pigs entered by pig club boys.

"No sheep were shown. Evidently the sheep business has been overdone in the past, to the detriment of some of the lands. With proper care they must come back in a degree and share with the cattle now being rapidly improved the regeneration of the ranges."

In closing, Prof. True speaks about a plant that had been introduced as an ornamental having become one of the worst pests on the Islands. It was all right in a pot or garden, but is causing much trouble since running wild.

RESULTS OF LIVESTOCK PREFERENCE VOTE AT DELHI.

In a communication from Supt. Packard of the Delhi State Land Settlement, he gives the results in detail of the vote by the settlers to determine the kinds of dairy cattle and swine that should be adopted at the Settlement. Also as to whether cattle purchased should be free from tuberculosis and subject to a periodical test thereafter.

The vote showed about one-third of the settlers had been dairymen previous to coming to Delhi, and a very large majority expect to follow dairying as a business on their allottments.

All except two were in favor of having one breed of dairy cattle and a large majority signified their preference for the Holstein, with the Jersey second and Guernsey a bad third. The Jersey received a faborable vote as the best family cow.

The vote on swine showed a large majority in favor of the Duroc-Jersey, the Poland China second and Berkshire third.

It was decided by an almost unanimous vote to purchase only cattle that had been tested for tuberculosis and found not to react. Also that all cattle owned at the Settlement should be tested for tuberculosis at regular specified times.

MORE CORN ROUGHAGE IN THE DAIRY RATION.

The feeding value of corn silage, corn fodder, and corn stover in the dairy ration is not sufficiently appreciated, especially in those regions where legumes do not thrive, says a specialist of the Dairy Division, United States Department of Agriculture. A recent study of records from cow-testing associations points to the conclusion that the growing of more corn roughage and less non-leguminous hay would increase the profitableness of the ration.

In all sections where legumes thrive it is of course, advisable to grow them, as their value is well recognized for feeding dairy cattle. In fact, from a study of cow-testing association reports it would seem that even grain does not fully take the place of good legume roughage. It is in those sections where legumes do not thrive, however, that dairymen may well consider the growing of more corn roughage and less non-legume hay.

Cattle Thrive on Corn Alone.

Few plants apparently contain all the substances required to nourish properly the animal body, but in the light of present knowledge the corn plant seems to be one of these. It is possible to balance a ration from corn products only that will enable the animals to thrive and reproduce with apparently no ill effects. This is not the case with many other crops. Corn, then, has unusual feeding properties.

Experimental work done at the South Carolina and Pennsylvania stations has shown that it is practical under some conditions to feed dairy cows on a ration of corn silage and grain without hay. Such a ration has been used successfully in feeding beef steers. Reports from one cow-testing association in a non-leguminous region having an unusually high income over cost of feed and large production per cow is in a district where the dairymen have practically discontinued the feeding of hay, but instead feed silage and corn fodder. In this association the grain ration is also composed largely of corn by-products.

No matter what other conclusions may be drawn from the evidence available showing the value of corn fodder and corn silage as dairy feeds, it seems certain that the corn plant provides an excellent roughage.

Hay is often damaged very much by becoming over-ripe. Storms damage it seriously. The feeding value of corn is not damaged by its becoming mature, and if it is properly shocked storms do little damage to it.

There are undoubtedly many dairymen who can well consider the wisdom of reducing the amount of non-leguminous hay produced, of increasing their pasture, and of growing more leguminous feed, corn fodder, and silage to feed their dairy cows.

CALEDONIA FARMS SALE.

Last Thursday at the Caledonia Farms' sale at West Sacramento, forty-eight head of Shorthorns sold for an average of $315.40. The top $950 was paid by F. L Gordon of Suisun for Lustrous 2d, a five-year-old roan cow out of Scottish Lustre by Prince Valentine She had a white bull calf at foot, born January 1, 1920, and sired by San Benito King. It was a buyers' day. Considering the quality of the offering and their breeding they should have sold for more money.

In point of numbers, H. C. Muddox and Son of Sacramento led the list with nine. Geo. H. Sawyer of Waterford and R. P. Cornell of Galt, each purchased six head and Howard Vaughn of Dixon bought five.

The new recruits into the Shorthorn ranks at the sale included Geo. H. Sawyer of Waterford, J. Boucher of Danville, Howard Vaughn of Dixon and E. L. Franks of Chico

Hon. Ben F. Rush of Suisun, newly elected president of the California Shorthorn Breeders' Association, was introduced at the opening of the sale and made a short talk to the breeders present.

"Silent Alamo" Farm Light Plant
—furnishes electric light and power for the country home. Runs without vibration. Write for catalog.

"Duro" Water Systems
The all-round water system for the household. Furnishes water under pressure at small cost. Send for catalog.

"Universal" Milking Machines
—enable dairy farmers everywhere to add hours to the day for other duties. Write for catalog.

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Horizontal Centrifugal pumps, Vertical Centrifugal pumps, Direct-connected Centrifugal pumps. Write for catalog.

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Get 25 per cent more milk, save feed, and save labor, by making your cows comfortable with Louden Equipment. Write for catalog.

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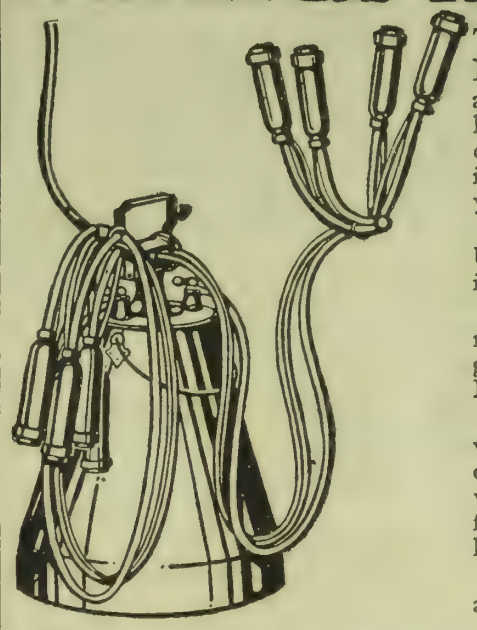
Cut out this ad, sign your name, check the catalogs you want, and mail to us.

Universal natural milker



The Universal Natural Milker enables thousands of dairy farmers to add hours to the day for other duties—and to put extra profits into the bank. Why not you?

Two times a day, every day, Universal is on the job saving time.

Cows like its gentle alternating action and the farmer gets more milk. That means MORE PROFIT.

Milks two teats at a time, while gently massaging the other two as they refill. Universal rubber-lined teat cup fits any cow, and is easily kept clean.

This saving to you begins at a very small cost.

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As a Human Remedy for Rheumatism, Sprains, Sore Throat, etc., it is invaluable. Every bottle of Caustic Balsam sold is Warranted to give satisfaction. Price $1.75 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address
The Lawrence-Williams Co., Cleveland, O.

THICK, SWOLLEN GLANDS
that make a horse Wheeze, Roar, have Thick Wind or Choke-down, can be reduced with

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also other Bunches or Swellings. No blister, no hair gone, and horse kept at work. Economical—only a few drops required at an application. $2.50 per bottle delivered. Book 3 R free. ABSORBINE, JR., the antiseptic liniment for mankind, reduces Cysts, Wens, Painful, Swollen Veins and Ulcers. $1.25 a bottle at dealers or delivered. Book "Evidence" free.
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For Size, Bone and Quality
More is required of Horses than ever before hence the need of more size, weight and power. Large geldings never were higher. Shire Geldings usually top the market. Use Shires to raise larger and better horses.
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Made where the cocoanuts grow.
Sun-dried—not smoky or rancid.
Carried in modern ventilated steamers. Shipped in solid cakes.
Inspected and ground in San Francisco

Has your past experience in feeding cocoanut cake meal been satisfactory?

We particularly request a trial of our meal by those who in the past have been disappointed.

Your feed dealer may not have our brand in stock but can obtain a large or small lot promptly.

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GUARANTEE: We will refund money in every case when STERILOID FAILS to make good. PRICE, $1.00 plus 4c tax. Mailed Postpaid, in plain wrapper.
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OVER TWO MILLION CALVES
Protected against Blackleg for LIFE with ONE treatment vouch for Purity Blackleg Aggressin (Germ-Free Vaccine made by the Kansas Process). Absolutely safe to use. Cannot transmit disease. Brand, castrate, etc., when you vaccinate. OTHER PURITY PRODUCTS—Anti-Abortions Vaccine for Cattle; Hemorrhagic Septicemia Vaccine for Cattle and Sheep; Anti-Hog Cholera Serum, and High Count Mixed Infection Vaccine for Swine. For service that counts, write, phone, or wire.
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Young Service Bulls

For Sale

From High-Producing Strains

Tuberculin Tested.

Prices Reasonable—Write for Them, or Come and See Us.

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HILLCREST STOCK FARM

Shorthorn Cattle

Won at Sacramento Both Championships

7 Firsts and 5 Second Prizes

Shropshire and Merino Sheep

RAMS AND BULLS FOR SALE

Single or in Carload Lots

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GRAND CHAMPIONS AT BOTH SHOWS

At the Western Stock Show, Denver, in January and the Stocker and Feeder Show at St. Joseph, in October, the largest shows of feeder cattle, Shorthorn steers were the grand champions over all breeds.

Use a Shorthorn bull and increase the weight and quality of your steers. You get an extra price for both at the market.

Ask for "The Shorthorn in America."

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Early to Market—Full Weight

51 per cent of all hogs marketed in the United States in 1918 were Duroc-Jerseys.

Duroc-Jersey hogs have proved themselves in championship shows as well as on the market.

Duroc-Jersey hogs raise large families and put on weight quickly. They are hardy, easy feeding animals that mature at an early age; and are uniformly red in color.

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GUASTI BERKSHIRES

Weaned pigs, both sexes, from sows that farrow large litters and raise them. Priced reasonable — they are money-makers.

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Young boars ready for service; also fall gilts by WINSOR'S GIANT ORION and GREAT SENSATION 3RD. Priced to move.

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HAVE YOU SEEN THE

Grand Champion Duroc State Fair 1920

HERD SIRE CHOICE WONDER III { Mahaska Wonder { Great Wonder / Grand Lady 20th; Grand Lady 72nd { Grand Model / Rose

Write for yours from the most select herd in California.

Littermate (gilt) topped Ed Kern's Last Sale at $5600

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LEONARD FARM JERSEYS

Bulls for sale from Register of Merit Cows. Write for information.

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PUREBRED JERSEY BULL

Dropped September 9, 1919

Sire—FINANCIER'S REMUS. 104,413

Dam—ROMULUS LEGACY LORENE, 294,130

Record 457 lbs. butterfat.

T. B. Purvine & Son

Petaluma, California

Livestock and Dairy Notes

SALE DATES.

Dec. 1—H. E. Vogel, Holsteins, Fresno.

Dec. 2—Consignment Sale, Holsteins, Tulare.

Dec. 15—H. A. De Wolfe-R. L. Holmes, Holsteins, Modesto.

Dec. 16-17—Consignment Sale. Holsteins, Sacramento.

Jan. 19—Stanislaus Co., Duroc Ass'n, Durocs, Modesto.

The Dairy

Mendocino county dairymen report favorably on silage as feed. Geo. King of Ukiah says his cattle prefer it to alfalfa or other fresh feed. At least so declared the Ukiah Press.

Nancy Whitehall, a 7 year old Ayrshire cow owned by Middlesex, Meadows Farms, South Lincoln, Mass., has just completed a yearly record of 22,075 lbs. milk, 858.77 lbs. fat.

Ormondale Ranch reports the best feed ever known on the place at this time of the year. Consequently the Shorthorns for which the ranch is justly noted are almost kneedeep in green feed.

The offering at the Holmes-DeWolfe Holstein Sale, scheduled for December 15, is going to be a good one. The sale will be under the auspices of the Stanislaus County Holstein Breeders' Association, with Cols. Geo. A. Gue and Cy. N. Clarke as auctioneers.

Spooner & Sons of San Luis Obispo are getting into the dairy business in the right way. They have purchased the old Steele place only a short distance from town and will have their Holsteins there instead of on the Pecho. They will develop a modern dairy.

According to recent reports from the Salt River Valley of Arizona, cotton has literally taken that garden spot. Where there were over 100,000 dairy cows there are now less than 6,000. There is food for thought in this for California dairymen.

Beef Cattle

Modesto on Armistice Day celebrated her fiftieth anniversary. One of the features of the jollification was a monster parade of over 50 floats. The winner of the first prize was the float entered by the Stanislaus County Holstein Breeders' Association. The organization deserve much credit for getting up such an attractive exhibit.

Orland is evidently coming back into the dairy fold. At the Toyon sale three dairymen near there made purchases. They were, R. J. Bender, J. N. Cook and E. M. Meyer Another dairy straw in the mind is the fact that they are organizing a purebred calf club. Mr. Meyer purchased a fine calf for his son who is one of the clubs' charter members.

Weymouth Farms, North Weymouth, Mass., announces the sale of nine young Ayrshire sires, two of which were supplied by Moonstone Farm, Ipwish, Mass. These young bulls will be shipped within a few days consigned to the order of E. Atkins & Co., Ceinfugas, Cuba. They will be used on the native Cuban cattle with a view to breeding up the native stock.

"Dad" Sharp of The Penobscot Farm, Cool, visited Sacramento and San Francisco last week. "Dad" has a plan of interesting fruit men and farmers in giving purebred Ayrshire calves to their sons and daughters for Christmas. This would start the young folks raising purebreds, and there is no more fascinating and pleasing present than a classy red and white Ayrshire purebred. It is a reasonable present in cost, and one that starts the young folks in the right direction. "Dad" Sharp is very enthusiastic. He hopes other breeders will take up the idea.

El Dorado Ranch owned by H. P. Faye located 6 miles above Knight's Landing on the Sacramento river is developing a fine herd of Ayrshire cattle. The ranch comprises 1300 acres of the finest silt land devoted to stock and grain raising, orchards and alfalfa. Alfalfa acreage includes 110 at present with 70 more to be sown this season. Mr. F. M. Lohse the manager states that while they are specializing in registered Ayrshires and have some fine young bulls for sale they also have Duroc Jersey hogs and Romney sheep. They are doing things and their place is bound to be headquarters for Ayrshires.

R. H. Davis, Holstein breeder of Modesto, reports seven A. R. O. records recently completed in his herd. Venetta Mechthilde DeKol Pontiac, a 4 year old, 21.85 pounds butter; Cirnela Mechthilde Pontiac, Jr., 3 year old, 19.88 pounds butter; Cirnela Mechthilde Colantha, Jr. 2 year old, 19.07 pounds butter; Bonita Pontiac, Jr. 3 year old, 17.34 pounds butter; Holland Aaggie 2, 4 years old, 3 months after freshening, 16.93 pounds butter; Cristena Mechthilde Pontiac, 2 years old, 5 months after freshening, 13.42 pounds butter; Venetta Mechthilde DeKol Pontiac, 2nd Jr. 2 year old, 7½ months after freshening, 13 pounds butter. All these records were for 7 days and they show a lot of young cattle that any breeder might be proud to own. Mr. Davis writes his 5 foundation cows were sired by Butter Boy Cirnela Mechthilde, who was also the sire of E. E. Freeman's cow, which has just completed a record of over 1000 pounds of butter in one year.

Two Holstein sales for the December 1st and 2nd are scheduled by the California Breeders' Sales and Pedigree Company. The one on the first is that of H. E. Volgel at Fresno and on the second is the Fourth Tulare Consignment sale at Tulare. Both sales are cried by Cols. Rhoades and Bell.

Beef

E. G. Driscoll of Santa Margarita has started a registered shorthorn herd in the Pilitas country.

S. J. Lowi's cattle won practically all the prizes in the Shorthorn classes at the recent San Luis Obispo Fair.

Word has been had that Wm. Briggs of Dixon, who has spent some time visiting the leading Hereford herds in the Middle West has purchased several high class individuals to add to his herd. Details as to the number and breeding will appear in a later issue.

Shorthorns are the cattle raised by S. J. Lowe of San Luis Obispo who has about 400 head in the aggregate of which 45 are registered. Mr. Lowe prefers the reds and roans for color and would like to eliminate the whites. When asked about livestock conditions in San Luis Obispo county he declared it had been the best season ever experienced in that locality.

Swine

S. J. Lowe who breeds Poland China swine and Shorthorn cattle at San Luis Obispo is erecting a new hoghouse on his ranch. It has cement floors and walls up 40 inches. Good hogs need a good house.

Col. Cy N. Clark the auctioneer of Modesto had a float in the parade at Modesto on Armistice Day showing Some Price's Equal 3rd., his herd sire and an A Wonder prize sow. The boar weighs over 500 lbs. at 18 mos. The sow has a litter of 9 pigs that average 75 lbs. each when 11 weeks old. The Colonel can raise good hogs as well as sell them.

J. Francis O'Conner, Castleview Ranch, at Santa Rosa, aside from breeding Berkshire hogs is building a good foundation herd of Guernseys. He made his 1rst sale last week, when Jas. M. Jamison of Santa Rosa bought a bull calf a month old, sired by Sunny Jim of Revada, a Dupee bred bull and out of Princess Pat of Revada. His most recent Berkshire sales were two bred sows and a service boar to Dr. Gaston of Petaluma and a bred sow to F. J. Kendle of Santa Rosa.

Sheep

Bullard Bros., breeders of Rambouillets at Woodland have brought all their sheep to the home ranch for the winter. Among them are a fine look-

ing bunch of young buck. Among their recent sale were six bucks to Long and Noble of Red Bluff.

Miscellaneous

Doctor F. H. Guldager recently accepted an appointment as an inspector for the Division of Animal Industry. At present he is located at Santa Rosa.

A fine rain in the Sacramento Valley promises to start winter feed in good shape, according to the reports from cattle and sheep men of that district.

C. R. Thomas, secretary and manager of the Los Angeles Livestock Show has recently returned from a trip into Nevada reports cattlemen have experienced a very dry season.

San Luis Obispo County Livestock and Agricultural Association is the corporate name of the new organization which is the outgrowth of the old association under whose auspices the last two successful fairs have been held. S. J. Lowe is the president.

J. I. Thompson, manager of Stralock Farm at Davis is busy installing a fine system of gravelled road over the farm. When completed every field in the five hundred and sixty acres will open onto the road. They are also building a barn 150x40 feet with a 20 foot shed on each side.

Recently seven head of cattle and three hogs were poisoned in the slough pastures between Salinas and Castroville, Monterey county, by eating the new fall sprouts of poison hemlock (Conium maculatum). Fortunately these particular sloughs had few plants of the poison hemlock or the loss would have been more serious.

A. A. Jenkins, the well-known Jersey breeder of Tulare, writes that the demand for Jerseys is excellent and also to report the sale of Gertie's Golden Tony to D. L. Grumbles of El Centro. This young bull is a son of Mr. Jenkin's herd sire, Gertie's Golden Victor.

LIVESTOCK DIRECTORY.

Rate, 4c. per word. Cash must accompany all orders.

SWINE.

Duroc-Jerseys.

FOR SALE — 3 Duroc-Jersey Junior yearling boars out of Ireland Joe Orion from a daughter of Cherry Volunteer 2nd; weight between 4 and 5 hundred, born September 22, 1919. Splendid type big-bone, high back. These boars will please you and are priced right. One was grand champion at Ventura county fair. Your pick, $125 F. O. B. Oxnard. They won't last long. Berylwood Stock Farm, Hueneme, Ventura Co., Cal.

DUROCS—BIG-TYPE—HIGHEST QUALITY—popular blood lines. Herd headed by Johnson's Defender, Jr., and Western Pathfinder. Bred sows and gilts and young boars for sale at moderate prices. Greenwood Farm, Witherow & Stafford, Live Oak, Cal.

BRED SOWS AND GILTS and young stock. Pathfinder and Great Wonder I Am breeding. Monthly payments, if you wish. Derryfield Farm, Capital National Bank Bldg., Sacramento.

BOYANNA BIG-TYPE DUROCS—Breeding stock; priced right for sale. Inquiries invited. Satisfaction guaranteed. J. Boyd Harrold, Dixon, Cal

BIG-TYPE DUROCS—Herd headed by California Orion King. Am offering excellent young boars at right prices. Inquiries invited. Harvey M. Berglund, Dixon, Calif.

LAMB'S DUROCS—Seven good sows with litters, weaned pigs and choice open gilts. Priced right to close out the herd. Elmer Lamb, Ceres, Calif.

GOOD SPRING AND FALL GILTS—Strong in Pathfinder blood, sired by Pathfinder Wonder. Hamlin Farm, Box 697, Sacramento.

WINSOR RANCH DUROCS—Young boars and some top gilts bred to WINSOR'S GIANT ORION—Morris C. Allen, Mgr., Bonita, Cal.

REGISTERED DUROCS — Choice gilts and weanlings, either sex. Breeding and satisfaction guaranteed. H. E. Boudier, Napa.

BIG-TYPE DUROCS — Gilts and boars of Great Orion Sensation breeding. Falfadale Farm, Perris, Cal.

FOR THE BEST in Durocs, write June Acres Stock Farm, Davis, Cal.

Poland-Chinas.

AN OCTOBER YEARLING BOAR out of the 1920 Grand Champion Sow. Two March Boars, one by Long Big Bone Jr., out of the 1919 Reserve Grand Champion Sow. He headed the 3rd prize litter Sacramento this year. One by The Westerner, out of the 3rd prize Junior Yearling Sow this year. These are tops, priced low, to move them. Alex D. McCarty, Route C. Box 338, Modesto, Cal.

POLAND CHINAS—Some promising young boars; also 2 yearling boars, 300 lbs. Big-bone type, excellent breeding and 2 bred sows, farrow in November. Pedigree on application. Edward A. Hall, Rt. 1, Box 39, Watsonville, Cal.

ELDERSLEY AND SHADY BROOK Farms big-type Poland-Chinas that make money for the Feeder, the Farmer and the Breeder. Prices reasonable. J. H. Ware, Brown's Valley, Calif.

TOHOQUA POLAND-CHINAS—A good tried boar and some choice young breeding stock for sale. Ferguson & McKaig, Orland, Cal.

WAUKEEN HERD POLAND-CHINAS — Home of King's Big Bone Leader. A few service boars for sale. Les McCracken, Ripon.

LAKESIDE STOCK FARM—Large, smooth and big-boned Poland-Chinas. Geo. V. Beckman & Sons, Lodi, California.

POLAND-CHINAS—Strictly large type. J. F. Lehman, Lodi, Cal.

REGISTERED POLAND-CHINA SWINE — Prize-winners. Finest stock in the State. Bassett Bros., Hanford, California.

REG. BIG-TYPE POLAND-CHINAS—Service boars; weanling pigs. J. H. Cook, R. 4, Chico.

Berkshires.

ANCHORAGE FARM BERKSHIRES
Orland, Calif.
HERD BOARS—STAR LEADER, Junior and Reserve Grand Champion of the World. The Grand Champion carload of barrows, over all breeds, at the San Francisco Live Stock Show, was sired by a son of Star Leader, NATOMAS BARON DUKE, grand champion of California. For sale, bred gilts, open gilts, young boars and weanling pigs. Write for booklet, prices and list of sows.

BRED GILTS.
Sired by Mayfield Rookwood 2d, a Grand Champion Boar, out of 600-700 lb. sows, and actually bred to "ACHIEVER," our English Blood Boar, the Sire that puts more bone and pork-making qualities into his pigs.
Priced reasonably and absolutely guaranteed.
Castleview Ranch, Santa Rosa, Calif.

The only herd of English Berkshires in the West. Bigger, better, stronger litters. More pounds of meat for less feed. Weanling pig, $35. Satisfaction guaranteed or money refunded at once. Sandercock Land Co., 703 Market St., S. F. In charge Natomas Land Sales.

GRAPE WILD FARMS—Berkshires—Guernseys. Big-type Berkshire Boars of serviceable age, sired by Big Leader—greatest son of Grand Leader 2nd. Panama-Pacific Grand Champion. A. B. Humphrey, Prop., Escalon.

BERKSHIRE BOARS—Real herd sires. We are offering these at sacrifice prices to move them quickly. Write for description and price. R. J. Merrill & Son, Morgan Hill, Cal.

REGISTERED BERKSHIRES—Seven sows, one boar, forty pigs. Best of breeding. Priced to sell. Payment plan to responsible people. F. H. Wood, San Miguel.

FOR SALE—Some fine purebred Berkshire pigs. Ready to wean. L. D. Baun, Yuba City, Cal.

QUALITY BERKSHIRES — Young stock, both sexes. Geo. P. Upham, Martinez .

REAL GOOD BERKSHIRES — Cholera immune. Frank B. Anderson, Sacramento, Cal.

Miscellaneous Swine.

YORKSHIRE SWINE — Registered Boars, Sows. Young stock. Mahajo Farm, P. O. Box 597, Sacramento, Calif.

DAIRY CATTLE

Holsteins.

HOLSTEINS

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Registered Holstein Cattle
Bulls, Heifers and Calves
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Tuberculin tested
Lewis Building, San Jose

ASEVEDO BROS. CO.
Patterson, Cal.
Breeders of
REGISTERED HOLSTEINS
For Sale
Young bull, sired by King Abbekirk Johanna 24th, and out of a dam making 24 lbs. as a 4-year-old

FOR SALE—Ten registered Holstein cows, milking, and two heifers, springers. Seven with A. R. O. records, including 19-lb. junior 2-year-old, 19.88-lb. junior 3-year-old and 21.85-lb. 4-year-old. All young and healthy, fine individuals, tuberculin tested. Must be seen to be appreciated. Will sell on easy terms. R. H. Davis, Rt. C, Box 196, Modesto, Cal.

CREAMCUP HERD — Registered Holsteins. Pontiac bull calves. M. Holdridge, Rt. A, Box 437, San Jose.

REGISTERED HOLSTEIN-FRIESIANS — Both sexes choice stock; tuberculin tested. Sunnybrook Ranch, H. H. Sisson, Mgr., Willits,

REG. HOLSTEINS, both sexes. World's record backing. Kounias Reg. Stock Farms, Modesto, Cal.

REG. HOLSTEINS—A. W. Morris & Sons Corp., Importers and Breeders, Woodland, Cal.

F. H. STENZEL, SAN LORENZO—Breeder of Registered Holsteins. High test producers.

REGISTERED HOLSTEINS — Best blood lines of the breed. R. L. Holmes, Modesto, Cal.

CHOICE HOLSTEIN bulls for sale. No females. Millbrae Dairy, Millbrae, California.

GOTSHALL & MAGRUDER — Breeders of registered Holstein-Friesians. Ripon, Calif.

EL DORADO HERD OF REG. HOLSTEINS—Alex. Whaley, Tulare, California.

Milking Shorthorns.

REGISTERED MILK AND BEEF SHORTHORNS, bulls and heifers for sale; catalogue free. Thomas Harrison, Santa Rosa Stock Farm, Santa Rosa, California.

70¢ and $1.40 Sizes

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Kow-Kare enjoys a quarter-century record of leadership in the prevention and successful treatment of all cow ailments due to weakened digestive or genital organs, such as Barrenness, Retained Afterbirth, Lost Appetite, Scouring, Bunches and Abortion. The Kow-Kare treatment is inexpensive but produces prompt and visable results. One trial will convince you.

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JERSEYS produce the best milk earlier, longer and most economically. They thrive under all conditions, are always willing to work, and breed true to type. Jerseys save you many years in building a profitable dairy herd.

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INNISFAIL HERD MILKING SHORTHORNS—Young stock for sale; both sexes. Owned by Alexander & Kellogg Leased by J. D. Rowe & Son, Davis, Cal.

WILLOW BROOK HERD—Milking Shorthorns. A few registered bulls and heifers for sale. W. T. Roberts, Penn Grove.

BREEDERS OF REGISTERED SHORTHORNS—Milk strain; choice young stock for sale. John Lynch Ranch, Box 321, Petaluma.

Jerseys.

SERVICE JERSEY BULL, bull calves Financial King blood, Chester White boars, prize winners. Best blood, type, production. N. H. Locke Co., Lockeford, Cal

FOR SALE—Purebred Jersey bull, 16 mos. old. Prize winner at two fairs this fall. $250.00, if taken now. W. H. Alfred, Loleta, Humboldt Co., Calif.

SUNSHINE FARM JERSEYS—"Production counts." E. E. Greenough, Merced, Cal.

PUREBRED JERSEYS from Register-of-Merit dams. Purvine & Son, Petaluma.

Ayrshires.

EL DORADO RANCH AYRSHIRES—Young service bulls, nicely marked from high-producing strains. All registered and tuberculin tested. Prices reasonable. El Dorado Ranch, Grafton P. O., Yolo Co., Ry. Station Knights Landing.

PENOBSCOT FARM REGISTERED AYRshires—Long lived, hardy, good "rustlers." High butterfat producers. Choice individuals; all ages; reasonable prices. Cool, El Dorado Co., 9 miles from Auburn, Cal.

STEYBRAE AYRSHIRES — Registered; all ages. E. B. McFarland, 414 Claus Spreckels Building, San Francisco.

NORABEL FARM AYRSHIRES — Le Baron Estate Co., Valley Ford, Cal.

Guernseys.

PUREBRED GUERNSEY HEIFERS—Heifer calves and bull calves for sale at reasonable prices and on terms, if necessary. The mothers are wonderfully bred, and with high milk and butterfat yields. The sires have made Guernsey history. Also a few purebred Holstein cows, heifers and a herd sire for sale. Prices and terms on application. If you desire to start with purebreds, now is your opportunity. S. J. Strauss, P. O. Box 62, Modesto, Cal.

REGISTERED GUERNSEY BULL—Happy Claremont, 26 months; photo, pedigree on application. A. O. Nelson, Georgetown, Calif.

BEEF CATTLE.

SHORTHORNS—The foremost beef breed—Have a limited number of stock for sale, both sexes. If you wish to start a small herd I can probably supply your needs. T. T. Miller, Hollister, Cal.

RANCHO SAN JULIAN SHORTHORNS—Purebred range bulls, unregistered, for sale. Estate Thos. B. Dibblee, Santa Barbara, or Lompoc, Calif. John Troup, Supt.

ALAMO HERD REGISTERED HEREFORDS (founded by Governor Sparks). Herd and range bulls. Reasonable prices. W. D. Duke, Gazelle, Siskiyou county, California.

THE NEVADA HEREFORD RANCH—Jno. H. Cazier & Son Co., Prop., Wells, Nevada. Reg. Hereford cattle. Breeding stock for sale.

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GEORGE WATTERSON — Breeder Registered Herefords. Bishop, California.

REGISTERED SHORTHORNS — Fair Oaks Ranch, Willits, Calif.

SHEEP AND GOATS.

F. A. MECHAM ESTATE, Petaluma, Cal.—Breeders and importers of Shropshire, Rambouillets and American Merinos, both sexes. Also Red Polled cattle. Take electric car at Petaluma or Santa Rosa for Live Oak Ranch.

FOR SALE—Rambouillet rams and ewes—purebred; the very highest grade of large smooth body; heavy shearers; the wool and mutton type. Immediate delivery of individual or carload lots. You can find none better or of higher grade. Address Glenn, Cal. Location, 8 miles south Hamilton City, 1 mile west Ordbend. Windell Orchards Co.

OAKDENE GOAT FARM, Walnut Creek, Contra Costa Co., Cal.—Breeder of milk goats. Nubian, Saanen and Toggenburg registered grades. Bred and fed for milk production.

J. R. BLOOM, Dixon, Calif.—Twenty-five years breeder of purebred Shropshire sheep. Rams for sale. Single or carload lots.

DORSETS—ROMNEYS—Dorset ram lambs for sale. John E. Marble, South Padasna.

SHEEP FOR SALE—1000 ewes. Will sell in lots to suit. Chas. G. Owens, Livermore.

HARVEY S. VAN VLEAR, Lodi, Breeder and importer of registered Hampshire sheep.

CALLA GROVE FARM, MANTECA, CAL.—Breeders and importers of Hampshire sheep.

KAUPKE BROS., WOODLAND, CALIF.—Breeders and importers of Hampshire sheep

CARL LINDHEIMER, Woodland, Cal.—Rambouillet Ram lambs for light use.

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MISCELLANEOUS.

BUTTE CITY RANCH
SHORTHORN CATTLE, SHROPSHIRE Sheep, Berkshire Hogs, Shetland Ponies, Bronze Turkeys, White Plymouth Rocks. Stock for sale at all times. W. B. Dwyer and W. S. Guilford, Box P, Butte City, Glenn county, California.

FOR SALE OR TRADE—Percheron stallion reg. (weight 2000). Will exchange for work horses or cattle. Address Ralph L. Clark, R. F. D. 2, Box 74, Lodi, Cal. Phone 24F4.

REGISTERED BROWN SWISS, carrying best blood of the breed. M. J. Pedrotti, San Rafael, Calif.

CREAMCUP HERD HOLSTEIN FRIESIANS

Will Sell A One-Half Interest

Preferably to an owner of an alfalfa dairy ranch. An unequalled opportunity for some one to acquire an interest in a well-known established herd, noted for excellent type, a clean bill of health and high production.

All registered Holstein-Friesians.

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REGISTERED HOLSTEINS
Creamcup Herd offers service bulls and bull calves of 34-lb. breeding. Females offered for foundation stock.
Tuberculin tested.
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Two miles out North First Street.

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Registered Hog Sales a Specialty

Who Is Going to Raise Next Year's Bacon?

(Written for Pacific Rural Press by Ned Niccolls.)

The tendency on the part of California swine breeders to cut down their herds and the announced intention of some of them to go out of business altogether does not look right. It does not look like good business judgment. Admitting that the past year has not been a paying one for the average hog man it must be remembered that the past year has not been particularly strewn with roses in a great many lines of business. The swine breeders, with a lot of other producers, have seen their profits go glimmering with the general decline in farm prices, although the man who has had occasion to buy a slice of ham recently hasn't been able to notice any material effect of the decline yet. But for all of this the hog market is a steady market. Ham is staple and people will continue to buy pork chops and bacon long after the demand has ceased for the silk shirts with broad stripes, which were bought so lavishly by the rich riveters during the war.

Viewed from any angle it is hard to see how the hog business can help but show a decided turn for the better in the near future. This does not mean necessarily that prices will be higher, but it does mean that profits will be greater. Market authorities do not seem to think that the market will advance much. It seems probable that the average price next year will be less than this year. To many in the business this seems desirable. They contend that it is better to sell hogs at twelve cents per pound and show a profit than to sell at fifteen and lose money. The concensus of opinion seems to be that the ratio between hog prices and cost of production is sure to show a change in favor of the producer very soon—in fact, the trend is that way now.

Corn vs. Hogs.

The Breeders' Gazette, in commenting on a comparison of the prices of live hogs and the price of corn in the various states, made by the U. S. Bureau of Crop Estimates, concludes that "either hogs will advance more than corn ,or corn will decline more than hogs, or hogs will advance and corn decline. Differently expressed, a hundred pounds of live hogs will buy more bushels of corn than at present."

The country needs the hogs. Recent storage reports by the U. S. Bureau of Markets show that the holdings of pork products, while liberal, are not excessive and do not total as much as last year. During September there was a heavy movement of lard and the visible supply showed a decrease of 60,500 pounds. Cured meats in storage were 111,000,000 less October 1, 1920, than October 1, 1919.

Official figures are not yet available but it is certain that there are fewer hogs on the farms in the United States than a year ago. The decrease in this state has been considerable; far too much. Last year and the year before when hog production was at its peak, we didn't raise nearly enough to feed ourselves.

Local hog prices for some months have been higher than Chicago prices. Until a year and a half ago this condition was almost unheard of. In fact, the idea that California hogs should sell for less than Eastern hogs was so firmly embedded that the Food Administration fixed the minimum for live hogs in California at $1.00 per hundred under the Chicago minimum. Packers are now paying more than Chicago prices for local hogs, because California is raising better hogs than she once did and has, lately, been raising them in sufficient quantities to handle economically. It has been possible for the growers to arrange to sell in carload lots. Whenever production is cut down to the point where it is necessary to market in smaller lots the grower is at the mercy of the local buyer. The packer can't afford to bother with them.

Better Quality.

The quality of California hogs now compares quite favorably with eastern hogs. There was a time when the best grade of hams and bacon were all eastern stock. This isn't true any more. Better breeding and better feeding accounts for the quality.

It will be a long time before the state produces as much pork as she consumes. Until she does the market here will probably be higher than the eastern market. The recent raise in freight rates favors the California producer and promises to make the spread in prices still greater in favor of the California hog.

All of these things point to a better day for the swine breeder. Some of those who are selling too much of their breeding stock will realize it when it is too late. There hasn't been a similar opportunity in years for a man to get into the hog business. The breeding and quality that is offered has never been on this market before and values especially of the purebred stock must surely increase. The wise man is getting in now while the getting is good. There will be a lot of people looking for hogs next spring and they won't know where to go to find them. People are going to eat bacon next year. Who is going to raise it? Will the money go to the California farmer, or will it go to the farmer in some other state?

The Oakdale district will be the scene of more extensive cattle feeding operations than any previous season, notwithstanding the low prices on beef cattle. Forty-eight cars of feeders from Nevada, belonging to A. L. Gatzman and Rodden Bros., arrived recently and were sent into the foothill region above Knight's Ferry.

FOURTH TULARE SALE

70 REGISTERED HOLSTEINS 70

67 Females—3 Bulls

SALES PAVILION, TULARE, CALIF. THURSDAY, DECEMBER 2, 1920

This offering includes a large number of young cows and heifers of more than ordinary merit, and made doubly attractive by the services of the great sires which they carry, these bulls including both short and long time record breeding. In the list will be found:

A SPLENDID COW that has just completed a yearly record of 745 lbs. butter from 17,087 lbs. milk. She sells heavy with calf to a 32-lb. son of King Mead of Riverside.

A 24-POUND daughter of Colantha Sir Pontiac Aaggie that has just finished a yearly record of 653.2 lbs. butter. Due to calve on December 7 to a 32-lb. son of King Mead of Riverside.

A DAUGHTER of a 646-lb. yearly record 2-year-old. Dam now on test again and making a nice record as a 3-year-old.

A 3-YEAR-OLD that has just completed a yearly record of 640.6 lbs. butter. She sells heavy with calf to a 32-lb. son of King Mead of Riverside.

A 21-POUND granddaughter of King of the Pontiacs, now fresh.

A 19-POUND 3-YEAR-OLD, bred to a 32-lb. son of King Mead of Riverside.

A DAUGHTER OF KING KORNDYKE SADIE VALE, out of a 23-lb. 4-year-old granddaughter of Pontiac Korndyke.

FOUR YOUNG COWS bred to a 31-lb. son of Sir Veeman Korndyke Pontiac whose first daughters to freshen are making splendid records.

A 26-POUND daughter of a 28-pound cow, bred to Prince Gelsche Walker Alcartra, who is by Prince Gelsche Walker and out of a half-sister to Tilly Alcartra that made 796.16 lbs. butter from 19,043.5 lbs. milk in one year.

TWO DAUGHTERS of Prince Gelsche Walker Alcartra out of well bred dams.

A DAUGHTER of Creamcup Colantha Pontiac Burke, heavy with calf to Sir Aaggie De Kol Acme 2nd, five of whose seven nearest dams average 1,153 lbs. butter in one year.

A DAUGHTER of the 35-lb. sire Segis Pontiac Abbekerk.

A DAUGHTER of Segis Pontiac Crane De Kol, heavy with calf to Segis Pontiac Abbekerk.

A SHOW HEIFER, sired by a proven son of Segis Pontiac De Kol Burke.

A 2-YEAR-OLD daughter of Sir Aaggie De Kol Acme, now on yearly test and bred to the 34-lb. bull, Sir Aaggie Hiske Walker.

A GRANDDAUGHTER of an 811-lb. yearly record cow bred to Palo Humphrey Meka, son of the 1,326-lb. yearly record cow Laurameka.

AN 18-POUND 3-YEAR-OLD bred to Palo Humphrey Meka.

A 2-YEAR-OLD with 519.3 lbs. butter in 305 days, her dam a 23-lb. 2-year-old.

TWO GRANDDAUGHTERS of King Korndyke Sadie Vale, bred to a 31-lb. grandson of Pontiac Clothilde De Kol 2nd.

A DAUGHTER of a cow that made 1093.04 lbs. butter from 27,179 lbs. milk in one year.

A GRANDDAUGHTER of King Segis Pontiac Count, out of a 21-lb. dam and heavy with calf to a 36-lb. son of the three times grand champion King Segis Alcartra Prilly.

A 21-POUND COW that has milked over 100 lbs. per day many different times.

A 2-YEAR-OLD daughter of the above cow, with 18.49 lbs. butter in 7 days at 2 yrs. 3 mos. She is by a son of King Segis Pontiac Count and sells heavy with calf to a 36-lb. son of King Segis Alcartra Prilly.

ANOTHER DAUGHTER of the same cow, sired by a Son of King Walker and due to freshen shortly after sale to a son of King Segis Pontiac Count.

A HEIFER sired by a 950-lb. yearly record grandson of Aralia De Kol. Will be fresh with first calf before sale.

MANY OTHER WELL BRED FEMALES, by great sires, out of good dams, and bred to some of California's best bulls.

ONLY THREE BULLS IN THE OFFERING.

A son of the 41-lb. $5,000 bull, King Abbekerk Johanna Segis, out of a 29.42-lb. daughter of Spring Farm King Pontiac 6th. The dam and sire's dam average 35.21 lbs. butter in 7 days. Here is a herd header.

A son of Creamcup Fidessa Cornucopia Lad, whose dam made 897 lbs. butter from over 22,750 lbs. butter in one year. The dam of this youngster is now on yearly test and making a good record.

A son of the 35-lb. bull Segis Pontiac Abbekerk, out of an A. R. O. granddaughter of King Pontiac Ruby Burke

Contributors to sale:

COTSHALL & MAGRUDER, Ripon.
ALEX WHALEY, Tulare.
R. C. STURGEON, Tulare.
F. S. BORROR & SON, Tipton.
E. D. BARRY, JR., Daggett.
HARRY HILL & SON, Riverdale.
H. E. SPIRES, Caruthers.
PETER LOWSON, Tulare.
SANTA MARIA STOCK FARM, Tulare
DR. E. J. WELDON, Sacramento.

CATALOG FREE ON REQUEST.

Every animal positively guaranteed to be a breeder; every animal over six months old tuberculin tested and sold subject to retest by the buyer.

Auctioneers:
COL. BEN A. RHOADES, Los Angeles.
COL. GEO. W. BELL, Tulare

Management
Calif. Breeders' Sales and Pedigree Co.

C. L. Hughes, Sales Manager, Sacramento, Calif.

TOYON FARM ASSOCIATION HOLSTEIN SALE.

(Written for Pacific Rural Press by Ralph Newman.)

This sale, held at Sacramento November 10-11, was notable in two respects. First, from the fact that it was the first sale of any large number of animals in California from a Federal tested herd, and, second, from the large number (131) sold from a single herd.

Did the fact that these animals came into the ring with an absolutely clean bill of health backed by the Federal Government, have a material effect on prices offered? Probably nobody can say, categorically, but a comparison of this sale with others where the animals were sold untested, or where a test had revealed as high as a 20 per cent reaction, would indicate that buyers do not yet appreciate the splendid work Toyon Farm has been doing to secure stock for Califrnia absolutely free from the taint of tuberculosis. Will some of these animals go into herds where they may become infected after the labor and expense expended in guarding them from it? When will we ever be free of the disease if those who promote the purebreds are thoughtless or careless about it? Anyway, Toyon Farm had the satisfaction of offering stock concerning which there could be no question.

Food for thought was offered in the contrast between the male and female offering as to demand and prices. The whole lot of females (107) brought an average of over $362. The bulls, twenty-four in number, averaged only $134. What was true of this sale has been true of practically all we have attended this year. The fact might as well be faced that we must cull the bull classes closer and do more real, constructive extension work, or sell bulls at little more than butcher prices.

The best females in the offering sold exceptionally well, the ten highest bringing a total of $8,369. Three tied for first place at an even $1,000 each. They went to Bridgford Company, Patterson, J. W. Scudder, Escalon, and Gotshall & Magruder, Ripon. Holmes, Modesto, Wm. Dreher, Sacramento, M. L. Dow, Modesto, and Ralph Kilgore, Ripon, were the other buyers of the first ten. Other purchasers of a number of good ones were P. M. Shearer, San Jose, Mrs. D. M. Fox, Modesto, E. Alberti, San Anselmo, R. J. Bender, Glenn, H. J. Long, Fallon, Nevada, Frank Hatch, Modesto, C. C. Pease, Kerman, and E. L. Hall, Reno, Nevada.

A HOLSTEIN CONSIGNMENT SALE.

Breeders of Holstein cattle in the territory tributary to Tulare are for the fourth time offering some of their excellent cattle at auction. If we are to judge by past offerings this will be an aggregation of good cattle—the kind all breeders want. It is to be largely an offering of females as 67 out of the 70 head listed are cows and heifers. The three bulls are all of quality that ought to prove an attraction. One is a son of the 41-pound $5,000 bull, King Abbekerk Johanna Segis and out of a 29.42 pound cow. The dam and granddam of this bull average 35.21 lbs. in 7 days. Space forbids going into detail about this sale, but the list of consignors is guarantee that the stock offered will be worth a try anyway. This is a time when economical production counts, and this is an opportunity to procure registered Holstein cows that will not only milk a lot but will do so on the minimum of feed.

HIGH HOLSTEIN RECORDS AT BURR FARMS.

Burr Farms, Los Angeles, with 40 Holsteins on annual test, are making some fine records as the following returns recently received will prove: Carnation Rag Apple De Kol (2-year-old) has made 496 lbs. butter from 13,570.9 lbs. milk. Dutchess Korndyke Sadie Vale (senior yearling) in 305 days produced 572 lbs. butter from 13,349 lbs milk. Cascade Johanna (5½ years) has 903.82 lbs. butter and 22,030 lbs. milk. La Conner Pontiac Albino Girl (Junior 2-year-old) came through with 621.25 lbs. butter and 16,378.7 lbs milk in 305 days. Clothilde Walker Sadie Vale (Junior 2-year-old) made 618 lbs. butter from 15,221.5 lbs. milk.

BETSY LAMB PRILLY

75 REGISTERED HOLSTEINS

with

TYPE—PRODUCTION—BREEDING—HEALTH

At Public Auction

WEDNESDAY, DECEMBER 1, 1920

WESTLAWN FARMS

Owned by H. E. Vogel. **Fresno, California**

Mr. H. E. Vogel is making an offering in this sale of which any breeder might well be proud and the opportunity presented for purchase of high class individuals is one which should command widespread attention.

The entire milking herd at Westlawn Farms will be dispersed in this sale, and a number of high class bred heifers and a limited number of good bulls will complete the sale list.

In a previous announcement in this paper we outlined the breeding of the four great sires to which the females in this sale are bred, and present here a brief description of a few of these richly bred females:

BETSY LAMB PRILLY, 35.03 lbs. butter in 7 days from 743.3 lbs. milk. She also made over 31 lbs. butter in 7 days as a 4-year-old and was Grand Champion cow at San Francisco in 1910. She is due to calve in January to King Aralia Mead, a 1161-lb. son of King Mead of Riverside.

A DAUGHTER OF KING MEAD OF RIVERSIDE, out of a daughter of Ignaro De Kol that made 762.73 lbs. butter from 18,424.8 lbs. milk in one year.

A 22-POUND GRANDDAUGHTER OF ARALIA DE KOL, with 717 lbs. butter in one year as a 3 year-old, her dam a 954-lb. daughter of the 1085-lb. former world's record milk cow, Riverside Sadie De Kol Burke. Her three nearest dams average 1061 lbs. butter in one year.

A 21-POUND DAUGHTER OF PRINCE GELSCHE WALKER, out of De Kol of Valley Mead 3d, 845.11 lbs. butter in one year.

A YEARLING DAUGHTER OF THE ABOVE COW, sired by Sir Aaggie De Kol Mead, son of Sir Aaggie De Kol Acme and Miss Valley Mead De Kol Walker. HERE IS A REAL STAR!

A DAUGHTER OF COLANTHA ALCARTRA FAYNE, 33-lb. grandson of Colantha Johanna Lad, with 25.68 lbs. butter in 7 days as a junior 3-year-old.

A 28.36-POUND DAUGHTER of Dutchland Hengerveld Sir Gladi, in calf to a son of Betsy Lamb Prilly.

A GRANDDAUGHTER OF KING OF THE PONTIACS, with 21.30 lbs. butter in 7 days as a senior 4-year-old. Sells heavy with calf to King Aralia Mead.

A 17-POUND 2-YEAR-OLD daughter of King Morco Alcartra, bred to King Aralia Mead.

A 24-POUND SENIOR 3-YEAR-OLD granddaughter of Juliana King of Riverside, now on yearly test with 191.47 lbs. butter to her credit in 60 days.

A 24-POUND GRANDDAUGHTER of Juliana King of Riverside, now on yearly test, and well along with calf to King Aralia Mead.

A 22-POUND COW due in December to a son of Betsy Lamb Prilly.

A 21.73-POUND JUNIOR 4-YEAR-OLD daughter of the 30-lb. bull Admiral Burke.

A 15.87 POUND 2-YEAR-OLD daughter of above cow, well along with calf to a son of Betsy Lamb Prilly.

A 24-23-POUND GRANDDAUGHTER OF JULIANA KING OF RIVERSIDE, now on yearly test, and well along with calf to a son of Betsy Lamb Prilly.

A 23-POUND COW, heavy with calf to King Aralia Mead.

A GREAT COW with a record of 25.11 lbs. butter in 7 days as a senior 2-year-old. Will be fresh at sale time.

A 22-POUND COW out of a half sister to Juliana De Kol, and bred to a son of Betsy Lamb Prilly.

AN 18.29-POUND 2-YEAR-OLD, heavy with calf to a son of Betsy Lamb Prilly.

A 17.40-POUND 2-YEAR-OLD, heavy with calf to a son of Betsy Lamb Prilly.

A LARGE NUMBER OF OTHER COWS AND HEIFERS with good records, out of well bred, high record dams, and bred to one or the other of the richly bred Westlawn Farms herd sires.

A Limited Number of Young Bulls

KING PRILLY MEAD, out of the great producer and show cow, Betsy Lamb Prilly, 30.03 lbs. butter from 743.3 lbs. milk in 7 days, and sired by King Aralia Mead, a 1161-lb. son of King Mead of Riverside. Here is a real herd bull for some breeder.
A SON OF A 25.68 POUND 3-YEAR-OLD, sired by a son of Betsy Lamb Prilly.
A SON OF KING ARALIA MEAD, out of a 24-lb. granddaughter of Juliana King of Riverside now on yearly test.
TWO OTHER WELL BRED YOUNG BULLS, both out of dams with good records.

This is positively one of the best offerings ever made in California. The blood lines of the herd are popular, the records substantial, and we believe that no sale in the west has ever presented cattle of better type throughout.

Every animal positively guaranteed to be a breeder; every animal tuberculin tested and sold subject to retest by the buyer.

WRITE FOR CATALOG NOW!

Auctioneers:
COL. BEN A. RHOADES
COL. GEO. W. BELL

Management
Calif. Breeders' Sales and Pedigree Co.

C. L. Hughes, Sales Mgr., Sacramento, Calif.

VOGEL WILL SELL.

Betsy Lamb Prilly, on December 1st, among 75 other excellent Holsteins. This young cow is not only a producer but she is a great show cow as well, being grand champion Holstein female at the San Francisco Livestock Show in 1919.

This is not the only good cow Mr. Vogel will sell as he will dispose of his producing herd containing many high producing cows and heifers, all with a clean bill of health. It has taken years to build up this herd and now the breeders in California will have an opportunity to procure some of these good animals.

The breeding of the females is of the very best, carrying the blood of many of the highest producing lines. These females in turn have been bred to bulls of breeding that will nick well with them and produce calves fully the equal or better than their immediate ancestors.

A well-known cattleman and sugar-beet raiser maintains that in pasturing cattle on the beet tops the manure produced is of fertilizing value nearly equal to the fertilizing value of the beet tops if they are plowed under as such.

The Holmes-DeWolfe Guarantee Sale

DEC. 15, 1920

R. L. Holmes and H. A. DeWolfe

of Modesto of Ripon

Will sell 45 head of registered Holsteins consisting of 40 females and 5 bulls.

This is an especially good lot of cattle, the majority of which are of breeding age.

The younger stock are selected for their exceptionally good breeding.

The quality of the offering is good enough to go into any herd. Those needing foundation stock, or established breeders who wish more registered cattle will find stock that the most discriminating will wish to possess.

Every animal over 6 months of age tuberculin tested and sold subject to a 60-day retest.

Sale at Modesto under the auspices of the

STANISLAUS COUNTY HOLSTEIN BREEDERS' ASSOCIATION

E. M. MORROW, Secretary

Auctioneers

COL. GEO. A GUE, Yakima, Wash. COL. CY. U. CLARK, Modesto

Poultry for Profit

TURKEY STOCK FOR BREEDING AND MARKETING.

To the Editor: I expect to move on a ranch in November and plan to buy some Mammoth Bronze turkeys for breeding stock. How old should the hens and toms be for raising turkeys for market purposes? How many hens to each tom? I will also buy a few hundred day-old chicks for November and sell them as broilers or friers in February or March. I would have to buy food for them. Would you consider that profitable?—G. A. W., Marshfield, Ore.

By raisers of turkeys who intend them only for the block, it is almost universally considered that the male should be younger than the females. However, equally successful breeders differ in their opinions regarding proper breeding ages. Some make it a practice to keep their hens as producers of eggs as long as they are profitable, but each year secure new gobblers one year of age and of a different strain or strains for mating with the hens that are one year of age and older. Others consider that while the use of eggs from year old hens does not result in such large or even growth in the young, the added number of eggs laid by the young hens—and often when the range is restricted and the hens well fed, greater fertility—renders it more profitable to sell all hens each fall and carry over, or purchase, only pullets for breeding during the following spring. It should be noted that we refer only to breeding of turkeys for killing, and that the handling of breeding turkeys that are used for producing breeding stock is not taken into consideration. Twelve hens may be safely mated with one vigorous gobbler. If the band of hens consists of twenty-four or thirty-six birds, all of the gobblers should not be allowed to run with them at one time. Some breeders turn out one gobbler with the hens one day, another the next day, and the third the following day. The males often fight and seriously injure one another if allowed to run out at the same time. Under certain very favorable conditions it is just possible that our correspondent might make a profit from raising all of the lot of purchased chicks—pullets as well as cockerels—to be sold as broilers, but we do not wish to accept the responsibility of encouraging him to undertake the matter.

The early maturing pullet, provided she is of good size for her age, will be the most profitable layer during the fall and winter and early spring.

THE POULTRY MARKET.

The opening of this week showed a sharp rise in poultry product prices, with the exception of turkeys, which, according to San Francisco poultry dealers, are in for a decided decline between now and Thanksgiving, following the break in prices consequent upon the heavy arrivals of dressed turkey on this market in the past few days. Extra fancy eggs rose 4½ cents on Monday, but reacted, closing with a gain of 2½ cents. It is reported that record prices for eggs in the Tulare district has been reached with the payment of 74 cents to producers. With best eggs now selling around 94 cents a dozen wholesale, it looks as though the consumer must meet the dollar mark again—the second time this season—if he must start the day with the conventional egg and bacon breakfast.

A DELUGE OF DEHYDRATED EGGS PROMISED.

A shipment of Chinese eggs dehydrated at a Shanghai plant is scheduled to reach San Francisco the latter part of next January, according, to "Himrod, the egg king of China."

Himrod and his associates plan placing the equivalent of a dozen eggs on the market at 25 cents or less all year round. Providing eggs on the Pacific Coast drop to a level low enough, Himrod and his associates plan also to establish a dehydrating plant at Santa Cruz, where the chicken-raising industry has grown rapidly in the past five years.

San Francisco will be the distributing center of the United States for the product. Local offices have been established and warehouse space engaged, it is reported.

The dehydrated eggs will come to the consumer in powdered form and in cans. They are merely fresh eggs from which all moisture has been removed. When the proper proportion of moisture has been replaced the product is said to meet all the requirements of the average egg.

Poultry Breeder' Directory

Rate, 4c. per word. Cash must accompany all orders.

—THE MISSION HATCHERY—
Planing for your early chicks? We are. and booking orders for R. I. Reds, Barred and White Rocks, Black Minorcas, White, Brown, Buff Leghorns; delivery January and later. Write for prices and particulars, stating your needs. Eggs from Breeding Stock of Quality. Chicks hatched right and carefully packed for safe delivery—express or parcel post, at reasonable prices. We aim for the good will of satisfied customers; will you try us out? The Mission Hatchery, Campbell, Cal.

BARRED PLYMOUTH ROCKS —"Nothing Better in Poultry." Wonderful layers. Choice hens and pullets for sale; also fine cockerels that will improve your flock. Now booking orders for hatching eggs. I have made a specialty of Barred Rocks for over twenty-two years. That's why our birds win at all the leading shows. Catalog free. Chas. H. Vodden, Box 3, Los Gatos, Calif.

SUPERIOR WHITE LEGHORNS — WE BREED THEM.—Order your spring chicks now to insure desirable delivery date. We raise all chicks from our proven producers from OUR OWN YARDS and guarantee them vigorous heavy layers. A card brings full information and catalogue. Bolfing Poultry Farm, Gilroy, Calif.

BABY CHICKS—Stop! Look! Listen! Before you place your order for Single-Comb White Leghorn Baby Chicks, write for my booklet telling you about my large, heavy-laying stock, etc., and price and terms. H. A. Schlotthauer, Exeter, Calif.

RAISE FALL CHICKS—They are profitable. Write for circular. See why they pay. Chicks every week. R. I. Red, Barred Rock, White Leghorn. Also booking for spring delivery. Order now and get a desirable date. Safe arrival guaranteed. Stubbe Poultry Ranch and Hatchery, P. O. Box 67, Palo Alto.

ATKINSON'S PEERLESS ANCONAS lay more and eat less than other breeds. 50 big husky cockerels, $5 and up; 200 pullets, trios, and pens for sale. Hatching eggs. Catalogue free. J. W. Atkinson, Box B, 130 Willard St., San Jose, Cal.

WHITE LEGHORN BABY CHIX from heavy-laying Hoganized Stock. Safe arrival of full count, live, strong chix guaranteed. Price list and interesting literature on application. The Pioneer Hatchery, 408 Sixth St., Petaluma, Cal.

DARK CORNISH Breeding Trios, $25. Our own "Victor" strain, with importations of England's best, bred successfully twenty-six years. W. S. Templeton, Route A, Box 25, Santa Clara, Calif.

WATCH US GROW—"Quality Chicks." We are now booking orders for the season of 1921. White and brown Leghorns, R. I. Reds and Barred Rocks. Order early. R. W. Ohlen, Campbell, Cal.

MAMMOTH BRONZE TURKEYS—Prize winning eastern strain; large bones, vigorous, well marked. Hens, $10; toms, $15 and $20. Mrs. W. S. Adams, Rt. 2, Box 73, Petaluma, Cal.

BABY CHICKS — White Leghorns — 10s, 100's, 1,000's—hatched right in $60,000 brick and concrete hatchery from our selected heavy layers. Pebbleside Poultry Farm, Sunnyvale, Cal.

GOLDCROFT BUFF ORPINGTONS, Columbian Wyandottes and White Leghorns. Heavy laying strains. Breeders and young stock. Samuel Abrams, Box 13, Los Altos.

BARRED ROCKS, WHITE ORPINGTONS—heavy layers; winners at leading shows. Special prices on old and young stock. R. P. Lutzi, 1450 23d Ave., San Francisco.

LARGE NUMBER of Choice Stock Toms and hens; also Geese and Herding Collie Dogs. Stock shipped from St. Helena and San Miguel. John G. Mee, San Miguel, Calif.

FOR SALE—200 pullets, 5 months old; 100 laying hens, 2 years old; 300 baby chicks, 8 weeks old—White Leghorns. Joe Scheiber, Box 64, Sheridan, Cal.

HART'S MAMMOTH BRONZE TURKEYS—Large, well-marked, year-old hens. Thrifty young stock of both sexes. Albert M. Hart, Clements, Cal.

MONEY IN TURKEYS? Yes. If you have the right stock and breed. Address A. W. Gauger, Dos Palos, Cal. Breeder of Mammoth Bronze Turkeys.

CHICKENS, DUCKS, GEESE, GUINEAS, Pea Fowl, Pigeons. Wm. A. French, 545 W. Park St., Stockton, California. Stamps.

PLACE YOUR ORDER NOW for chicks for 1921. Standard varieties. Prices right. Send for circular. Madera Hatchery, Madera, Calif.

ROUEN DUCKS for sale. Fine stock—all prize-winners. Emma V. Miller, R. R. 2, Box 534, Santa Cruz, Cal.

BOURBON RED TURKEYS—Buff Orpingtons. The Ferris Ranch, R. 2-144D, Pomona Calif.

WHITE HOLLAND TURKEYS—Breeding stock. H. H. Buhring, Concord.

FOR SALE—12A Kresky Brooder Stove. H. W. Fitting, Livermore, Calif.

BOURBON RED TURKEYS. Mrs. Geo. F. Smith, Hardwick, Calif

TURKS WITH SCABBY LEGS.

To the Editor: What is the best way to get rid of white scab on turkeys' legs? It forms knots of white scale up near the hock joints and later these knots break off and leave holes, eaten in the skin. The leg is mottled with white scale and gives the bird a bad appearance and they seem not to thrive quite so well as others of same conditions.—Subscriber, Turlock, Cal.

The description of the scales on the hocks indicate the presence of articular gout, which is caused by crystals of urate of soda. When troubled with this disease the fowls do not walk or stand comfortably. Often the scales or nodules ulcerate discharging a stringy pus and exposing cavities of the joints to the air. Early stages of the disease are often mistaken for rheumatism. The chief cause of the trouble is an abnormal condition of the kidneys that is nearly always brought on by lack of green feed, or too much meat in connection with the lack of greens and roughage. Badly diseased birds may live a long time, but there seems to be no cure for them. Mild cases may recover on a corrected diet. As a treatment to assist nature to cleanse the blood, give each bird a teaspoonful to a tablespoonful of Epsom salts, according to the size of the bird. Succulent green feed in variety and in abundance is the best medicine for this disease.

S. C. White Leghorn

Baby Chick and Hatching Eggs

From 227-egg strain of winter layers. Book your order now for early delivery.

Protect your home and stock with a pedigreed Scotch Collie. They make excellent herders and are good companions for children.

MEYER POULTRY FARM
and
COLLIE KENNELS
Rt. A, Box 17A,
MODESTO, CALIFORNIA

FOR GREATER EGG PRODUCTION FEED— COULSON'S EGG FOOD
FULL PARTICULARS IN OUR FREE BOOK "CHICKENS FROM SHELL TO MARKET"
Coulson Co.
PETALUMA, CAL.

CHICKEN POX.

To the Editor: What can I do for my poultry? They have chicken-pox. Is that disease easily cured?—G. G., Atwater.

Except in severe cases this disease is frequently cured with little trouble. The following simple remedies are frequently used for its treatment: Sulphur ointment; Carbolic ointment; glycerine in which is mixed two per cent of carbolic acid; or bathe the affected parts with soap and water in order to soften the crusts, and afterward apply a solution of sulphate of copper (blue stone), one-quarter ounce to one pint of water. The Veterinarian Division of the University of California, Berkeley, will send free on request Circular No. 145, entitled "Suggestions to Poultrymen Concerning Chicken-pox."

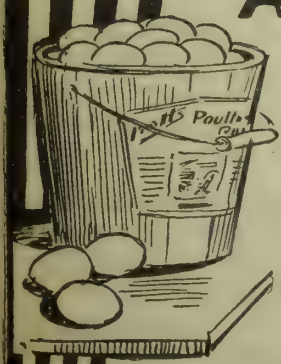
SONOMA CO. FARM BUREAU EGG-LAYING CONTEST.

To the Editor: The Sonoma County Farm Bureau this year started an Egg-Laying Contest on November 1 at Petaluma. There are now thirty-six entries in the contest, which is the present capacity of the building. At the end of the first week of the contest the standing of the six highest pens composed of ten hens each was as follows:

Owner	Pen. No.	No. Eggs
S. G. King (Petaluma)	5	38
J. J. King (Petaluma)	6	37
V. H. Guthrie (Petaluma)	12	33
E. O. Hussey (Petaluma)	2	35
Ray Cole (Petaluma)	10	33
W. L. McAllister (Sonoma)	7	33

There are three pens or entries of twelve hens each, two of which are alternates, placed together in each pen of the contest building.

You Can Have Eggs All Winter-If



you give your flock a little help. It isn't a matter of chance—you'll get eggs if you work for them. And if your birds lay heavily *this* winter you'll take in a lot of egg-money because prices will be high. The extra eggs you can get will pay for many things you want and need.

Give your layers a chance to do their best work. Feed a good ration and include

Pratts Poultry Regulator

the original poultry tonic and conditioner. It makes hens lay because it puts and keeps them in condition to lay—healthy and vigorous. Its natural tonics, appetizers, digestives and laxatives strengthen and regulate the internal organs—make hens healthy—then they lay. Nearly fifty years of successful use by the world's leading poultrymen proves it. And our money-back guarantee is your protection. Sold in packages, pails and sacks up to 100 lbs.

Pratts Roup Remedy

is another big aid to winter layers. Put it in the drinking water occasionally, especially during spells of bad weather. It heads off dangerous colds and deadly roup, and aids in overcoming these troubles if they appear.

"Your Money Back If YOU Are Not Satisfied"
One of the 60,000 Pratt dealers is near you. Talk this over with him.

PRATT FOOD CO. Philadelphia Chicago Toronto

Makers of Pratts Animal Regulator, Pratts Cow Tonic, Pratts Hog Tonic, Pratts Dip and Disinfectant, Pratts Poultry and Stock Remedies PR25

Pratts

Home Circle Department

WESTERN ROBIN'S NEST.

Practically leafless trees make November an excellent time for searching out nests which the birds deserted, after raising their broods, this year. Wise child welfare workers know there are few things more fascinating to the wee folk than a tramp aiming to thus explore tree-lined roads, to bring home this work of feathered architects. If last spring the lads had located nests while used as nurseries and had personally known the little builders, much joy is added to the Fall study of the deserted bird homes.

A most interesting nest is that of the hummingbird when wonderful use has been made of cobwebs, and of lichens. To find how these substitutes for our clumsy brick and lumber are skillfully used, to learn how the dainty mother's breast feathers take the place of the trowel—why, resolve to find her building such a nest and learn for yourself. If this take several years—all the greater is the joy.

The domicile of another nest builder, the yellow warbler, or summer yellowbird, is ofttimes found in the river bottoms. By midwinter this summer visitant has gone to Spanish-speaking countries of the warm south, to Nicaragua, Panama, or even to Columbia or to Venezuela. One yellow warbler nest now before the writer is a structure marvelous for its use of nearby materials. The outside is composed almost entirely of bark fibre of the cottonwood, an excellent binding material. Then it is daintily lined with the wool of the same tree. Here is a lesson for the young Californians who are to do our city planning of tomrrw. Wise men from elsewhere deplore our tendency to make California a jarring potpourri from other civilizations. We lay out a park—and proceed to cover it with Chinese pagodas, Moorish arched buildings, Dutch windmills. We plant a roadside, and, neglecting our California silva, use Norway maples or Oriental sycamores. The lads and lassies who will do our city and rural planning of tomorrow can learn from the yellow warblers' nest the common sense, the expediency, the beauty of using materials at hand. Thus will countryside and city grow to be more distinctively Californian.

Photo courtesy of California Fish and Game Commission.

That even the city-dwelling child may enjoy on his nature-study field excursion exploring and studying nests is proven by our cut. Dr. Bryant photographed this robin's nest at the Chain-of-lakes, Golden Gate Park, San Francisco. Many notes on nesting are found in Wheelock's "Birds of California," which divides birds according to conspicuous colors and which can be obtained at many County Library branches.—From California Nature Study League, care of C. M. Goethe, 720 Capital National Bank Bldg., Sacramento, Calif.

Puzzling over Christmas gifts? Why not a nature study book, useful for months and years to come?

THE INSUBORDINATE FOWL.

Hiking through the small French town, an ignorant chicken, unversed in the appetites of American darkies, crossed the road in front of a colored detachment. With much zeal a soldier broke forth from the ranks and set out in pursuit.

"Halt!" bellowed the officer in charge. Both fowl and negro only accelerated their paces.

"Halt! Halt!" repeated the officer.

The dusky doughboy made one plunge, grasped the chicken by the neck and stuffed it, still struggling, inside his shirt.

"Dere!" he panted. "Ah'll learn you to halt when de captain says halt, you disobedient bird."

GUMSHOE.

"Look here, Mose," said the white foreman of a gang of colored laborers, "every time I come around you're loafing. How does it happen I never find you at work?"

"Ah'll tell you how come, boss," explained Mose aggrivedly. "It's cause dem rubber heels of yours don't make no noise a-tall."

WHERE?

Joseph and Isaac went to hear Billy Sunday preach, and after service, as they were going home, Joseph said:

"Vell, Izaac, vat you tink of him?"

"I didn't like him," said Isaac. "Too much hell. It was hell, hell, hell all the time. And I don't believe there is any hell, Joseph."

"No hell?" asked Joseph, in amazement.

"No," answered his friend.

"Vell, then, Izaac," said Joseph, "if there is no hell, where is bizness gone?"

NEAPOLITAN SALAD.

Two cups cottage cheese, ½ cup cream, ½ teaspoon salt. Mix cheese, cream and salt. Color one-third of the mixture pink with beet juice. Mold in brick-shaped tin which has been dipped in cold water. Put in one layer white, one of pink and then white. Chill thoroughly before turning out. Slice with a very sharp knife that has been dipped in hot water. Serve on lettuce leaf with salad dressing.

THE LITTLE BOY'S BEAR SCARE.

There were no bears left in the country where the little boy carried the well-filled pail across the meadow to his aunt Susan, after the cows were milked one evening. The little boy knew that there were no bears even in his grandfather's woods; but he knew also that there had been bears prowling around that very meadow when his father was a little fellow and the meadow was part of the wilderness. He was thinking of bears as he walked along, holding the pail carefully and wishing the cows had come from pasture a little earlier, so he would not be carrying milk to Aunt Susan after the sun went down.

If there should be a bear and it should step suddenly from behind the bushes, the little boy wondered what he should do.

"The thing to do, I suppose," the little boy thought, and this is exactly what he thought, because he told his mother so afterward), "the thing to do would be to stand still and look at that bear square in the eye, same as saying, 'I'm not afraid of you!' Grandfather says bears are not dangerous except in the spring when they first wake up and are hungry, and in the autumn when they are looking for a den. But the old bear might be looking for a den the very minute you met him!"

This thought frightened the little boy as he walked along the meadow path, with both eyes wide open, looking for a bear! It was growing dark. If there should be a bear, that bear might jump out and hug him to pieces! —squeeze the buttons right off his blouse—before he could call to Aunt Susan or his mother! There was a light in Aunt Susan's kitchen, but if she did hear a boy calling, she might think it was all fun and not come. The woodshed was between his own house and his mother's kitchen, so, unless his father or the hired man happened to be out of doors, he could not expect help from home if he did meet a bear.

By this time the little boy was thoroughly frightened. He had just made up his mind that the minute his aunt Susan took that pail of milk, he would run for his home as fast as his legs would carry him, when he saw something beside the path, a few steps farther on, that looked like an animal. The little boy stood still. The animal stood still. At first the little boy hoped the black-looking animal was Aunt Susan's dog; but Aunt Susan's dog never stood still and waited like that. Even if Rover couldn't have seen the little boy coming, he would have smelled him and barked joyfully. What if a bear should smell him and growl horribly?

That thought was too much for the little boy. He ran home fast, fast, slopping milk all over his play-day trousers.

"What is the matter?" asked the big sister, as the scared little boy burst into the kitchen.

"They's something beside the path," he panted, "that looks like a bear. I was afraid to go by it!"

Without a smile, the big sister took her little brother by the hand and told him to show it to her, she wasn't afraid.

When they reached the dreaded spot, the little boy, pointing ahead to a plump, black something beside the path, whispered, "There it is!" His sister, without answering a word, walked straight up to the animal and without any hesitation sat on it. It was a stump!

"Now," said she, "I shall sit on this bear, little brother, and wait for you while you take the milk to Aunt Susan. And you'd better not tell her that you were afraid of a bear or she will laugh at you, and so will Uncle John."

The little boy took her advice; he didn't say a word about bears again that evening. When his big sister went in to kiss him good-night after his mother had tucked him in bed, he said sleepily, "You're awful good, and when you're a little old lady, and scared about nothing, the way ladies are—about crossing streets and things —and I am a big man, why, I'll take care of you, and I won't let anybody laugh at you ever!"

At that the little boy got a kiss from his big sister. But she teased him a little ever after by saying, "Bear in the path?" when he didn't have quite courage enough to do his duty. But he had learned a lesson, and the fact that the first "bear" was only a stump made other obstacles easier.—Frances Fox, in the Continent.

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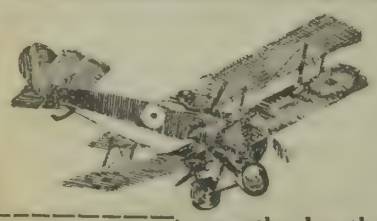

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MORE MUSIC IN THE AIR.

(Written for Pacific Rural Press.)

Some time ago these columns reported two counties—Sutter and Marin—as having paid supervisors whose business it is to teach music and develop the musical possibilities in the schools of the county. It now becomes our pleasant duty to bring the record up to date with the announcement of a third county—Stanislaus.

Stanislaus has a music supervisor for her schools whose itinerary includes eighteen districts with forty teachers and is constantly widening. Such good results have already been attained that many of the upper classes are able to read by note and do two-part work. Phonographs have been purchased for many schools and a "phonograph day" is observed once a month.

Along with other good things, it is coming—the day when we shall realize that music has just as important a part in the school-room as anything that can be taught. At least one high state authority is on record with the declaration that the music hour will become the most vital hour of the day, for no other subject and hour has such tremendous possibilities.

That parent-teacher part of your Home Demonstration work (you surely have that going by now) would do well to enquire if there is any good and sufficient reason why all the other counties should not follow the lead of the pioneers—Sutter, Marin and Stanislaus.

STICKY FLYPAPER STAINS.

Two weeks ago we printed a plea for help for the removal of sticky flypaper stains. The following replies have been received:

"To remove sticky flypaper stains from floor(take a table knife, put in boiling water for five minutes, then run the knife under soiled spot as you would scrape any soiled spot. Keep knife hot and after scraping off all that is possible of the sticky flypaper, take hot soapy water and clean cloth and wash while the spot is still hot from the knife. Have used for years with success."—Mrs. A. G., San Andreas.

"In answer to the plea for help, I would suggest the use of wood alcohol. Apply and let it stand for a few moments, wipe off and repeat. I have used it on feathers and hats that have met tanglefoot and it proves a success."—Mrs. R. S., Hanford.

"If C. A. P. of Visalia will rub the sticky flypaper stains on her wood flooring with some butter or lard, rubbing it in well, and then wash with hot soapy water, I think she can get the stains off."—E. A. McK., Ukiah.

"In answer to inquiry for information regarding removing sticky flypaper stains from floor, or elsewhere, if she will use alcohol she will have no trouble."—W. H. B., San Mateo.

"I have never removed any from floor, but I accidentally laid a white, soft, wool shawl on a sheet of sticky flypaper and I removed same with turpentine. It seems it would do in your case."—A. McC., Ripon.

PARENTHOOD.

These are the years our God
  Lays down, and nothing loth,
His sceptre and His rod
  As He were tired of both.
Bids men and women take
  His empire for a while,
To ban, to bless, to make
  The children weep or smile.

All power be yours, He saith—
  Over My little ones:
The power of life and death,
  The power of clouds and suns.
The power of weal and harm
  Be yours to have and hold;
In you they shall go warm,
  In you be pinch with cold.

Just for these God-like years
  Ye shall not know th' intense
Pang beyond prayers and tears
  Of your love's impotence.
Be yours to make, to mar,
  This lovely thing I wrought,
With love brought from afar,
  And My eternal thought.

For every needless tear,
  For all the smiles unsmiled,
For lonely wrong and fear
  Brought on any little child,
Myself will exact the fee,
  A God of wrath and scorn;
Better that day that ye
  Were dead ere ye were born.

Lord of the skies and lands
  Take pity on Thy dust,
Strengthen our mortal hands
  Lest we betray Thy trust!!

—Katharine Tynan.

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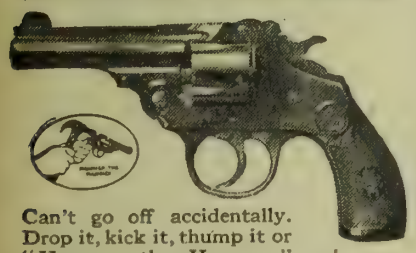

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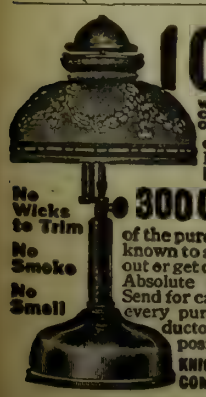

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SPAGHETTI.

One-half box of 8-oz. package of spaghetti, 1 can tomato soup, ½ can water, ½ pound cheese, 4 long strips bacon, 6 small onions, 1 cup diced celery, 1 green pepper, chopped.

Break the spaghetti in small pieces and boil in salted water until soft. Cook the can of soup and water and melt in the resulting sauce, the cheeese cut in small pieces. Cut up bacon and brown in frying pan, later browning the sliced onions in the bacon fat at one side of the pan. Drain the spaghetti and put in the sauce with the diced celery and pepper and cook in double boiler about an hour. This makes a fine one-dish meal, or it is excellent served with plain boiled potatoes and head lettuce salad. It is especially interesting, as it can be prepared beforehand and heated in time for serving.

ONION FLAVOR.

Prepare string beans for canning and peel one medium-sized onion for each jar. Blanch the beans and onions in boiling water, in separate kettles, for five or ten minutes; drain and rinse in cold water. Pack beans in glass jars, placing an onion in the center of each jar; fill to overflowing with cold water, put on covers and clamps, and put jars in wash boiler on a rack. Fill boiler with water to the neck of the jars, bring to the boiling point and actually boil them for three hours. Remove the jars from the boiler and set in a sheltered place to cool over night. Next day test covers to see that each is firm and set away in a dark place for future use.—Contributed.

STUFFED TOMATOES.

Six large ripe tomatoes. Cut off the stems and take out the pulp. Run this through a sieve to take out the seeds. Then add one-half cup of finely chopped cold boiled ham or other cold meat, 12 chopped mushrooms, 2 heaping tablespoons stale bread crumbs, 1 tablespoon chopped parsley, 1 tablespoon grated onion, 1 chopped pepper and one-half teaspoon salt. Fill tomatoes with this mixture, heaping up in the center. Sprinkle over the top with bread crumbs and bake in hot oven one-half hour, basting frequently with melted butter or drippings. When done, take them up carefully with cake turner, garnish with leaves of crisp lettuce and serve. Bell peppers may be filled with the same mixture.

SCALLOPED CARROTS.

Two tablespoons fat, two tablespoons flour, one cup milk and carrot stock, salt and pepper to taste. Wash and scrape the required number of carrots. Slice very thin and cook until tender in just enough salted water to keep them from burning. Drain, saving the stock. Melt the fat, add the flour and seasoning; stir until well mixed. Add liquid and cook until it thickens. Mix sauce with cooked carrots. Put in buttered baking dish, sprinkle with bread crumbs and bake until brown.

TO REMOVE COATING IN TEAKETTLE.

Editor Home Circle: Could you advise me through your columns how to get the thick coating that has gathered inside of my teakettle loose, so I can scrape it off. Thank you in advance for your courtesy.—Mrs. H. W., Oroville.

Boil in your teakettle a solution of water and muriatic acid in proportions of 10 parts water to 1 part acid and most of the thick coating will be dissolved. If any lingers on the sides it can easily be removed.—Editor.

THE CHRONIC OPTIMIST.

The group of war veterans were discussing Thanksgiving. One of the guests was a veteran who had lost both legs.

"And what have you to be thankful for?" they asked.

"Lots," he replied. "I've got cork legs, and I can put on my socks with thumb tacks."

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On raw mornings

Somehow, Ghirardelli's never tastes so good, so warming, so comforting, as on raw mornings when you're up just a bit ahead of the sun, with lots of chores to be done. Then it is that you're doubly grateful for a strong cup of this delicious food-drink. It nourishes and sustains!

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STANDARD OIL COMPANY
(California)

THE MARKET REPORTS

SAN FRANCISCO

San Francisco, November 17, 1920.

WHEAT.

The market is dull and offerings are few with demand apparently growing less. Further weakness is predicted after a quiet week.

Wheat .....$3.75@3.90

OATS.

The market has slumped in activity during the past week, although price quotations are the same. There is very little doing so far but increased activity is expected soon. There have been practically no inquiries for seed. It is thought that higher quotations would develop with inquiries.

Red Feed, ctl. .....$2.55@2.60

BARLEY.

With practically no trading, and that on a hand to mouth basis, inquiries have fallen off considerably. Spot trading has been reduced to a minimum and quotations are nominal.

Feed Barley, ctl. .....$2.10@2.15

CORN.

No trasactions of any magnitude are reported and quotations are unchanged. There have been no arrivals of any consequence.

Egyptian, white ..... Nominal
do, brown .....$2.50@2.60
California .....$3.00@3.10

FEEDSTUFFS.

Rolled barley is at a higher figure. Rolled oats holds its price after the increase of last week. There are offerings of bran or middlings. The market is firm in tone and continued steadiness is expected.

Rolled Barley .....$48.00@49.00
Rolled Oats .....$55.00@56.00
Alfalfa Products .....$39.00@40.00
Cracked Corn .....$58.00@60.00
Bran .....$63.00@64.00
Poultry Scratch .....$3.75@3.90
Mill Run $66.00

HAY.

Although the San Francisco hay market in common with most other hay markets throughout the country has been exceedingly dull for the past week, the light arrivals have kept the prices at their former levels, in the face of a very light demand. Last week's receipts of hay on the local market were 1509 tons. During the week previous 1997 tons were received.

Prices unsatisfactory to the farmers; the rain and farm work, have served to hold down shipments thus keeping prices stationary in the face of the poor demand. It is further expected that with plowing and seeding grain in hand, hauling and shipping hay will be further hindered and may keep the prices from declining even if the poor market continues. Interior trading has been of negligible quantities only. Buyers seem to be more cautious than ever. Alfalfa is still the strongest hay. The supply of alfalfa seems to be light, and the demand continues steady. Prices quoted f. o. b. San Francisco less $1.00 per ton commission charges.

Wheat, hay, new .....$28.00@29.00
Tame oat, new .....$24.00@27.00
Wild oat, new .....$18.00@20.00
Barley ..... $17.00@20.00
Alfalfa, 2nd cutting .....$22.00@25.00

RICE.

The market is steady now with slightly lower prices quoted on some grades. Activity has been reduced to a minimum during the week.

California Fancy $5.25
do, Choice $5.00
Southern Honduras, long grain $9.00
China, No. 1, double mat $8.50
Blue Rose, fancy $7.25
Fancy Head (Philips & Co.), 10 lbs. $10.00
California Japanese, No. 1 .....$5.50
do, No. 2 .....$5.25

FRESH FRUITS.

Apple receipts continue heavy and that fruit is moving well, with prices a little lower on some grades. Bellflowers are quoted slightly at an advance due to their scarcity. Newtown Pippins are on the market. Both Rhode Island and Virginia Greenings are finished. The week saw the last of the cantaloupes, Persian and watermelons. Casabas are still on the market. Berries are almost off the market, although better arrivals are expected during the coming week.

Apples: Wagner's $2.00
do, Spitzenberg, Oregon .....$2.50@3.00
do, Jonathan .....$2.50@3.00
do, Bellflowers, Watsonville ..$1.25@1.75
do Newtown Pippins .....$2.00@2.25
Pears (52-lb. box) .....$2.00@3.50
Strawberries, 6 12-oz. boxes.....$1.00@1.50
Casaba, crate $1.00
Raspberries, drawer .....75@90c
do, 8-oz boxes .....30c@40c
do, 8-oz. boxes .....40@50c
Grapes, crates (20 lbs. net).... $1.50@2.50

POULTRY.

Arrivals of most all grades have been light for the past week. Five or six cars of poultry from the East, billed to San Francisco, are held en route, due to storms on the transcontinental railway lines. Although only light receipts of turkeys are reported, the demand is poor and prices have fallen on all grades. A better market will undoubtedly develop with the approach of Thanksgiving. Heavier receipts are also expected.

Broilers, small, alive, per lb. .....60@62c
do, large .....47@50c
Hens, mixed color .....38@40c
do, Leghorns ..... 28@35c
Roosters, young .....34@48c
do, old 25c
Friers ..... 40@42c
Squabs ..... 70@80c
Geese .....30@35c
Ducks .....30@35c
do, old .....28@30c
Belgian Hare, live .....20@25c
do, dressed .....24@27c
Jack Rabbits .....Nominal
Turkeys, young, large, lb. .....42@47c
do, old lb.....40@45c
do, dressed, lb. 52c

BUTTER.

Starting the week with a brisk demand and heavy receipts, the market has continued steadily with no sensational developments. With the week's close a slightly easier feeling developed and dealers showed a tendency to shade prices, especially on medium grade butter. The market generally, however, is in good shape and trading stocks are somewhat lighter. Cold storage holdings show a steady reduction.

	Thu.	Fri.	Sat.	Mon.	Tu.	Wed.
Extra	..	54½	..	55	54½	53½
Prime 1sts	..	52½	..	53	51½	51½
Firsts	..	48½	..	48½	48½	48½

CHEESE.

A lack of buying interest characterizes the market on California Fancy Flats, while Oregon Young Americas are meeting with a little better demand and are selling at a higher figure. The continued stagnation of the market is reported due to excessive prices charged by retailers, which, it is said, has checked consumption.

California Flats, fancy 29½c
do, Firsts 22½c
Oregon Triplets 26½c
do, Y. A., fancy 32½c
Full Cream Jack 29c

EGGS.

Continued heavy Eastern shipments are keeping up egg prices, which, however, seem to have reached their high level for a time. A drop is expected soon in many quarters, while some dealers think the market will continue steady.

	Thu.	Fri.	Sat.	Mon.	Tu.	Wed.
Extra	..	85	..	89½	88	88
Ex. Pullet	..	74	..	76½	76½	76½
Undersized	..	65½	..	67½	67½	67½

HONEY.

The market is still very weak on extracts but firm on comb varieties. Receipts continue heavy. Little activity is reported.

Water White (extracted) .....11@13
White .....13@15c
Amber Alfalfa .....10@12c
Light Amber (comb) .....25@30c

POTATOES, ONIONS, ETC.

Bay stocks of vegetables are largely frozen but the Southern produce is arriving well and meeting with a good market. The potato market is strong on account of the rain, which seems to have precluded the shippig of any large quantities. It is thought that a few clear days will bring the market down with more digging on the river. Oregon potatoes are arriving well. Onions are scarce but are in poor demand.

Turnips $1.00
Beans, green .....8@10c
Carrots, per sack .....$1.25@1.50
Lettuce, local, doz. .....25@30c
Cucumbers, Alameda, large box ..$1.00@1.75
Tomatoes, Alameda, large box.... 75c@1.50
Summer Squash, box 35-40 lbs... $1.25@1.75
Potatoes, New River, cwt. .....$1.50@2.10
Onions, yellow, sack .....50@80c
do, Red ..... Nominal
Green Onions, box, 25 lbs. .....$1.50@1.75
Celery, crate ..... $3.00@3.25

BEANS.

The market is better, especially on colored varieties, with Bayos leading. The latter are almost cleaned up and it is increasingly difficult to secure more stocks. Pinks are firmer, due to the heavy rains which have damaged all of the crop. As a result the better quality is at a premium.

(Wholesale prices, sacked, per ctl.)

Bayos .....$11.00@11.25
Blackeyes ..... $6.00@6.25
Cranberries ..... $6.00@6.25
Red Mexican .....$5.75@6.50
Pinks ..... $5.75@6.00
Large Whites ..... $4.25@4.50
Small Whites ..... $4.40@4.60
Limas, S. F. prices ..... $7.35@7.50
do, Baby, S. F. prices ..... $6.85@7.00

DRIED FRUITS.

Prices are unchanged; the market continues exceedingly dull with a weakening tendency noted.

Apricots.

Extra fancy Moorpark, lb. 30c
Fancy Moorpark, lb 23c

Growers Quality.

Growers' quality—Fancy, lb. 26½c
do, lb. 24½c
do, Choice lb.....22½c
do, Slabs, lb.....20c
do, Standards, lb. 18c

Raisins—The following prices have been established as the opening prices of the California Associated Raisin Company for the 1920 crop of raisins.

Muscat, Sun Maid, seeded, pkg, 36-16s, 20½c
do, Fancy ..36-16s, 20½c; 48-12s, 15¾c
Bulk, seeded, Baker's Sun Maid, 25-lb. 19½c
do, Fancy Sun Maid, 25-lb. boxes.... 20c
do, 4-crown, recleaned, lb. 23½c
Loose, 1-crown, recleaned, lb. 19½c
Layers, 3-crown, flat pack, 5-lb. box..$1.30
do, 3-crown, flat pack, 5-lb. box..$1.30
Clusters, 4-crown, flat pack, 20-lb. box $4.70
do, 4-crown, flat pack, 5-lb. box..$1.40
Sun Maid, 100-lb. boxes $20.50
Thompson Seedless, Sun Maid, recleaned, lb. 20c
do, Sun Maid, bakers, lb. 21c
Sultanas, Sun Maid, recleaned, lb. 19¾c
do, Sweat-box, layers, lb. 18½c

..Figs—Following prices have been established as the opening prices for the 1920 crop of dried figs.

White Adriatic, 12-10 oz. $1.25; fancy, $1.30
do, 12-8 oz. .....$2.00; fancy, $2.05
do, 50-6 oz. .....$3.10; fancy, $3.20
do, 70-4 oz. .....$3.30; fancy, $3.40
Adriatic, bulk, Standard, 50-lb. boxes, lb. 9c
do, bulk, fancy, 50-lb. boxes, lb. 13c
Black Mission, Standard, 50-lb. boxes, lb. 7c
do, Fancy, 50-lb. boxes, lb. 12c

Prices f. o. b. Fresno.

(Peach Growers, Inc., prices f. o. b. Fresno.)

Peaches.—Following prices have been established as the opening prices of the California Peach Growers for the crop of dried peaches.

Yellows, Standard, lb 15½c
do, Fancy, lb. 17½c
do, Extra fancy, lb. 18½c
do, Slabs, lb. 15¼c
Muirs, Standard, lb. 15¾c
do, Fancy, lb. 18¼c
do, Extra fancy, lb. 19½c

The above prices are bulk basis.

Shipment: September, October, November. Seller's option. The above prices are guaranteed against Association decline until January 1, 1921.

Prunes—Following prices have been established as the opening prices of the California Prune and Apricot Growers, Inc., for the 1920 (Calif. Prune and Apricot Assn., f. o. b. California.)

Sunsweet Brand, 20-30s, flat, lb. 25c
do, 30-40s, bulk, lb. 16c
do 40-50s, bluk, lb. 15c
do, 50-60s, bulk, lb. 12c
do, 60-70s, bulk, lb. 11c
do, 70-80s, bulk, lb. 10c
do, 80-90s, bulk, lb. 9c
do, 90-100s, bulk, lb. 8½c

First half September shipment, ½c premium; last half September shipment, ¼c premium. The above prices apply only to contracts already issued.

SPECIAL DECIDUOUS REPORT.

Sacramento, November 17, 1920.

Shipments of deciduous fruits have settled down to grapes and persimmons. Of course, the apple will be in evidence for some time yet. All varieties of grapes that are arriving in good condition are selling well. Emperors, $185 to $2.75;; Cornichon, $1.75 to $3.20; Tokay, $1.55 to $2.74; Malagas, $2.60. One car of persimmons shipped from Newcastle sold for $1.95 to $3.37½ per crate,; car grossed $3,021. Two cars of winter pears from Monterey sold as follows: Winter Nelis, 100 to box, $5.63; 180 to box, $4.50; G. Morceau, 45 to box, $2.75; E. Beurre, 150 to box, $3.45. One car grossed $2,018, the other $2,711.

SPECIAL CITRUS REPORT.

Los Angeles, November 17, 1920.

Fifty-six cars of Valencia oranges were sold in New York during the week past. As a whole the quality and condition of the fruit was satisfactory. Prices showed a sharp decline. This may be attributed to the increasing competition with Florida and Porto Rico stock, together with the curtailment of sales from jobbers' stores on account of the prevailing high prices during the past few weeks. The decline amounted to $1 to $2 per box. The best fruit sold generally around $10 to $13; extra choice grades, $7.50 to $10.50. Thirty-eight cars of California lemons were sold during the week. Quality and condition was good; however, prices declined 50 to 75 cents from last week. Best 300 size sold throughout the week generally at $2.75 to $3.25 per box; 360's for $2.25 to $2.75.

Special Livestock Market Report

San Francisco, November 17, 1920.

CATTLE—The beef cattle market was unusually active during the week, and as a result buyers were willing to pay the asking price for several lots they were neglecting for some time past.

Steers, No. 1, 1000-1200 lbs..... 9 @ 9½c
do, 1200-1400 ..... 8½ @ 9c
do, 2nd quality ..... 7 @ 7½c
do, thin ..... 5½ @ 6c
Cows and Heifers, No. 1..... 7½ @ 8c
do, 2nd quality ..... 6 @ 7c
do, thin ..... 3 @ 4c
Bulls and Stags, good ..... 4½ @ 5½c
do, fair ..... 3½ @ 4c
Calves, lightweight .....10 @11c
do, medium ..... 8 @ 9c
do, heavy ..... 7 @ 8c

SHEEP AND LAMBS—The local mutton and sheep market continues active, with prices ruling strong to higher for wethers. Ewes' values are dragging somewhat, but they will shortly react as the visible lamb supply is limited.

Lambs, milk ..... 9 @10c
do, yearling ..... 7½ @ 8c
Sheep, wethers ..... 7 @ 7½c
do, ewes .....4½ @ 5c

HOGS—Receipts fall short of requirements and as a result prices moved up sharply. Weather conditions may have had something to do with the falling off in receipts.

Hard, fat, grain-fed, 100-150 lbs. 13½c
do, 150-225 lbs. 14½c
do, 225-300 lbs. 14c
do, 300-400 lbs. 13c

Los Angeles, November 16, 1920.

CATTLE—There is no change in this market from a week ago. Good fat steers continue scarce and in good demand at steady and firm prices. Cows still plentiful, slow sale and weak.

Per cwt. f. o. b. Los Angeles.

Steers, prime to choice, 1050-1000 lbs. .....$10.00@10.50
do, good to prime steers, 900-900-1000 lbs. .....$ 8.50@ 9.00
Prime cows and heifers .....$8.00@ 8.50
Good cows and heifers .....$7.00@ 7.50
Canners .....$4.00@ 4.50

HOGS—In sympathy with markets in the Central West, which are sharply lower, the market here the past week broke 50c a cwt. Offerings pretty good and killers only taking such lots as needed for the fresh meat trade. Very few being bought for curing.

Per cwt. f. o. b. Los Angeles.

Heavy, averag'g 275@350 lbs. $10.00@11.50
do, 225@275 lbs. .....$11.50@12.00
Light .....$12.50@13.50

Rough docked 20 lbs. piggy sows 40 lbs. and stags 40 per cent.

SHEEP—The market remains much the same as a week ago. Offerings good and tone of the market weak, though prices have not been lowered. Lambs and yearlings in fairer demand, but wethers and ewes are as dull as ever.

Prime wethers .....$6.00@ 7.00
Yearlings .....$6.00@ 7.00
Prime ewes .....$5.00@ 6.00
Lambs .....$10.00@11.00

LOS ANGELES

Los Angeles, Nov. 16, 1920.

BUTTER.

While we have had several showers of late and the grass has begun to start, there has been no increase in the production. Receipts for the week were fair—298,100 pounds; not enough to depress the market, however. Demand good for all extras from the consuming trade and prices are 1c higher in sympathy with an advance in San Francisco. Low grades dull. Eastern markets unchanged from a week ago. We quote:

California extra creamery 56c
do, prime first 54c
do, first 52c

EGGS.

This is still a famine market. Fresh receipts the past week were very light—by rail for the week only 275 cases. With this falling off in the receipts and the holding up of the consumptive demand, there was an advance the past week of 2c all around, prices now being the highest ever known here. San Francisco is unchanged from a week ago and the same may be said of Chicago and New York. There was withdrawn from cold storage for the week ending November 10, 7673 cases, to make up the shortage in the fresh receipts. We quote:

Fresh ranch, extras 88c
do, case count 86c
do, pullets 76c

POULTRY.

Receipts the past week showed a marked increase and market for broilers, friers and hens hardly so active. Offerings largely in excess of the immediate demand, but dealers are taking all receipts and holding for the Thanksgiving demand. Ducks in good demand and higher. The cooler weather helped the market for them. Turkeys are steady and firm. Some private sales are being made for more money. Geese steady, but slow sale.

Broilers, 1 to 1¼ lbs. 38c
do, 1½ to 1¾ lbs. 43c
Friers, 2 to 3 lbs 40c
Hens ..... 33@38c
Roosters (soft bone) 3 lbs. and up 36c
Ducks ..... 28@32c
Turkeys .....43@45c
Geese 25c

FRUITS.

The fruit market is fast narrowing down to apples. Grapes are now out of the market and but few figs are coming in. A few late pears are still to be had and they sell very well. Figs are higher and apples are firm and in good demand. We quote from growers:

Figs, lb. .....15@17c
Apples, Bellflower, 4 tier .....$1.50@1.60
do, Delicious, lb. .....5@6c
do, Jonathan, packed box.. $2.75@3.00
Pears, lb. .....9@10c

VEGETABLES.

There was a firmer tone to the market the past week as a whole. Offerings of good fresh stuff falling off. Potatoes coming in less freely and market a little higher. Dehand, however, only fair. Onions are as plentiful as ever and market dull. Peas are a little higher under lighter offerings and demand very good. String beans steady and selling fairly.. Cucumbers are higher and in very good demand and so are tomatoes. Green peppers steady and in very good demand. Lettuce sharply lower but good demand. Cauliflower steady and selling very well. Celery very dull and sharply lower.

We quote from grower:

Potatoes, local, cwt. .....$1.75@2.00
do, Norther, cwt. .....$2.00@2.35
do, Idaho Russett, cwt. .....$2.00@2.35
Sweet Potatoes, lb. .....3@3½c
Cauliflower, local crate .....55@65c
Celery, pony crate .....$2.00@2.25
do, Northern, crate .....$3.00@3.50
Onions, Stockton, white, cwt. ....$1.35@1.60
do, yellow, cwt. .....90c@1.00
do, Australian Brown, cwt. ..$1.05@1.10
do, local, crate .....40@50c
Lettuce, crate .....75@85c
Rhubarb, per 30-lb. box .....80@1.00
Peas, lb. .....13@14c
Carrots, bunches, ...30@35c
Summer Squash, local, lug .....$1.00@1.25
String Beans, green, lb. .....7@8c
do, wax, lb. .....7@8c
do, Kentucky, lb. .....8@9c
Cucumbers, lug .....$1.75@2.00
Tomatoes, home-grown, No. 1 lug ..75c@1.00
do, No. 2 .....25@35c
Bell Peppers, lb. .....3@4c
do, Chile, lb. .....3@4c
Celery, crate .....$4.00@5.00

BEANS.

The market the past week was quiet. There was some little demand for Blackeyes and Pinks, but there was no movement in limas or whites. Eastern buyers and exporters are still out of the market. Not a single carload was reported sold during the week.

Limas, per cwt. $6.00
Large white, per cwt. .....$4.50@5.00
Small white, per cwt. .....$3.00@3.25
Pink, cwt. .....$5.00@5.25
Blackeyes, cwt. .....$5.00@5.25

HAY.

The market lapsed back into dullness the past week. Receipts were good and with increased offerings buyers become more independent; held back and bought sparingly and only taking such lots as needed for immediate use. What sales made, however, were at old prices. We quote f. o. b. Los Ageles:

Barley hay, ton .....$21.00@24.00
Oat hay, ton .....$24.00@27.00
Alfalfa, Northern, ton .....$25.00@27.00
do local, ton .....$28.00@32.00
Straw, ton .....$ 9.00@11.00

WALNUTS.

The demand holds up very well. The Association reported a good movement the past week in all grades and prices remain steady. The bulk of the crop has now been marketed. Shipments have dropped down to ten cars a day against 40 a day last week. We quote:

No. 1 ..... 22½c
No. 2 .....16½c
Fancy budded 25½c

Orchard run from independent growers also met with a very good demand at 12@14c a pound as to quality.

WEEKLY BUTTER AVERAGES.
Cents per pound for Extras.

Week Ending	San Francisco 1919	San Francisco 1920	Los Angeles 1919	Los Angeles 1920
Jan. 2	66.19	62.80	63.16	65.00
" 9	61.00	63.70	64.00	65.00
" 16	61.70	62.58	64.16	66.00
" 23	55.83	55.50	62.16	61.00
" 30	44.91	62.50	49.00	66.00
Feb. 6	43.58	64.75	47.33	68.60
" 13	46.80	60.75	47.60	64.00
" 20	51.58	60.80	63.16	64.00
" 27	53.90	59.40	55.00	66.00
March 6	56.16	58.66	59.00	62.00
" 13	55.58	57.50	58.00	59.00
" 20	54.41	59.50	56.00	59.00
" 27	56.41	58.58	58.00	62.00
April 3	54.23	56.00	55.50	56.00
" 10	57.16	55.41	56.00	55.00
" 17	52.41	55.76	54.00	56.00
" 24	52.41	55.00	54.00	55.00
May 1	52.41	54.66	54.00	55.00
" 8	52.91	52.90	54.00	55.00
" 22	57.91	52.83	59.00	54.00
" 29	57.91	51.41	59.00	54.00
June 5	54.12	50.90	57.00	54.00
" 12	53.58	51.25	57.00	54.00
" 19	53.16	53.66	57.00	55.50
" 26	52.83	55.75	55.00	57.00
July 3	52.37	56.91	55.00	57.00
" 10	52.13	57.70	54.00	58.00
" 17	52.71	56.80	56.00	58.00
" 24	54.24	55.91	57.00	58.00
" 31	55.08	56.58	57.00	....
August 7	55.50	56.10	59.00	58.00
" 14	52.33	57.08	57.00	58.00
" 21	52.66	57.50	56.00	59.00
" 28	52.66	59.70	58.00	61.00
Sept. 4	56.20	63.90	59.00	63.00
" 11	58.70	65.87	61.00	65.00
" 18	59.70	65.62	62.00	67.00
" 25	60.58	64.20	66.00	67.00
October 2	62.70	62.90	67.00	65.00
" 9	63.41	63.80	67.00	65.00
" 16	62.90	61.75	65.00	63.00
" 23	62.00	56.20	65.00	59.00
" 30	62.25	54.60	64.00	54.00
Nov. 6	62.66	52.21	64.00	55.00
" 13	64.50	52.90	66.00	55.00
" 20	63.83	54.25	66.00	56.00
" 27	64.30	....	67.00	....
Dec. 4	76.30	....	67.00	....
" 11	63.91	....	67.00	....
" 18	64.60	....	67.00	....
" 26	65.66	....	68.00	....

WEEKLY EGG AVERAGES.
Cents per dozen for Extras.

Week Ending	San Francisco 1919	San Francisco 1920	Los Angeles 1919	Los Angeles 1920
Jan. 2	75.60	62.50	69.50	60.00
" 9	69.91	61.20	66.66	58.00
" 16	58.70	62.66	62.41	58.00
" 23	52.58	57.66	54.66	55.00
" 30	48.75	58.00	52.33	55.00
Feb. 6	42.00	48.16	43.00	47.00
" 13	40.90	45.41	37.80	45.00
" 20	36.41	44.10	39.33	43.00
" 27	37.40	45.60	33.60	42.00
March 6	37.58	41.33	37.00	38.00
" 13	37.16	37.41	37.00	38.00
" 20	38.41	39.66	39.33	41.00
" 27	40.41	41.91	42.00	40.00
April 3	42.41	40.83	45.00	39.00
" 10	42.91	40.83	45.00	40.00
" 17	45.10	39.41	46.00	40.00
" 24	45.00	39.33	46.00	39.00
May 1	45.00	42.91	44.00	42.00
" 8	46.50	42.60	42.00	44.00
" 15	47.91	42.91	50.00	44.00
" 22	49.16	43.50	51.00	44.00
" 29	47.58	41.33	49.00	43.00
June 5	45.50	41.30	46.00	42.00
" 12	47.60	42.08	47.00	43.00
" 19	45.91	43.66	47.00	45.00
" 26	49.66	42.75	50.00	47.00
July 3	43.97	45.91	51.00	48.00
" 10	47.60	47.70	51.00	50.00
" 10	47.66	51.00	51.00	51.00
" 24	49.33	54.58	51.00	52.00
" 31	53.16	56.25	52.00	52.00
August 7	55.50	54.50	56.00	52.00
" 14	55.00	54.50	56.00	54.00
" 21	51.80	53.66	52.50	56.00
" 28	53.91	56.10	52.00	58.50
Sept. 4	56.70	62.60	53.00	61.00
" 11	61.50	64.50	61.00	61.00
" 18	61.83	67.00	58.00	67.00
" 25	62.75	67.60	68.00	67.00
October 2	68.70	71.70	68.00	70.00
" 9	69.91	77.20	69.00	75.00
" 16	67.70	83.50	71.00	78.00
" 23	72.25	79.60	73.00	78.00
" 30	70.08	74.20	73.00	75.00
Nov. 6	81.25	77.50	75.00	79.00
" 20	76.86	87.62	75.00	88.00
" 20	76.86	....	75.00	....
" 27	76.66	....	75.00	....
Dec. 4	80.90	....	77.00	....
" 11	79.16	....	77.00	....
" 18	71.16	....	68.00	....
" 26	68.91	....	65.00	...

MARKET COMMENT.

Grape Shipments Continue Heavy.

Notwithstanding the general rains there has been a steady shipment of grapes mostly Empires and those arriving in good condition are selling well. There are still some Tokay's and Cornichons being shipped, but with the present heavy downpour throughout the grape districts shipments will cease.

End of Spanish Grape Shipments.

The end of the Almeria Spain grape shipments is in sight. These grapes have a more or less depressing effect on our markets, as they usually arrive in splendid condition and keep for a length of time. There have been 243,600 barrels of Almeria grapes sold in New York to date. About 23,600 barrels are now afloat and 69,175 barrels in the New York port. Reports come from Almeria that the last cargo of the season had left that port. Prices ranged in sales of last arrivals for best quality, $8 to $8.75 per barrel, a few lots going out at $9.75 to $11.75.

Persimmons in Carload Lots.

Several cars of persimmons have been shipped to New York during the past few weeks and have sold at splendid prices. One car going from Newcastle grossed $3,021. This fruit has fast become a favorite in the eastern markets. It is easily produced, as there is no pruning or spraying required and the acreage in some sections of the state is increasing. The fruit comes at a time when the markets are practically bare of tree fruits, and as this fruit carries well and makes a splendid appearance on the fruit stands it is increasing in popularity.

Banner Sale on Strawberries.

Ten chests of strawberries shipped by H. A. Hyde Company from the Oak Grove Berry Farm at Salinas to San Francisco last week sold for $28 per chest wholesale, and by actual count this would place the berries at about 2 cents each. The Oak Grove Berry Farm is the largest and best arranged berry farm west of the Mississippi river.

CALIFORNIA FARM BUREAU MARKETING ASS'N.

REPORT OF SALES.

No. Hogs	Av. Wt.	Dock	Price
Tulare, November 9, 1920.			
90	202		$13.95
80	215		13.65
93	194		13.55
14	262		13.45
77	177		13.45
71	150		13.10
17	365	410	12.10
13	133		11.90
Five cars, 38 consignors.			
Visalia, Nov. 10, 1920.			
75	218	10	$14.00
42	201		13.65
22	267		13.15
11	164		12.20
17	263	460	11.65
Two cars, 20 consignors.			
Hanford, Nov. 11, 1920.			
75	210		$14.05
80	202		13.80
72	198		13.80
80	168	80	13.20
6	321		12.80
45	110		12.00
9	375	440	11.70
Four and one-half cars, 27 consignors.			
Corcoran, Nov. 12, 1920.			
37	188		$13.70
60	199	60	13.65
26	151		12.90
3	340		12.70
20	355	550	11.20
Two cars, 12 consignors.			
McFarland, Nov. 15, 1920.			
35	214		$14.40
82	206		14.15
94	185		14.00
91	194		13.90
61	251	20	13.50
50	151		13.75
85	188		13.70
7	330		13.00
32	301	605	12.75
30	111		10.65
Seven cars, 39 consignors.			

POLLED HEREFORD NOTES.

On October 22d at a special meeting of the American Polled Hereford Breeders' Association, the organization was reincorporated for a period of fifty years, its first corporate life of twenty years having expired. We are at work now on a revision of the By-laws in which we hope to embody the strong points of all similar ordinances.

Plans for the big mid-winter series of sales to be held at Des Moines, Iowa, on February 1, 2 and 3, under the title "Polled Hereford Week," are approaching completion. Something over 210 head of cattle have been chosen from 102 herds scattered through nearly 20 states and including also one Canadian herd. This is the largest number of cattle ever assembled under the auspices of the Association for this big annual event, and we are anticipating the largest attendance of breeders and others interested, that we have ever succeeded in gathering at Des Moines in connection with the sale. There will be held at the same time the annual meeting of the American Polled Hereford Breeders' Association and the annual breeders' banquet.

On November 4th there sailed from San Francisco on the S.S. Rona, the third exportation of Polled Herefords made to Australia during the present year.

ANNUAL CONVENTION C. C. A.

The program for the annual convention of the California Cattlemen's Association, on December 11th at the Palace Hotel in San Francisco, is one that will attract all interested in this business. This meeting, coming as it does after the Salt Lake Conference of December 6, 7 and 8, will be a mine of information to those who could not go to the latter city at that time.

Among the speakers at the San Francisco convention will be: Professor W. R. Camp, Rural Institions, U. C., on "Co-operative Marketing Associations of California and Their Application to the Beef Cattle Industry; District Forester Redington, U. S. Forest Service, "The Cattlemen and the Forester"; Mr. Fred H. Bixby, President California Cattlemen's Association; Mr. David P. Barrows, President University of California; Incoming President, Mr. A. Spiro; Mr. Robert Newton Lynch, Manager San Francisco Chamber of Commerce; Mayor James Rolph of San Francisco.

Classified Advertisements.

Rate, 4c. per word. Cash must accompany all orders.

COUNTRY LANDS.

CALIFORNIA FRUIT FARM
160 Acres $8,000
15 acres heavy bearing orchard—100 apple, 300 cherry, 150 apricot, 100 orange, also mulberry, walnut, pecan, pluma 30 grapevines; no irrgation necessary; convenient R.R. town; attractive bungalow, running water, abundant shade, attractive view; good-sized barn; aged owner unable care for it longer, makes low price $8,000, part cash, balance easy terms. Details this and other farms, groves California, many other states, page 92, Strout's Big New Illustrated Catalog, Farm Bargains, 33 States. Call or write for free copy. STROUT FARM AGENCY, 503FA Wright-Callender Bldg., Los Angeles, Calif.

FOR SALE BY OWNER—82 acres river bottom, mostly in alfalfa and orchard (walnuts, pears and almonds) yielding large crops. Own irrigation, highway, railroad station, store on place, $850 an acre. 80 acres Linden district, rich soil, close to Calaveras river, $300 an acre. Both places real bargains at price offered. For terms and full description. Box 2260, Pacific Rural Press.

FOR SALE—150 acres irrigated farm on Newlands Government Project; 88 acres under ditch and in alfalfa. On main lie S. P. railroad within one-fourth mile of Fernley, Nevada. Fine dairy country. Also first-class alfalfa hay, $22.00 F. O. B. Fernley, W. A. Pray, Fernley, Nev.

MEXICAN LANDS—400 acres in American colony near Hermosillo and Southern Pacific Railway. Rich river bottom land; will grow anything; two crops each year. Investigate this opportunity to start big farming at small cost. Owner, 329 Ochsner Bldg., Sacramento, Cal.

MISCELLANEOUS.

BUNYIP
SEED WHEAT ..
Recleaned Seed for sale.
FOSGATE & LION,
Seed Growers
Mountain View, Calif.

TENNESSEE
WINTER BARLEY
Recleaned seed for sale.
Grown from State Universiay Farm Stock
W. A. BEARD
Marysville, Calif.

PRUNES, LARGE, SWEET, Evaporated French prunes—packed in sanitary boxes; will keep 10 and 20 pound boxes, 22c per pound; 40 pounds and over, 20c per pound—all delivered prepaid any California express station. Buy direct from grower and obtain best fruit at less cost. Sunset Ranch, Live Oak, Calif.

SAFETY OILING SYSTEM for Fords—corrects the defects in the Ford system, filtering and forcing the oil to all parts of the motor on all grades. Write for our free booklet. It is educative and interesting. Paul Vining, Dist. Corte Madera.

REMANUFACTURED PIPE
All sizes standard pipe and wrought iron screw casing. All kinds of fittings. Guaranteed good as new. Write for prices. Weissbaum Pipe Works, 160 Eleventh street, San Francisco.

EXTRACTED ALFALFA HONEY direct from producer—60-lb. can, $8.50; case, 2 cans, $16.00. Sample by mail, 20c. Freight paid 150 miles. Remittance with order. E. Jackman, Firebaugh, Fresno Co., Cal.

ALL SIZES OF PIPE and screw casing, both new and second-hand, dipped and undipped. Guaranteed. Prices right. Shecter Pipe Works, 304 Howard St., San Francisco.

APPLES FROM GROWERS — Bulk pack. Bellflowers, $1.30 per box; No. 2 grades, $1.00; Newtowns, $1.75; No. 2, $1.25. Edward A. Hall Rt 1, Box 39, Watsonville, Cal.

SPANISH PEANUTS—Only $4.40 for a 40-lb. sack. James McKee, Riverside, Calif.

AS FOREMAN OR SUPERINTENDENT—A first-class stockman, exceptional experience and references, 39 years of age. Married, now disengeged. Box 2270, Pacific Rural Press.

$1200—ONE HOLT "30" ENGINE, just overhauled; in good condition, with 5 disk moline plow. Cost, new, $465; outfit for $1200. J. M. Nelson, San Jose, Cal.

CORY THORNLESS Mammoth Blackberry. Write for descriptive price list. Get your plants from the grower. Wm. Mortenson, Rt. A, Box 209, Lodi, Calif.

FOR SALE—Budlong 7-ft. double-disc, excellent condition; also 140 feet 6-inch O. D. well casing, dipped in asphaltum. H. Portus, Santomas Road, Campbell.

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Ideal for your leveling.
Light Draft operated by driver from tractor seat. Made in 3 sizes, for small or medium-sized tractors.
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LEVER CONTROLLED
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Engine, Saw, Etc., all complete.
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GRAIN FEED!

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SUREMILK is based on the practical findings of hard-headed dairymen. It is a mixture of by-products from the table cereals manufactured in the Sperry mills at Stockton. And just as the grains used in the blending of these cereals are tested for quality and uniformity, so SUREMILK is tested for the right amount of carbohydrates, protein, fat, fibre, ash, moisture, etc. Because of this constant inspection and analysis, there's no guess-work about SUREMILK—or what it will do.

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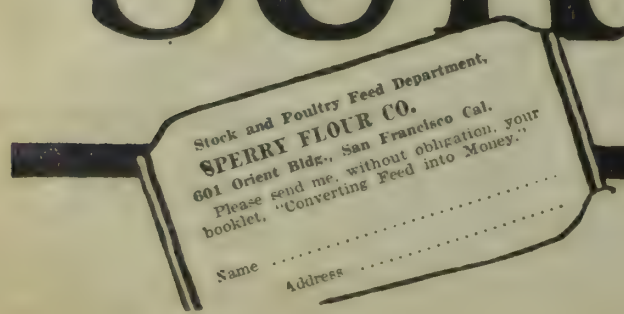


VOL. C—No. 22 Fiftieth Year

THE PACIFIC RURAL PRESS

SAN FRANCISCO NOVEMBER 2[illegible] 920 LOS ANGELES

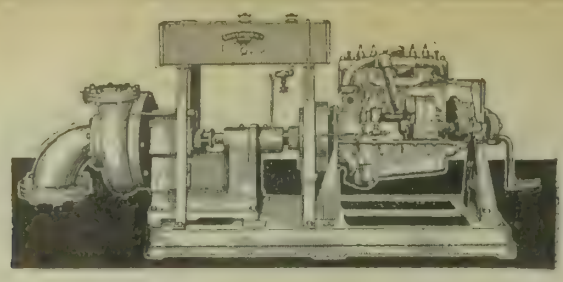
California State Lib 7-1-2
CALIFORNIA STATE

a. b. c. d. e. f. g. h.

Illustration shows representative heads of California wheat varieties: a. White Australian (Oregon bluestem); b, Defiance; c, Sonora; d, Galgalos; e, Early Baart; f, Propo; g, Little Club; h, Turkey (About half natural rize).

SOME VARIETIES OF CALIFORNIA WHEAT

The grain industry of California is more keenly alive to the importance of using good seed than ever before, and a lively interest in the new barley and wheat varieties now being distributed from the University Farm at Davis has developed in all parts of the state and in neighboring states. Last year the University Farm distributed 3,000 sacks of pure seed and about 115,000 acres was planted to University varieties in California this season. No single variety of wheat or barley is best suited for all localities and the highest returns can only be secured by studying carefully the soil and climate conditions for each individual case and choosing the variety best suited to those conditions. See article in this issue of Pacific Rural Press, page 703, by Prof. Geo. W. Hendry, University Farm, Davis, California.



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121 W. Julian Street
San Jose, Calif.

*Distance to water below surface of ground*_____
*Probable distance to water when pumping*_____
*If water is to be raised above surface of ground, how high? (Length and size of pipe line)*_____
*Volume of water desired (Gals. per min.)*_____
*(Inches)*_____
*If you have pump give width*_____ *length*_____
*depth*_____
*H.P. of motor or engine if you have that equipment*_____
*Give total depth of well*_____
*Inside Diameter of well*_____
*Is well straight and true?*_____
*Is electric power available?*_____
*Name*_____
*Address*_____
*Rural Route No.*_____
*Street Box.*_____

Be independent. Run your pump as long as you please. You can do it with this Bean Direct-Connected Outfit.

It consists of a heavy 4-cylinder engine (Bosch High Tension Magneto) direct-connected to a Bean Universal 4-inch Pump. Handles a wide variation in head and throws a big stream. Will deliver water at either of two heads by the simple turn of a gate valve. Runs 10 hours on 6 or 7 gallons of fuel. Start it in the morning and forget it till you are ready to turn it off at night.

Send the coupon. Fill it in carefully. Let us help you solve your water problem.

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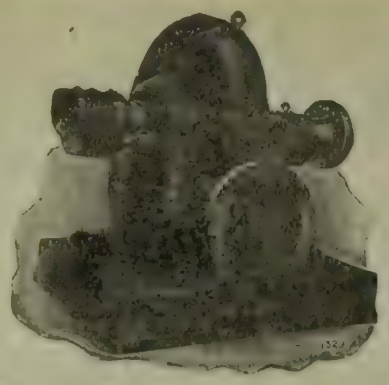
Centrifugal Pumps

DeLAVAL
IRRIGATION PUMPS



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Double Suction *Highest Efficiency*

HANDLES LARGEST QUANTITY AT LOWEST COST
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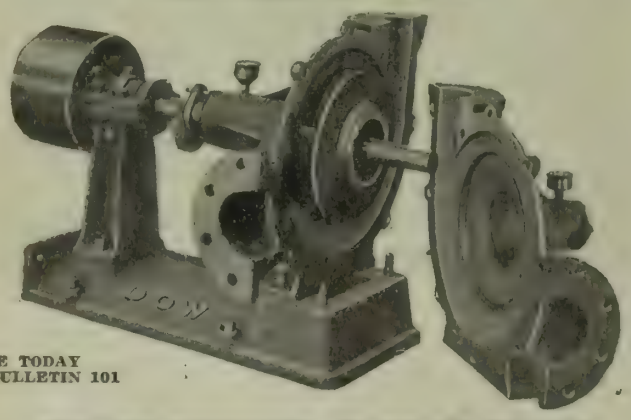

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1. *The tractor itself* with inbuilt dependability, economy and long life.
2. *The Rumely factories* that have been building farm power machinery for over eighty years—127 buildings covering 195 acres—a perfect assurance of permanency.
3. *Twenty-nine branch offices and warehouses*—complete stocks of machines and parts—located at important railroad points to give quick service.
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And you. order for an OilPull gives you this four-fold service throughout the life of the tractor. Shall we send details.

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BUNYIP, BAYAH and DART IMPERIAL SEED WHEATS

California acclimated Australians; best milling; higher prices for product; yield well; shatter less in wind than other varieties known to us.

MARIOUT

There is a large demand for this early maturing, drouth resistant barley. Carload just shipped Miller & Lux averaged approximately 130 lbs. per sack. All our recleaned Mariout, when well-jigged, has approximately such weight.

All our seeds grown on new soils, one irrigation only. All water from deep wells. No Bermuda, Johnson, or Morning Glory.

No more Sonora or Early Baart wheats. No Beldi, Tennessee Winter or Four Thousand Barleys. Small lots only remaining of the so-called Diener Hybrid wheats.

DURANGO COTTON SEED

Fully matured seed from purest Durango strain known to us; grown in selected fields hand-rogued for typical plants of greatest yield and earliest maturity. We operate our own gin. No seed mixing.

All seed orders, whether carl-load lots or less, booked as received, shipments following consecutively.

Write for prices, stating quantity desired.

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FOR SALE

Famous Riverside Valencia Sweet Spanish Onion Seed.

Are your looking for immense possibilities from your land? Then plant our Sweet Spanish Onion Seed and grow more tonnage to the acre, and get a better price for your product. The industry is new and cannot help being a winner.

California will eventually supply the Eastern markets with these Onions. It has been proven that our soil is well adapted to grow a superior onion to those now shipped from Spain. Sample packages, 35c. Write for quotations on seed by the pound.

W. T. Thompson & Son
203 Citizens' Nat'l Bk. Bldg., Riverside, California

PURE ANIMAL MATTER AMMONIATES

GOLD BEAR FERTILIZERS

FOR CALIFORNIA SOILS

for a bigger yield

Gold Bear Fertilizers are scientifically prepared to meet California soil conditions and crop necessities. Made from animal products containing the necessary elements to feed your crops.

Send for our Fertilizer Booklet

Western Meat Co.
San Francisco, Calif.

General Horticultural and Agricultural Review

HORTICULTURAL JOTTINGS.

To date more than 775 cars of pears have been shipped from Medford, Oreon. There are a few cars left. Less than 100 cars of apples have been shipped.

More than 100 nut culturists of the Pacific coast have been in attendance at a convention of the Western Walnut Association at Portland, Oregon. Many California walnut growers were in attendance.

Orange picking is underway at the Edison groves, east of Bakersfield, the company planning to maintain its custom of having a carload of ripe fruit in the Eastern market for Thanksgiving. Last year 55 carloads of oranges were shipped from Edison and prospects are for a good crop this year.

The raisin growers of Sutter and Yuba counties have just "cut a juicy melon," the contents of which revealed a check for $140,000, same being distributed among the raisin growers as their share in the final dividend declared by the California Associated Raisin Company on the 1919 crop.

Sale of the plant of the Smith Manufacturing Company, a concern engaged in the manufacture of fruit drying and canning machinery to the Berger and Carter interests for $300,000, has been announced. This business was started by J. S. Smith and his son, Charles C. Smith, 18 years ago on a capital of $200.

In a test made by the Bureau of Markets there has been found at least 60 per cent of the shipping baskets and hampers that were examined below standard. This fact, together with the large number of sizes and shapes of containers coming under this general class, indicates the need for further legislation in this respect.

Building operations amounting to nearly half a million dollars, in which the California Peach Growers are interested, has been announced by J. P. Nuswander, vice-president and general manager of the company. This total includes the joint construction of a $200,000 office building with the California Associated Raisin Company.

Dr. J. C. Whitten, of the division of Pomology will conduct a deciduous tree-pruning demonstration at various points in Fresno county from December 13 to 18, inclusive. A special pruning demonstration for the boys and girls of the agricultural classes of the county high schools will be given on two afternoons by Dr. Whitten.

That real estate in the shape of orchard and vineyard property continues to change hands at record-breaking prices, is evidenced by a recent sale reported in Fresno county made by Dunn and Williams to a Fresno capitalist. The property contained 140 acres and sold for $175,000. The entire tract is in full bearing, raisin and shipping grapes.

The last of the almonds of the Oakdale district have been delivered to the new plant of the Oakdale Almond Exchange, showing a total of 465,752 pounds, or about 233 tons handled this season. This comprises only about half the output of the Oakdale section as independent growers harvested almost as much as those belonging to the association.

Olive growers and packers of Tulare county have started a "Buy a Case of Olives" campaign, similar to "Buy a Bale of Cotton" idea in 1914. Their plan is to get residents of the county to buy a case of olives to send to Eastern friends, who will, in turn, place the olives on the tables of many people for Thanksgiving and Christmas. All olives used in that way will be sold at cost.

Figures compiled by the College of Agriculture shows that California produces practically the entire apricot crop of the United States. For this reason the University has decided to supply orchardists of the state a correspondence course in apricot growing. The course will be given free of charge and is being arranged by the Division of Pomology of the College of Agriculture.

Representatives of the seven farm centers that have entered the Sutter County Farm Bureau home fruit canning contest, met in the office of Farm Adviser C. E. Sullivan last week, with Miss May Secrest of the University of California and made final arrangements for the competition. It is estimated that fully 300 Sutter housewives will enter preserved pears, plums, cherries and peaches.

The California Associated Raisin Company is practically out of the market, says F. A. Seymour, assistant to the president. This means that the entire raisin crop of 1920 has been disposed of by the Association. The association recently offered the last of the crop to the trade consisting of about 20,000 tons. The winding up of the raisin crop shows that the growers of the association will net about $60,000,000 for the 1920 crop.

Horticultural Commissioner H. P. Stabler of Sutter county has announced that there will be a meeting of the fig growers of the county and those interested in the industry are requested to attend a meeting at the court house in Yuba City on the evening of Monday, November 29, when I. J. Condit, fig expert, will be present and speak to the local growers. An interesting discussion is promised to those who attend.

One of the largest farm sales made in Contra Costa county in many months was consummated a few days ago when a deed was recorded disclosing the sale of the Whitman ranch in Ygnacio Valley by Martin A. Whitman to Ivy L. Borden of San Francisco for $80,000. The cash consideration was $12,500. This ranch embraces about 350 acres and is one of the show places of the county. Much of the property is devoted to orchard, while a big acreage is in walnuts.

AGRICULTURAL NOTES.

The planting of 115 acres of winter peas is now under way in the Sutter Basin.

An average of five cars of celery is being shipped daily from Antioch. The celery crop in the delta is said to be the best in five years.

Herbert Hoover and Ralph P. Merritt have in partnership bought 2,500 acres in Kern county to develop cotton, grapes and fruit.

From November 18 to 21, inclusive, Southern California shipped 137 cars of lettuce, 37 cars of tomatoes, 74 cars of mixed vegetables, and 111 cars of cauliflower.

The first shipment of Alameda county rhubarb for this season was made to Oakland. It was grown on Bay Farm Island. The shipment consisted of 25 boxes and was sold from $3 to $3.25 per box.

Judge Emmet Sewell of Sonoma county has given judgment for the plaintiff in the suit of G. Battista, et al., against G. Emilio, et al., to recover $5,198 on notes and $548.50 paid as a result of a deal in tomato paste.

Professor Mackie says something about rice-growing that is interesting when he states that 80 per cent of the California crop is raised by tenants, and that of these 60 per cent are Asiatics.

Unanimous vote to establish a "spot cotton" market in Los Angeles was taken at a meeting last week at a meeting of the International Cotton League of the West. It was planned to have it in operation by January 1.

The Spreckles Sugar Company have closed a deal with the Sutter Basin Company for 2,500 acres, on which they expect to plant sugar beets. This will be the largest planting of sugar beets in the Sacramento valley.

That Coachella Valley farmers are planning a large acreage of onions for next season is seen by orders received at the Santa Ana box shook factory, where 570,000 onion crates are being made sufficient to take care of 4,000 cars.

Farm subdivision is progressing in Ventura county at a rapid rate, according to a report received by the farm bureau from the U. S. Department of Agriculture, which credits the county with 1,543 farms against 1,293 in 1910 and 1,269 in 1900.

The University of California has sent five varieties of wheat to be tested in plot in Tuolumne county. It will be planted at the Sonora union high school and by a method acre yield can be determined and milling qualities tested.

The Japanese Department of Agriculture and Commerce has published an estimate of the rice crop for this year, placing the amount at somewhat over 325,000,000 bushels. This is said to be an increase of 12 per cent above normal, taking the average for the past seven years.

During the last few days more than $32,000 has been distributed to the Pleasanton sugar beet growers. Last month the sugar company paid out $15,000 and with another payment next month it is expected that more than $60,000 will be distributed locally this year for beets raised.

One hundred and fifty thousand bags of pink beans of the 1920 crop, valued at $175,000, have been damaged in the San Joaquin and Sacramento valleys during the few days of the recent rain. This statement has been given out by F. B. Nims, a Stockton bean merchant.

The field crop department of the University Farm at Davis is to test a larger number of new cereal varieties this season and has recently received an extensive collection of new hybrid wheats and barleys from the Maple Grove Seed Breeding Farm in Saskatchewan.

J. W. Morris, manager of the Merced-Stanislaus Sweet Potato Association, has announced that the fifth pool, aggregating the large sum of $60,000, will be distributed to the growers. This is the largest pool yet divided up, and shows that the association members are getting quick and satisfactory returns for their shipments.

The proposed bond issue for the acquisition of the system of the Fresno Canal and Land Company by the Fresno Irrigation District will be for $2,000,000 under the recommendations submitted to the board of directors, at a recent meeting, by Engineer G. L. Swendsen. Of this amount $1,750,000 represents the purchase price of the holdings.

According to H. B. Frost, Research Associate in Plant Breeding at the Citrus Experiment Station of the State University. Common beans of a few kinds may be grown as a dry land crop on some soils under climatic conditions like those at Riverside, provided they are planted in March. Pink and Red Mexican are the best varieties.

J. H. Stephens, president of the Pacilc Rice Growers' Association, announces that a plan has been practically completed for the association to take over all the rice mills of the state, to provide for the immediate cleaning of this year's crop and also to enable the association to sell the cleaned product through its own central agency.

Urging affiliation of the County Farm Bureau with a similar organization of the State, Dr. W. H. Walker, president of the State organization, in an address before the board of directors of the Butte county bureau, who met in the county agent's office at Oroville recently, explained the various functions of the California organization and touched upon benefits farmers would derive in the event affiliation finally became a realty.

A NEW SERIAL STORY

Beginning with the issue of December 4th, the Pacific Rural Press will publish weekly installments of the new story by Wm. MacLeod Raine, entitled, "Oh, You Tex." This is a new story, copyrighted in 1920, and deals with range life in the Panhandle in the early days. The story is full of dramatic situations, is clean and wholesome, and we believe will interest every man as well as woman reader of this journal—and Boys! read the first installment next week.

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W. S. KILLINGSWORTH - - - Horticulture
THOS. F. McCONNELL - - Livestock
RALPH NEWMAN - - - - - Dairy

EDITORIAL

INDISPENSABILITY OF PROTECTION.

To the Editor: In the issue of the Rural Press of November 13 you commented on the fact that you had not received any letters of commendation or otherwise from any of your readers since the election. And you concluded that they had ceased to "blow off." Just to prove to you that some of them are still on the job, I ask you to please explain what you mean by your statement: "There surely was never anything which promised worse for the American laboring man than the world-leveling and free-trade which have now been repudiated by the American people."—J. A. L., Auburn.

The meaning of the words you quote seems quite obvious and yet we have no objection to making a more concrete declaration of our conviction which is that the depression of our producing industries, which must result from free competition in our own markets with products from countries where wages are less and the standards of living are lower, will reduce our wage-scale and living standards toward those prevailing in the countries with which our producers are obliged to compete. The effect of this grading down financially and socially will manifest itself first in unemloyment and reduced wages for those who may be fortunte enough to hang onto their jobs, and therefore the first shock will come upon those who are now enjoying the advantages of being American wage-earners, because they are dependent upon daily earnings while their employers of all kinds have more or less capital or credit with which to protect or provide for themselves, in spite of the losses they have to endure. It is no advantage to wage-earners to have commodities cheapen if they have no money to buy with. Therefore, the claimed benefits of world-leveling and free-trade to American workingmen are illusory. The last election, with its overwhelming installation of a party which has always exalted the economic, social and patriotic virtues of a protective policy, is a national repudiation of an opposite policy, which, in our judgment, only the intervention of the world-war prevented from precipitating distress upon our wage-earners first, and finally upon all the producing enterprises of the country which were thrown into competition with commodities of the same kinds from other countries where workmen earn less and live worse. This is neither an obscure nor new belief. If you desire a fuller statement of it turn back to page 672 of our last issue and read the declaration of the Fresno convention of fruit growers and farmers.

THE BENIGN BROTHERHOODS.

To the Editor: I was very much interested in your editorial page of November 6. It was the best for fifteen years and was full of interesting points and ideas and suggestions. I liked especially those written by N. M. of Santa Monica, who wanted to know what the railroad brotherhoods are going to do next. For his information I will say that the railroad men are going ahead to solve their own economic conditions, according to the laws of this country. They were not very successful after fighting for eighteen months for a reduction in the high cost of living, because all they got was from 12 to 20 per cent increase in wages with which to combat the 110 per cent increased cost of living. They did not seek an increase in wages, but did fight hard for a reduction in the high cost of living. They declared themselves against the vicious circle, their economic expert, Mr. Lauck, told the people that the high cost of living would never come down as long as every producer wanted more money. Then Mr. Plum, the brotherhood's counsel, told the President and Congress at that time to curb the profiteers, and the railroad men would not ask for an increase in wages, but we all know what the result was. What the brotherhoods are going to do next is another story. They are going ahead with their economic program in establishing their co-operative wholesale and retail stores, their co-operative national banks, their warehouses and factories all over the United States. The leaders of the brotherhoods and the farmers and co-operators in the east have all joined hands in this great movement of "Each for all and all for each." It has been a long time coming, but it is here, this brotherhood of man, and let us hope that it will grow, and then the farmer and workers can have more of the pleasures and comfort of life which they deserve. Do not forget that the railroadman's fight was to reduce the high cost of living two years ago for every man, woman and child in this nation, but they did not get much outside support. The railroad brotherhoods have shown that they are against the immorality of strikes also. There is no class-selfishness in their economic program either, as they are soliciting the farmers to join them in extending their system.—C. E. M., Berkeley.

We are surely glad to know more about these beneficent brotherhoods, and they apparently do not deserve the starvation which N. M. of Santa Monica (in the letter which interested you) seemed to prescribe for them. If they repudiate strikes which bring community suffering and distress; if they will accord every man his natural right to work or rest as he likes and if they will respect the constitution and laws of the country while they are working for the improvement of both in the direction of reducing class-privilege and class-domination, either high or low—they are simply doing what every American has a right to do and which, in fact, it is his duty to do. They seem to be a very high order of unions, and, in accordance with the platform which you have made for them, they must be opposed to the Plum plan, which gives one-third of railroad control to the owners, one-third to the workmen, and one-third to the public, which pays for the whole thing and which the politicians could easily wheedle out of all share in the control. But then the Plum plan does not seem to be necessary, for the public has got it in the neck already. The owners and the workmen have installed their joint policy and the formality of consulting the public seems silly. However, the public is restless and may need to retain the brotherhoods, as its attorney in their suit against the brotherhood's wicked partners, the railway owners and managers! The old, many-act play, Public vs. Railways, seems to be coming on the boards again and promises to have some of the newest movie thrills included in its rendition. The Fresno convention gave it due publicity—as we stated last week.

COPYING CALIFORNIA CO-OPERATORS.

We judge from the dispatches which are coming freely from the Mississippi valley, that California food producers are looked upon as leaders in the enterprise of getting producers a fair profit from their investments and industry. Such a regard for our success in marketing products by producers, but the recognition is often accompanied by comments which seem to indicate little knowledge of the purposes and methods of our organizations. For example, we read this:

Plans are under way for the formation of a gigantic combine to control the domestic and export business in wheat. This combine, according to plans which were tentatively formulated at a meeting of the committee of seventeen appointed by the National Farm Bureau Federation, which was held in Chicago last week, is to take the form of a co-operative association organized on the lines of the Citrus Fruit Growers' Association of California. That organization has a monopoly of handling, packing and selling the citrus fruits grown on the Pacific Coast.

This statement is misleading in the fact that it conveys the idea that our citrus-growers' association is a monopoly and therefore organized for cornering, price-fixing and other black commercial arts for which a monopoly is supposed to exist. Of course, people who get that idea deceive themselves and do the association great injustice. Although it does handle, perhaps seventy-five per cent of the product, and though, through its local branches and subsidiary companies it controls all the operations of preparation for shipment, including the use of its own forests, saw-mills for box-making and other lines of supply-furnishing, it does none of these things with the idea of control and restriction, and it does all of them for the purpose of selling as much fruit as it possibly can at prices which consumers are willing to pay and, by lessening costs of production, delivery and sale, to get for the grower just as much as is possible of the money which the consumer pays for the fruit. And in addition to getting the fruit to the consumer as cheaply as possible, it serves its purposes by large expenditure for advertising so that more people will have more and more fruit as cheaply as possible. There is, of course, no "monopoly" about this, and there is no restriction or control—except to prevent intervening packers and traders from buying low and selling high, which benefits no one but themselves—a practice which should be controlled and restricted as much as possible in the public interest.

WILL WHEAT WORK THAT WAY?

The current question seems to be, is it possible to market a great common staple like wheat, which every one knows about and which is grown by millions of producers, capable of being handled in the same ways and with the same motives and purposes as the unique special products of California, which are for the most part, incapable of being produced in other parts of the country and in which California has a "natural monopoly" but is prevented from having a "commercial monopoly" by the fact that California is capable of producing such immense quantities of them that, to get her money back, she must sell them as fast as consumers can be persuaded to buy them. We are under the impression that great staple products, capable of being produced everywhere, and therefore regarded as common and cheap, cannot be handled in the California way—for reasons which every reader can frame up for himself. And yet it is gratifying to our vanity to see how much they expect to learn from us. This is another declaration from the Middle West:

In broad outline the plan is to form a huge combine of wheat growers in which the individual farmers or their various organizations shall be the shareholders. The present idea is to proceed under the laws of California, which are said to be particularly favorable to such an organization, and a committee has been sent there to study the situation and confer with the Citrus Fruit Growers' Association as to the best methods of procedure.

That surely is a great compliment to California—both in legislative insight and in agricultural mastery, and we hope that our plan of masterful, non-profit corporation will serve as the models for which our cousins in the Mississippi valley seem disposed to take them. And yet, we must acknowledge that if they succeed in pooling the American wheat crop, which in 1919 had a farm-value of more than two billion dollars, they will make our little collections of oranges, raisins, etc., look like thirty cents' worth! But that will be all right. If California has produced a great idea, it will live after all her oranges are frescoed with blue mold and all her raisins have sent up their last bubbles for the stimulation of the bibulous!

THE SEASON'S OUTLOOK.

Is it not fine to start out on a season which one does not have to worry about? With the soil soaked down to bed-rock and all the croakers and weather-prophets safely covered with umbrellas and raincoats, we seem to be entering a crop-year in which the farmer need not be looking at the sky and saying to himself: "By Jingo! I don't know whether I will get my money back." We have a good, old-fashioned sky, which leaks every time one looks at it, and a soil like a sponge, so full of air and water that the big weeds will make it almost impossible to get anything else into it. Of course, it costs losses to many to have such a foundation for a good year as is now being laid, but they must bravely try to recoup their losses from the grand aggregate of general advantage which a year of

generous rainfall and snowfall heaps up. It is true that the price-sky is not now as promising as the production-sky, but that may be brighter near the season's end than at the beginning. If every one will do his best to lessen the cost of production by drawing his share from the lessened cost of supplies and of labor, for which the recent sky-highing seems to have no longer any justification whatever, he may be able to match nature's bounty against man's greed and get more for his own reward than he has had during recent years for the common, staple products which it is the farmers' duty to produce in the fullest abundance. It seems no longer necessary to figure upon the inch-fractions of rainfall. The grand integers of it at different points, given in the adjacent tabulation by the Weather Bureau. And while he is still enjoying the fullness of them let each farmer write to his congressman that the Weather Service needs a more generous allotment of the public funds to continue its work in fair step with the needs of an ever-extending agriculture.

QUERIES AND REPLIES

By the Editor.

Inquirers Must Give Full Name and Address
Answered Questions also on other pages.

'Mums, Pansies, and Verbenas.

To the Editor: When is the proper time to separate chrysanthemum roots? Is pruning essential, and how is it done and when? Is it too late to plant pansy, snap dragon and verbena seeds now in this section?—A. E. J., Escalon.

You can get better bloom of chrysanthemums by dividing the old clumps in February than you will have from old clumps which are allowed to go on and bloom again in the old place, but the best plants come from making cuttings of strong new wood in the spring and then discarding all the old rootings entirely. To get ready for this, cut back the pants nearly to the ground after the leaves die and use the new shoots for soft wood cuttings after they have grown out well, say in April, or thin out such shoots and let the best of them go on for fall bloom—if you prefer to grow your flowers that way. The largest 'mums are had by cutting back the new growth in midsummer for a new start and then thinning out the shoots and disbudding to reduce the number of flowers. Snapdragon are best started in the spring, after the ground gets well warmed up. Seed of pansy and verbena should be sown at once—preferably in seed boxes, from which little plants can be taken for planting out after the hard, cold winter rains are over. In warm, sheltered places you can sow them in the open ground now if you prefer that way, but better results are generally had from sowings in boxes or pots in a cold frame or with some such protection.

"Sow-bugs" and "Tule-bugs."

To the Editor: I send a few bugs that are inhabiting our cellar by the hundreds and some are through the house. Our house is new and the cellar cemented—bottom and walls. What can we do to drive the pest out? During the day they gather under cover, but when darkness comes they spread over the sacks of flour, sugar, potatoes, etc. I have noticed the same kinds of bugs frequently under old wood, boards, sacks, etc., lying on damp ground. —J. R. H., Millville.

You send "sow-bugs" and "tule bugs." The former are sometimes called "wood lice" and are common in moist places everywhere, as you suggest. To escape them clean up all such places and let them get dry. The latter is a carabid beetle, which comes from its home in stream margins in the interior valleys and is therefore called the "tule-bug." It invades habitations at some distance at this time of the year. They will probably not be noticeable for long and they do no harm. If a buggy cellar gets on your nerves, sweep it out thoroughly, burn the sweepings and burn some sulphur on the floor of the closed cellar in an old shovel or other iron receptable. After a few hours open from the outside and release the fumes before entering.

Too Large Seedling Walnut.

To the Editor: I send a few walnuts from a seedling tree; also Mayettes for comparison The larger nuts are from a tree ten or twelve years old, which this year produced sixty-five pounds of nuts; also a heavy crop the year before, and that is as far as my knowledge extends. What would be the comparative values of the two nuts commercially, and would these seedling nuts be apt to come true if planted for nursery stock?—F. R. D., Biggs.

Over-size in a walnut is a handicap in a walnut, much as it is with a lemon, because it is usually associated with lack of exterior finish and interior contents. Your seeding has not the shell-color and fineness of the Mayette, nor has it the color of the covering of the kernel, and the kernel itself is not plump and shell-filling as is the Mayette and the varieties which make the California product famous and which have about the same characters as the Mayette combined with superior size. There seems, however, no advantage in going beyond the size of the best California varieties and such seedlings as you send would sell for considerably less than these types, which are the result of a long period of selection. In a local market, however, it might be profitable—especially in connection with a good bearing habit. You cannot tell what its seedlings would be without trial, but probably they would resemble the parent but of smaller size.

Corn Smut and Wireworms.

To the Editor: I had a small piece of land in corn. Nearly 20 per cent of the ears are smutted—some of them all smut. Joining this piece my neighbor had a patch of corn and no smut. I intended to follow the corn with wheat but am afraid of the smut, as I should feed the wheat to chickens in the sheaves. Is the smut in the land, and would the wheat be infested as the corn is? The land is low and rich, and is also infested with wire worm. Is there anything I can do to escape this pest?—A. W. C., Novato.

Go ahead with your plan to grow wheat instead of corn. Corn is smutted by a fungus which does not attack wheat. All you have to do is to dip your seed wheat to protect it from its own smut. Corn smut does live in the land, and it is carried in smutty stalks and in the manure of animals fed on them. It is not readily spread otherwise and that it the reason why your neighbor had clean corn while yours was smutted. Seed corn cannot be saved from smut if the land is full of it. Seed wheat can be cleaned by dipping because the fungous germs are on the seed and not in the soil. Wireworms have to be starved out. They do not usually injure wheat as they do corn.

Using Gyp-Corn Stalks.

To the Editor: I have 20 acres of young trees, from 2 to 4 years old, and I have raised between the rows this season Egyptian corn. I have harvested the grain and now I am not sure of the best plan to dispose of the fodder. Would it be proper to place it around the trees as a mulch for the next summer, as I cannot get water on the land, or would the fodder harbor insects and so more than balance the good effects sought?—G. W. S., Morgan Hill.

There are at least two objections to the plan of using the stalks as a mulch. One is that such stiff litter will prevent such close-up cultivation as the trees ought to have next summer; another is that such a cover will prevent your detecting gophers as quickly as you should, and that may cause some loss of trees, and, if the layer is thick it might harbor field mice for bark injuries. If we had stock we would rather carpet the corral with the stalks and let that comminute it and promote decay and increase the bulk of manure for later use. If we had no stock we would let the stuff rot down in a stack before applying it to the land. The stack should be loose so as to take water readily.

Superphosphate and Melilotus.

To the Editor: I have superphosphate sufficient to put 400 lbs. per acre on my prune orchard. When would be the best time to spread it—now or in the spring, just before plowing, say 1st of March? If it is put on now, should it be worked in a little with cultivation or left on top. Is it too late to sow melilotus alba or sweet clover for a cover crop, to be plowed in not later than April 1st? Would it grow sufficiently by that time. The land is sandy loam, river bottom orchard, 25 years old. No irrigation.—W. S. G., Slough House.

There is no danger of losing the phosphoric acid by drainage, even though the superphosphate be soluble. Therefore, we should make the application now and get in the sweet clover as soon as possible. There is still time to get quite a growth of it, especially as the winter promises to be of the old-fashioned California kind—plenty warm and plenty wet. The superphosphate may help to get a good lot of clover. But we would sow yellow sweet clover instead of white, unless we were sowing for forage as well as cover crop.

Almonds in Alfalfa.

To the Editor: What would be the reasons for not planting alfalfa in a six-year-old almond orchard, where the trees are thirty-three feet apart? In the orchard grows wild morning-glory, wild geraniums and a mint weed, which covers several acres. The land is a rich loam and under an irrigation ditch.—L. W. R., Byron.

Considering what you say about the soil and the water supply, we see no reason to object except, perhaps, the difficulty of picking up the early-dropping almonds which fall before you put on the harvesting sheets. It may be hard to find them in the stubble, but that can be reduced by doing the last mowing with sheep—if the trees are not so low as to tempt them to go nutting on their own account. A good stand of alfalfa will keep down the weeds and the water will help the trees and increase the almond crop if the soil is open enough to prevent water-logging.

Old Peaches Poor Grafting.

To the Editor: I have some old Early Crawford peach trees that I wanted to have stump-grafted to some other variety of peach, but some of my neighbors think I will have poor success grafting peach on peach. Kindly give me your opinion.—J. L. G., Auburn.

You misapprehend the trouble. There is no lack of affiliation between the peach and the peach. The trouble is that the peach wood is so apt to die-back and the peach bark is so shrinky that it is difficult to keep the scion and the stock up to a living agreement. For this reason peach trees are worked over by budding into new shoots of current growth and forcing growth immediately the bud has taken. But even in this case the cut-back stump does not heal over and is apt to take to decay. Scions can be put in larger peach wood by side grafting, which does not require splitting the stump, with better behavior of the latter, but if the trees are very old and the bark hardened and inactive, you will usually get better and quicker results by planting a new tree of the kind you desire.

No Hurry to Irrigate

To the Editor: Our irrigating pump will be here next week and so far we have had close to five inches of rain (and it is still raining). Would you advise irrigating as soon as the pump arrives? The piece to irrigate is fifty acres of prunes, seven years old.—C. W. C., Chico.

We would hunt a warm, dry place and read the advertisements in the Rural Press, and let Jupiter Pluvius go on with the winter irrigation in all places where he normally makes a good job of it, for it looks now as though he was starting in to beat Harding. If he falls short by February you should be ready to fall in with your new pump—otherwise you will not need it until next summer, if your soil is deep and fine enough to hold what it gets.

Fellenberg on Peach.

To the Editor: Is it possible to graft the Italian prune on peach limbs?—E. J. D., Atascadero.

The prune has no objection, but the difficulty of grafting into the peach is considerable. It will be easier to cut back the trees and bud into selected new shoots, which will put out next spring. But we do not know why you should put in the Itailian in this state. It does not like California very well and California reciprocates the feeling.

CALIFORNIA WEATHER RECORD

The following rainfall and temperature record is furnished the Pacific Rural Press by the United States Department of Agriculture Weather Bureau at San Francisco for the week ending November 22, 1920.

Station—	Rainfall Past Week	Rainfall Seasonal To Date	Rainfall Normal To Date	Temperature Highest	Temperature Lowest
Eureka	3.39	11.77	7.55	64	48
Red Bluff	1.24	7.16	4.49	64	42
Sacramento	.56	4.59	2.86	64	44
San Francisco	.71	4.25	3.20	64	50
San Jose	.24	3.43	2.47	68	42
Fresno	.22	1.95	1.74	70	46
San Luis Obispo	.32	2.85	2.94	70	42
Los Angeles	.00	1.72	1.81	72	47
San Diego	.02	.45	1.11	66	52
Winnemucca	.16	2.88	1.71	58	40
Reno	.13	.64	1.61	64	30
Tonopah	.18	.63	2.70	58	32

Snow on ground at Summit, 28.0 in.

Sidestepping the Deadly Pear Blight Plague.

(Written for Pacific Rural Press by W. S. Killingsworth.)

In the early part of the present century, when the Bartlett pear growers of California were fighting codling moth and dodging foreclosure preceedings, realizing barely enough to pay the hired help from the proceeds of their annual shipment of pears, whether it be a large or small tonnage, there appeared on the horticultural horizon, a foe, more deadly than all else in the history of pear growing in California—pear blight. While pear blight is known to have exercised its prerogative for more than 140 year, not until something like 20 years ago did it settle its destructive fangs in the Bartlett pear orchards of the Pacific Coast. While it was a new disease to appear in the pear orchards of California, the writer had come in contact with its destructive effects more than 30 years ago while handling and shipping pears from southern Georgia—not of the Bartlett variety, but the Kieffer and Le Conte varieties.

Pear growing being somewhat of a side issue with the Georgia fruit growers, they were not disturbed over so small a matter as the loss of a few thousand pear trees, but with California pear growers it meant all if a decided campaign were made by this, greatest of all enimies to Bartlett pear culture.

Pear Growers Panic-Stricken.

It is fresh in the mind of every Bartlett pear grower in the state—the excitement this new destructive agency created when it became known that it was on the premises. The United States Department of Agriculture was appealed to for both human and financial assistance. The Department was well aware of its destructive effects and they lost no time in sending trained officials to assist in checking this evil.

We shall not go into detail as to the damage wrought by pear blight—that is ancient history, so let's forget it and turn to the interesting chapter there to be found evidence that leads us to believe that pear blight has run its race, as its mode of attack has been discovered, its defense is now undermined, and we believe that the day is not far distant when every pear tree when taken from nursery row will be absolutely immune to blight.

Blight-Resistant Pear Seedlings.

The crusade against pear blight in California, also Oregon and Washington, merely checked the evil without removing the cause, and the losses sustained are incalcuable. However, there are those who were not discouraged in not being able to perfect a plan or a remedy that would permanently drive out this horticultural blood poison, and they turned their attention to other means by which the great Bartlett pear districts of the Pacific coast might conitnue to produce, but with pear stock propagated from certain blight-resistant pear seedlings, and to this end a world-wide search was begun with the hope that something might be found in the form of blight-proof stock.

Professor F. T. Reimer of the Oregon Agricultural College, and that "Soldier of Civilization," Frank N. Meyer, traveled the world over in order to find such, finally to have their efforts rewarded by a discovery of a resistant species in China and Japan.

Having known for many years that A. L. Wisker, of Grass Valley, California, had given his undivided attention to the subject of blight-resistant pear stock, the writer availed himself of the opportunity of interviewing Mr. Wisker on the subject while in attendance at the California Association of Nurserymen at Fresno, which Mr. Wisker addressed on the subject of "Resistant Stocks as a Factor in Pear Blight Control." In reply to our inquiry as to the most successful resistant stock, Mr. Wisker said; "I have continued my experiments with the Chinese pear seedling, Pyrus usuriensis, on my ranch at Grass Valley, during the current season, which further strengthens my opinion that the cultivated types of this blight-resistant species provide pear stocks decidedly superior to any now generally used by nurserymen. While it might be premature for me to make a sweeping claim at this time, the behavior of the seedlings which have been under my observation discloses no unfavorable trait thus far, and at least tentatively places them among the best pear stocks known." Replying to our inquiry as to whether this was the only pear variety of the blight-resistant species, "Not at all," said Wisker; "there are a number of pear varieties embraced within this species, and these vary to some degree in blight-resistance. Some produce edible fruit of such quality that the Chinese have propagated them under definite names, and grow them in orchards as we grow the Bartlett and other varieties, cultivating and caring for them according to their standards of horticulture.

Represents Centuries of Selection.

"Among these cultivated varieties are some whose seedlings are free-growing and vigorous, in this respect far surpassing the French seedling (Pyrus communis), which furnishes the stock for fully 90 per cent of the pear orchards of the United States and Europe, and which has been only superseded on the Pacific Coast during the past few years by the so-called "Jap" seedling, Pyrus serotina." We inquired as to the length of time these varieties had been in existence in the Orient. "Cultivated varieties of the Usuriensis, species," said Wisker, "probably represent centuries of selection on the part of the Chinese, and almost centainly represent the best types." When was this stock first introduced into this country? "The first importation in quantity of the cultivated type occurred late in 1917, when Prof. Reimer brought in a few pounds of seed of varieties grown by the Chinese of Chihli Province. The next importation and the largest that has been made to the present time was in January, 1918, when I obtained 50 pounds of the seed of the same varieties from the Japanese nurserymen who accompanied Prof. Reimer through part of his 1917 trip to Oriental regions in search of seed. Nearly 200,000 seedlings grew from this seed and these seedlings are probably the only ones of the desirable cultivated type that are obtainable in considerable quantity in the United States at this time."

Up to the present time do you find the trees produced from those seed entirely satisfactory? "The seedlings produced from my importation of seed have in my estimation been entirely satisfactory." said Wisker, "three years of critical observation inspires that belief. In Loma Rica Nursery we have a few thousand Bartletts bench-grafted on Usuriensis roots, that are now in their second growing season. We also have several thousand budded to Bartlett, Anjou, Comice and other varieties."

How about the union—is it as perfect as with the French stock? "In the vital matter of union between stock and scion, the grafts are perfect. With the budded trees the union is also perfect." Has the growth of the seedling in nursery row as well as in the orchard been satisfactory? "Whether in the nursery row or planted directly in orchard, the growth of the seedlings themselves has been all that could be desired and much more vigorous under Grass Valley conditions than French seedlings, although they possibly make slightly less vertical growth than Jap seedlings of the same age."

What About Pear Root Aphis?

Do these trees resist such? "Grown where French seedlings have shown as high as 98 per cent infestation with pear root louse, and where every pear orchard or French root suffers badly from this pest, I have yet to find," said Wisker, "the first Usuriensis seedling attacked by this member of the aphis family. I have no proof that these seedlings are aphis-resistant, but I know that they have been planted in an old orchard in the Chicago Park district in holes from which Bartletts on French root had been dug out, practically dead from this pest, and that they have thus far made vigorous growth and show no sign of aphis injury." This in itself speaks well for the tree for it is a toss-up which will destroy the usefulness of an apple or pear tree the quickest, the root aphis or blight.

When asked as to the effect dry and wet soil had on the growth of the Usuriensis seedling, Wisker said; "On dry soil they have made as good growth as other members of the pear family; but where ample moisture was supplied, growth was so luxuriant that there is little reason to doubt that this species responds best to an ample supply of ground moisture. I have kept them for one year in running water (ditch), have planted them, and more than 60 per cent grew."

Propagation By Budding.

In budding this stock, is it your custom to bud near the ground or up among the branches? "For the greatest benefit to horticulture," said Wisker, "nursermen should not make use of Usuriensis as a stock upon which to propagate by budding in the usual manner, near the ground. In such trees a blight-proof root is only secured, and the seedlings are too valuable to use for so small a measure of blight protection." Would you advise budding in nursery row or plant the seedlings in the orchard and then bud them? "The orchardist," said Wisker, "must be induced to plant the seedlings in the orchard row, properly frame the head of the tree, and then bud or graft the desired variety upon the branches; thereby securing in root, trunk and main-limb crotches the maximum degree of blight protection." In your opinion are there other Oriental species that will in time prove satisfactory? "Yes. Among several such species," said Wisker, "is the Pyrus calleryana, which gives great promise, and it probably ranks next to Usuriensis. Mature specimens of this variety may be found at Oroville, Calif."

From your observations and experiments are you satisfied that Usuriensis is the ideal stock? "I have not reached the conclusion that Usuriensis is the best species for pear stocks that will ever be discovered, but I am strongly of the belief that at this time no evidence exists that it is equaled by any other." Would you be in favor of doing away entirely with the French and Jap seedlings? "It will be horticulture's great gain should the Oregon work give us not one but two or more species of Pyrus which shall possess extreme blight-resistance, and thereby permit us to discard entirely both French and Jap seedlings, which all admit have very positive shortcomings."

A Note of Warning.

One would naturally infer from that, that you are not satisfied with the Jap seeding blight-resistance sufficient to recommend its propagation? "In this connection," said Wisker, "I feel that I should sound a note of warning with reference to the blight-resistance of the Jap seedling. It is fitting that I should tell of its disadvantages, since, more than any other person, I am responsible for its present general use in California. This season's experiments at Talent, Oregon, gave definite evidence which proves that this stock is not sufficiently resistant to blight to justify planting the seedlings in orchard, with the intention of forming the head and then top-working our commercial pears upon the branches as is being done with the Usuriensis seedlings. Nothing, however, has yet come to light to weaken the esteem in which the Jap seedling is now held to provide blight-resistance and aphid-resistance in the root-parts of the tree."

Mr. Wisker is very much encouraged over the experiments he has made with the Usuriensis seedling. However, it is not his intention to go on record that "this is the ideal stock" until his experiments prove conclusively to his mind that the stock is ideal, and should his efforts prove successful, the pear growers of this nation will be under lasting obligations to Mr. Wisker for his persistent work, for practically a lifetime.

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Community Ice Manufacture Beats the Trust

Written for Pacific Rural Press by D J. Whitney.

Winter in one way would seem to be a poor time to talk about ice, but if people are going to prepare to make ice they have to begin before summer comes. Hence, now is the proper time to tell about the Lindsay Community Ice Company that gave Lindsay cheap ice all last summer and freed her from the "Ice Trust." It would be fortunate for the state if every community did the same; it would give the high cost of living a body blow in one tender spot.

"Is there actually an Ice Trust in California?" you ask. Perhaps not, but there is one big company that seems to have a pretty good working agreement with the little local manufacturers here and there, provided the local manufacturers keep their prices up and buy all the extra ice they need from the big concern.

But if a local man sells cheaply? Well, that's different. He will have to go out of business. Meanwhile the farmer and the townsman are both paying a big price for ice and some one must be profiteering.

For example: In Visalia, where there is a small ice manufacturing plant, ice retailed last summer for 80 cents a hundred, platform prices. In Exeter, a few miles away, it was 90 cents a hundred. A little further east, in Lemon Cove, it was a cent a pound straight. So it was in Portersville, but at Lindsay, in the center of this district, platform prices were 50 cents a hundred, and the amusing feature of it all was that a commercial concern [we will not call it the ice trust] could also ship in ice to Lindsay and sell it at 50 cents too, even if they had double that price a few miles away. Perhaps they charged other communities enough to enable them to sell cheap here, though we do not admit that the 50-cent price meant any loss.

Not only could commercial concerns meet the Community Company prices, but to big customers they even sold at a reduced price. Perhaps they did not try to drive the Community Company out of business, but it is worth noting that while an ice famine was on in summer the Lindsay commercial ice house could get all the ice the regular customers needed at 50 cents a hundred, while nearby towns went short when their retail price was 90 cents. Perhaps the ice trust was not trying to compete with the local concern and perhaps it was.

Community Bought Private Plant.

The history is something like this: Lindsay men started an independent ice company several years ago and sold ice at 50 cents. Last spring they decided they could not stand the pace and planned to sell their plant. The Lindsay Chamber of Commerce knew what outside prices were and for public advantage got an option on the plant and started a "Community" company, stock being sold so that cheap ice could continue, not in order to secure dividends. In this it is like the great growers' fruit companies. There are 300 different stockholders. A. M. Robertson, secretary of the Chamber of Commerce, has had the oversight of the business.

During the summer 1,000 tons of ice have been sold at a saving to the consumers of $7,500, granting that they otherwise would have to pay the 85 or 90 cents that would have been charged. The plant is modern and up-to-date. Its replacement value is $20,000 to $25,000. Hence its saving to customers would pay for it in less than four years.

The plant was handicapped by having space for only 100 tons reserve storage. This winter it is planned to put in storage room of 1,000 tons extra, so that the plant will operate almost continuously and be able to double the annual output. The demand is such that 2,000 tons per year can easily be sold.

Customers from Miles Around.

Ranchers and townspeople drive in from as far as Woodlake on the north to Porterville on the south. It gives a pleasant trip and the saving in ice pays for a lot of the gasoline. On one afternoon more than 3,400 pounds of ice was sold to people from the Porterville districit alone. Buyers not only are pleased to buy cheap ice, but they are pleased to avoid being held up by the ice trust.

A cent a pound, $20 a ton, is the charge in some nearby towns. Ice is manufactured and put on the platform for about $3.80 a ton at the Lindsay plant, though it can hardly be retailed to break even at less than $10 a ton. Lindsay manufacturing costs are the costs in nearly any town in California, but ice prices will remain high until the people see that good competition is provided.

As it is the ice trust (so called) will charge a dollar in other towns for what it seems anxious to sell for 50 cents in Lindsay. A Community ice plant seems to be the solution.

Characteristics of California's Wheats

(Written for Pacific Rural Press by Prof. Geo. W. Hendry, Nniversity Farm, Davis, Cal.)

(See illustration on 1st page.)

There are seven wheat varieties extensivly grown in California at the present time and of which seed may be readily obtained. These are as follows:

California Club (Little Club), Cal. No. 114.

This is one of the first varieties of wheat cultivated in the state of California. It is thought to have been introduced and grown by the Spanish padres around the first mission settlements. It is identical with the Club wheat grown extensively in Chili, and probably found its way north from that locality.

It has from the earliest time been a strong contender with the Pacific Bluestem (White Australian) for supremacy in the Sacramento Valley and has retained its commercial importance largely because of its non-shattering properties. The compact club holds the grain retentively after maturity and prevents shattering losses when the crop remains standing in the field exposed to strong north winds. The system of cutting wheat in California with the combined harvester, which does not operate except upon dead ripe grain, has made the employment of such varieties as this a necessity.

The grain is of low milling quality, bringing about $5.00 a ton less than that of the Pacific Bluestem (White Australian), yet its non-shattering qualities have won a place for it in the agriculture of California. It yielded at the University Farm in 1920 47.6 bushels per acre.

Pacific Bluestem (White Australian, White Tuscan, White Lamas, Oregon Bluestem), Cal. No. 791.

This variety has been grown in the grain-producing sections of the Pacific Coast for about 70 years. It was introduced into California from Australia in early fifties and has until within recent years remained one of the principal commercial varieties of this state. It is a good general purpose variety and has produced good yields of both grain and hay. It is a mid-season-ripening variety and has been found to be less productive under conditions of drouth than some of the more early maturing newer introdutcions. It is a smooth chaff, beardless variety, which yields a grain of medium milling quality. It is classed on the market as a soft white wheat. As a hay variety it has few equals. It yielded at the University Farm in 1920 58.5 bushels per acre, as compared with 47.6 bushels per acre for Club, 42.3 bushels per acre for Defiance, 41.2 bushels per acre for Baart, and 32.4 bushels per acre for Sonora.

Sonora Wheat (Velvet Pearl), Cal. No. 98.

This is one of the oldest and best known California wheats. It takes its name from the state of Sonora in old Mexico, whence it is thought to have been introduced into California by the Spaniards in the early days. It has been grown in a limited way in the Commonwealth of Australia under the name "Velvet Pearl," a name which was suggested by its velvet chaff and a pearl-like luster of its smooth, kernels. At the present time it is the most popular variety grown in the south San Joaquin Valley, and a large part of the wheat originating in the Tulare Lake region is of this variety.

It is an early maturing variety, peculiarly adapted to hot, dry climates, and grows to perfection throughout the semi-arid regions of the southwest. It is of low milling quality, but has retained its wide popularity by virtue of its high-producing capacity under conditions of drouth. It is less productive in northern California than many other varieties of its class and yielded only 32.4 bushels per acre at the University Farm in 1920.

Early Baart, Cal. No. 3950.

Introduced from Australia in 1900 by the U. S. D. A. It has never been a leading commercial variety in Australia but has become prominent in California during the last five years. The name (Baart) is Dutch for beard, which seems to indicate that the variety was introduced into Australia from the Orange River Colony or the Transvaal of South Africa, where it has been grown for many years This variety was originally grown in Europe.

It is an early maturing bearded wheat of high milling quality but has two defects which limit its usefulness. It has a weak straw, making it susceptible to lodging when fall planted to rich land well supplied with moisture, and second, it possesses a lax spike, which induces shattering losses when exposed to strong winds subsequent to maturity. It yielded at Davis in 1920 41.2 bushels per acre.

Bunyip Wheat, Cal. No. 3023.

This is a hybrid produced by Farrer of Australia in 1897 by crossing Rymer and Maffra, each of which are themselves hybrid varieties It was obtained by the California Experiment Station and tested for many years before it became prominent in the state. A sample of the wheat was exhibited by the Australian Government at the Panama-Pacific International Exposition at San Francisco; and at the close of the exposition in 1915 the sample was obtained by the Sperry Flour Company of Stockton and grown and distributed by them subsequently. It is an early maturing erect, stiff straw, compact, sparse stooling, medium height variety. It is becoming more popular each season in the state and is replacing some of the older, later-maturing varieties, such as Club and White Australian.

Defiance Wheat, Cal. No. 955.

This is a hybrid variety, produced by Pringle by hybridization at Charlotte, Vermont, in 1871. It is the result of a cross between a club variety, and an unnamed Pacific Coast white wheat. It is rust-resistant and for this reason has been popular in the humid coast districts of California for many years. It resembles White Australian very closely in the field, but is slightly slower growing and is ultimately somewhat shorter than White Australian. It may be easily distinguished in the head from White Australian by minor structural differences. It has a grain of good milling quality for a wheat of its class. It yielded at Davis in 1920, 42.3 bushels per acre. It is recommended chiefly

(Continued on page 714.)

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Fruit, Shade and Ornamental
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Write for prices.

CROW'S NURSERIES, Gilroy, Cal.

Here and There in the Fruit Business

Oroville's Gala Week.

During the past week Northern California did honor to the orange and olive at the Fifth Orange and Olive Exposition held at Oroville. Oranges, not by the plate or box, but by the carload, were on exhibition, and to add to the beauty of the display, olive boughs ladened with fruit were in evidence at every turn. All kinds of tropical and semi-tropical deciduous fruit were added to this great picture. Not to be outdone, the valley sections sent a full line of agricultural productions, including pumpinks, large enough to make pies for all of New England. Rice, alfalfa, and a general line of vegetables added to the display. Oroville has every right to be proud of productions. The first oranges to leave the State for the eastern markets go from Oroville. It is said by experts that the sugar content in the Oroville orange ranks highest of any orange grown in California. Its olive trade has reached to the four corners of the earth. One of the great features was the grand ball on Saturday night given in honor of the two queens—Lorraine of the olive and Nora of the orange—who were crowned at the elaborate ceremony on Friday night.

First Oranges Condemned.

The wily fruit shipper continues the nefarious practice of attempting to deceive the public by packing immature fruit. The first shipment of oranges from Sanger, Fresno county, has been condemned by County Horticultural Commissioner Roullard. "The oranges were picked too green," said Roullard, "being below the sugar content requirement and immature." The fruit growers of California might just as well stop "kidding" themselves by thinking they are going to get by with this work, and get down to business for we are there to say to them that the practice of shipping anything that will go into a box, barrel, crate or sack is a thing of the past. While in attendance at the State Fruit Growers' and Farmers' Convention and the State Horticultural Commissioners' Convention at Fresno, we were more convinced than ever that it was the intention to put a stop to the shipment of inferior and immaure fruits. So Mr. Grower, you had better get wise. Fifty dollars and $100 fines take the profit out of a number of packages of legitimately packed fruit that are made to suffer on account of an attempt at shipping rubbish.

Apple Barrel Scarcity in Canada.

The Canadian apple shippers are facing a serious problem that may prove a great financial loss. The apple crop, which is now the main item in the domestic fruit market, is much effected by the shortage of apple barrels and their consequent high price. The Ontario fruit dealers say that the new barrels will cost between $1.75 and $2 each and are very scarce at that. The writer spent three months of each year from 1889 to 1893 in the apple sections of Western New York state, buying and shipping apples and the prevailing price for apple barrels was 25 to 40 cents. The reason given for this unusual advance in price is scarcity of the right kind of lumber used in the manufacture of barrels, which is principally oak and ash. There is also a material shortage in boxes and baskets used in shipment of smaller fruits and berries.

Other Countries Raise Prunes.

We must not let the idea get the best of us that California produces all the prunes on earth. We have before us a statement issued by Consul K. S. Patton of Belgrade to the effect that the only dried fruit which is produced in commercial quantity in Serbia is prunes. According to offical statistics there are 453,620 acres in prune orchards. The chief centers of production are Serbia and Bosnia, the annual tonnage is approximately 63,000. It is said that 40 per cent of these prunes are used in the manufacture of prune brandy, 40 per cent is dried, and the reminder is made into jam. It may be seen from that, however, that the tonnage dried will not materially interfere with California dried prunes.

Fruit Growers Paid in Full.

At a meeting of the board of directors of the Fruit Growers of California, Inc., held at San Jose a few days ago, J. U. Porter, secretary, reported that every member of the association had been paid in full for their 1920 crop and the growers' accounts at the bank through which the money was paid have been closed. The organization department reported 7½ per cent and that the association has increased its acreage 9½ per cent as a result of the drive recently started to sign 75 per cent of the apricot acreage of the Santa Clara Valley for next season.

Damage Suit Follows Purchase of Prunes.

Suit for the recovery of $40,356.25 damages against Seggerman Bros., Inc., fruit brokers of New York city, has been launched by the California Prune and Apricot Growers' Association as the result of an alleged breach of contract on the purchase of prunes. The charges against the New York establishment were filed in the Superior Coast at San Jose by Aaron Sapiro, attorney for the association, subsequently the Seggerman Brothers filed a petition, which was granted by the court, asking that the case be transferred to the U. S. District Court in San Francisco.

New Olive Plant Dedicated.

Marking an epoch of momentus import to olive growers of California, the new Ehmann olive packing plant, the largest of its kind in the world, was formally dedicated last week before thousands of persons from all sections of the state. In twenty-two years, from an initial equipment of ten half-barrels on the porch of the Ehmann home in Oakland, the factory has grown until today it occupies an entire block.

PROCESSING OLIVES.

(Written for Pacific Rural Press by R. E. Wood.)

Pick from the tree by hand, place in box not over five inches in depth, have tub filled with water and pour fruit from box into water, thus preventing bruising, and after drawing water from tub the olives should not be over eighteen or twenty inches in depth. What is ordinarily termed lye varies in strength from thirty per cent to ninety-eight. Wood ashes from the cook stove will do the job as well as some of the brands of lye. For beginners the proper trick is to buy Greenbank Caustic Soda. Make a solution of two and one-half ounces to each gallon of water, place wooden follower over the olives with stone weight to keep it down and cover all with the solution, an inch or so above the follower. Every ten or twelve hours, draw off a portion of the solution and pour it back on top to equalize its strength. After thirty-six hours with a sharp knife, slice one of the olives to the pit and in most cases you will find white flesh near the pit, indicating the lye has not yet penetrated quite far enough. It should darken the flesh to the pit, but should not be left any longer. The olivin or bitter principle is an acid, and while the alkali is neutralzing that it cannot attach the oil of the fruit. From thirty-six to forty-eight hours is usually the proper time for the lye to act. Draw it off and use plenty fresh water, changing two or three times a day for a week or so, then cover with salt water, two ounces to the gallon. Let stand two or three days, then replace with water five ounces to the gallon, a 4 per cent solution, most satisfactory to most tastes. I never bother to expose olives to the air to darken them, after being in the lye a few hours. The Collumella, one of the

BARTLETT PEAR ON JAPAN ROOT:

We have a fine lot of yearling Bartlett, as well as Bosc, Anjou, Comice, Flemish Beauty and Winter Nelis.

These trees are grown on new soil, never before in nursery stock, are well rooted, clean, healthy and hardy. Hundreds of thousands of our trees in all parts of the west are now bearing profitable crops for their discerning owners.

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Remember our prices cover freight and packing charges.

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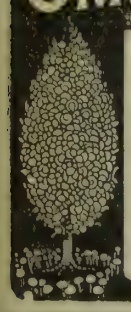

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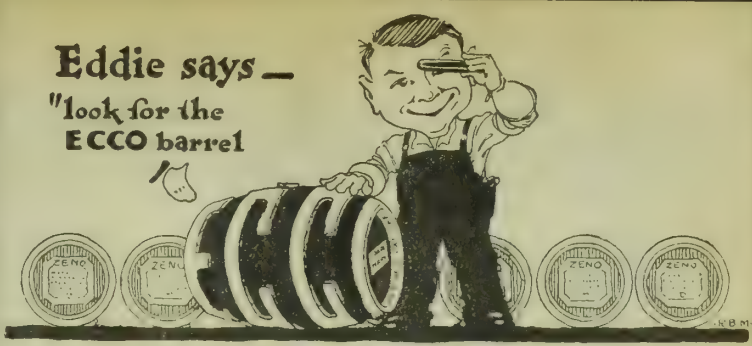
very best olives, is yellow when ripe and of course never could be made dark. There is several objections to the darkening process; liability of bruising; over processing; extra labor; with no benefit, except to please the eyes of those who consider black the proper color. Variation in color is as correct in olives as in apples. When properly processed, placed in cool cellar, and brine renewed occasionally, they will keep in good condition four months.

LITTLE ORCHARD TRACTOR.

One horse did the cultivating in four acres of big apple trees and about as many of big walnut trees for Dr. W. L. Jerman of Los Angeles county. He never did plow this orchard for two years, but he disked it deeply instead. Not long ago the doctor, who is over three score years old, met an accident which made walking behind his fast horse more than he could endure. So, although the horse's upkeep was practically nothing because he was pastured in the apple orchard, Dr. Jerman bought a small-sized two-wheeled orchard tractor with a five-horsepower engine last May, and since then has been able to ride at all of the work on an easy seat. He sold the horse in June. No new tools were obtained, but a little blacksmithing fixed over all of his one-horse tools for use on the tractor. A notable difference in efficiency of cultivation has occurred, however. A short tongue and iron braces replaced the shafts on the four-foot disk and now it is angled to the limit and goes into the dirt to its axles. The 3½-foot section of springtooth harrow is set to go as deep as possible. A section of steel harrow, whose teeth formerly were slanted backward now has its teeth angled forward and they go in to the hilt. A trailer obtained for use with the automobile is hitched by a short tongue to the tractor to haul half-ton loads of nuts, apples, etc., out of the orchard. All of the furrowing for irrigation is done by the tractor with a furrower built from old cultivator irons and a furrower bottom. A drag made of two 4x4's with teeth projecting backward is used in the apple orchard where there is considerable grass and weeds, and these teeth will not clog. The tractor gets around under the heavily laden low-hanging branches much easier and with less damage to the crop than the horse did formerly. Four gallons of gas run the outfit a nine or ten-hour day.

HOW TO PREPARE TREES TO BE GRAFTED.

Where it is the intention to work over a block of old trees by grafting on a more profitable variety, there is a way of going about the work that will make it decidedly more agreeable and easy for the parties entrusted with the delicate work of grafting and waxing. It was the writer's custom when such work was to be done, to select a careful ranch hand and instruct him at what point of the trees the dehorning should be done. Each limb was carefully sawed off about one foot beyond the point intended for the insertion of the graft. All brush was trucked from the orchard, leaving nothing to interfere with the parties doing the grafting and waxing. As a rule, this dehorning and cleaning up of brush was done in the early part of December. When it was deemed advisable to begin grafting a ranch hand preceded the party doing the grafting and sawed off about twelve inches of the end of each limb leaving a fresh wound. Now that there was nothing to interfere in the matter of getting around and up into the tree with ease and comfort, the work of grafting and waxing was carried on with more rapidity, and results were far more satisfactory. The old way of going at it is cumbersome, and many times the scions are knocked out by the careless handling of the brush and also by the party doing the sawing where part of the tree had been grafted. Try the new way, which will be found more satisfactory.



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Miscible oil spray, and these are reasons why
It has proved the best by years of test.

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Tell us the kind of trees you want and the number required. If you're in doubt as to the best variety, ask us.

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HAS
Greatest Yield Record. Our Seed Is COMPETENTLY TESTED FOR HIGH PURITY.
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Pulverized Sheep Manure
IN BAGS OR IN BULK. NOT LIKE ORDINARY MANURE.
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Look for the Tag LOS ANGELES, CAL.

Significant Agricultural Pointers

Growers Holding Potatoes.

Carlot shipments of potatoes in the U. S. totaled 104,403 for the 1920 season up to November 17. To the same date last year the shipments totaled 101,817. As a carload averages about 500 bushels, we have already shipped 1,293,000 bushels more than last year. As the total crop is estimated at 63,351,000 bushels more than last year, this indicates that growers are holding more than they did last year at this time. It will be remembered that famine prices were paid in the spring following last year's crop.

The Best Right to Profiteer.

When profiteer after profiteer takes unrestrained toll between producer and consumer, the time has come that primary producers should cease asking for cost of production plus a reasonable profit, but should demand and take all of the unreasonable profits that shall be permitted to any class between producer and consumer. Why should farmers stand by while traders in their products rob consumers until consumers rebel and depress the prices to producers while profiteers continue to exact their ungodly toll on all that passes into consumption? If anybody gets those undue profits, producers are entitled to the first whack at them. If anybody is financed directly or indirectly through the Federal Reserve Bank with profiteering results, the producers are entitled first to all the money they need.

Tire Prices 40 Per cent Lower.

Tires are selling now at about 40 per cent lower price than in 1910, as stated by the B. F. Goodrich Rubber Co. in announcing recently a 15 per cent cut in their prices. So strange does this sound that we have looked into the matter further. The price before the recent reduction was 25 per cent below the 1910 prices of the same tires! Who would believe it now! Reasons for cheaper tires now than in 1910 are: (1) Greater volume of business; (2) longer fiber in the fabrics; (3) improvements in methods of manufacture. Besides the lower price, it is stated that the tires of today deliver about twice as much mileage as those of ten years ago.

Cure for Most All Crop Diseases.

What appears to be a contemptible fake is being advertised in California—a general cure-all for fungous and bacterial diseases on roots and tops of all plants and almost as good an insecticide. Read the following claims quoted verbatim from one of their circulars and judge for yourself whether it is a fake. "Soluble sulphur-carbon compound. Disease infested soil in plantations, orchards, vineyards, farms, or gardens is restored to healthy condition by the use of "————." . . . The most efficacious remedy known for mildew, rust, smut, fungus, blackspot, wilt, curl leaf, red spider, thrips, aphis, codlin moth. . . .Try it as a spray for your walnut trees this winter and you will find it will clean them from the fungus and codlin moth more efficiently than any other remedy on the market. . . . If sprayed 1 to 100 on the land during the winter months the rains will carry the "—— ——" into the soil and wherever it penetrates it will kill the eggs or larvae in the ground. . . . Is not poisonous and may be used on the most delicate flower and blssoms without injury. Has been found an efficient and successful cleanser on root diseases of trees, pineapples, sugar cane, grape vines, in fact, for all plants." Now suckers, gobble the bait! and lessen up on your swollen profits.

Testing New Grain Varieties.

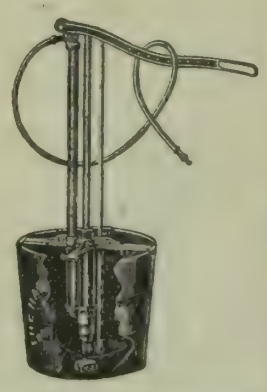
Not content with the recently introduced superior varieties of wheat and barley, the field-crop department of University Farm is this season trying out an extensive collection of hybrid wheats and barleys from Saskatchewan, eleven wheat varieties from Minnesota, sixteen new wheats from India, thirty-three from Washington, thirty-nine from Australia, and miscellaneous cereal varieties from State Experiment Sations in the United States.

Motor Truck Loads Regulated.

Omisison of a comma from the Motor Vehicle Act led not long ago to the serious contention in a Visalia court that the limitation of 800 pounds per inch width of truck tires resting on the pavement applied only to the truck, and that the load it carried was unregulated. The same point was argued in a Livermore Valley court more recently and the court held sensibly enough that there could be no doubt about the intention of the legislature to regulate total pressure on the pavements. But see all the legal flurry about a comma!

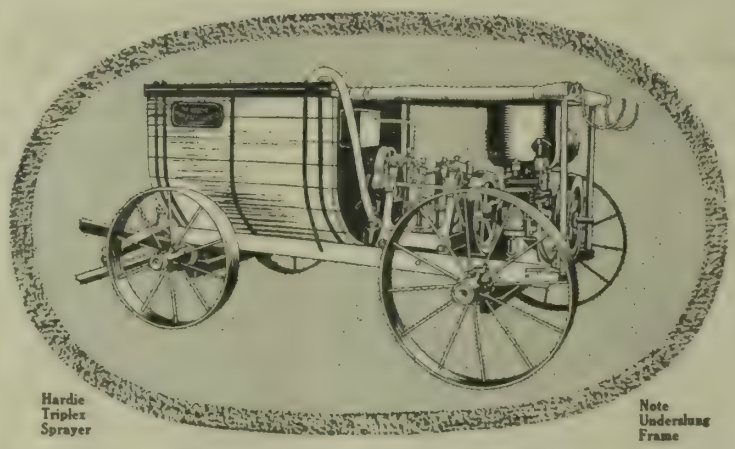
O. F. Darnell of Porterville received $5,300 from his orchard of 1,100 apricot trees.

For small growers there is the Hardie Junior Power Sprayer—a low priced high quality Sprayer—150 gallon capacity, maintains 200 pounds pressure.



The *Hardie* all-brass bucket pump, the only bucket pump on the market with mechanical agitator, 200 pounds pressure with 35 strokes per minute.

Hardie barrel sprayer—mounted on the side for low height and freedom from upsetting. Pumps out all the liquid. Equipped with agitator.



The Advantages of Simplicity in a Power Sprayer

Spraying Troubles at Spraying Time are Extremely Costly

Sprayer troubles are practically eliminated in Hardie Sprayers because of the simplicity of design and the accessibility of each working part.

Investigation will convince you that adjustments and replacements are called for far less frequently in Hardie Sprayers than in any other kind. Ask any one of the 35,000 Hardie users.

The Hardie Triplex with its underslung truck and its wide track is a Sprayer that can be used on the steepest hillside where it would be impossible to take other machines. The tank is carried so close to the ground that it goes through the orchard without injuring the tree or fruit.

Its big capacity and high pressure enables the user to cut the cost of spraying to the bone.

Hardie Sprayers are sold where ever good fruit is grown. See the Hardie dealer or write us direct.

HARDIE MANUFACTURING COMPANY
For 20 years the foremost, exclusive manufacturers of hand and power sprayers, including the FAMOUS HARDIE ORCHARD GUN
222 NORTH LOS ANGELES AVENUE, LOS ANGELES, CALIF.
Home Office and Factory, Hudson, Michigan
Branches at: Portland, Ore. Kansas City, Mo. Hagerstown, Md. Brockport, N. Y.

AGRICULTURAL AND MECHANICAL SERVICE

Watch for Alfalfa Weevil.

Please keep us posted on the alfalfa weevil.—C. G., Lake county.

The State Department of Agriculture and the Western Plant Quarantine Board are alive to the menace and have recently quarantined a district in Nevada within 20 miles of the California line. But there are many ways in which the bugs can be carried; and our only real hope is that alfalfa growers of this state will watch closely for them and report them to the State Board of Agriculture when first observed. The most prominent sign of alfalfa weevil may be seen in spring time on the first crop. The adults lay eggs early in spring, and very small grubs will soon be noted feeding on the growing tips. This feeding stops growth at the tips and forces laterals on the alfalfa which in turn are attacked. The adult weevil is an oval beetle about 3/16 inch long, with six legs and with a pair of feelers on its blunt-ended snout. It is brown or grayish brown with a darker line lengthwise of the middle of its back. Damage is done more or less all through summer, and if California alfalfa growers wish to avoid the immense losses directly and indirectly due to the weevil, they will watch closely and report promptly if any are found.

Fertilizing Value of Legumes.

What percentage of the main fertilizing constituents is contained per ton of green vetch and green melilotus alba.—T. C. K., Napa county.

Prof. F. W. Woll of University Farm gives us the following analyses of these plants per 1000 lbs.

Per 1000 lbs.	Vetch	Melilotus alba
Nitrogen	6.1 lbs.	19.5 lbs.
Phosphoric acid	1.6 lbs.	5.6 lbs.
Potash	5.0 lbs.	18.3 lbs.
Water	79.6 lbs.	74.3 lbs.

The melilotus analysis was made on dried plants. Figuring the data above into the basis of the same water content as the vetch, we would have the following percentages for comparison.

Green	%Nitrogen	%Phosphoric Acid	%Potash
Vetch	0.61	0.16	0.5
Melilotus alba	0.43	0.12	0.4

Rice at Eight Times Growers' Price.

I have noted your consistent boosting of farmers' marketing associations and also the present difficulty of rice growers to secure a fair price for rice. I like to eat rice frequently, but a 100-pound sack would last my family a very long while. Consequently we buy in two-pound sacks, for which we pay 50 cents. Is this something for the rice growers to think about?—H. H. A., Madera county.

That is outrageous. If you and your neighbors could buy a sack of rice from a mill, you would get it at a price not unreasonably above what the growers get for their unmilled rice. We wish the fellows who are robbing you had to eat all the money they would make out of it. Then they would recognize some profit tears.

Soil Analyses Useless.

Please furnish me the name of a good agricultural chemistry and laboratory manual dealing with soil analysis in particular.—R. E., Fresno county.

Prof. C. B. Lipman of the University, to whom the question was referred, answers that "no methods of soil analysis at the present time are worth anything, except to a very few for extremely specialized purposes." However, we are sending the names of some text books to be used for what they may be worth.

Tractor for Pump.

Will a Model D Moline tractor run a six-inch pump lifting water ten feet?—Subscriber.

It would lift to three times that height all the water a six-inch pump would deliver if both engine and pump are in good shape. Sign your name to all queries you want answered in the future. Only the initials will be published.

Allwork Kerosene Tractor

ALLWORK KEROSENE TRACTOR, Pulling Knapp Orchard Disc Plow in a Santa Clara Valley apricot orchard.

Scientifically Designed for Burning Kerosene

The ALLWORK is one of the few tractors that can perform satisfactorily while burning kerosene. Here is the reason: Every detail of the staunch ALLWORK engine—from the intake to the exhaust—is scientifically designed to adapt it for kerosene consumption.

Attempts to convert gasoline engines into kerosene engines by means of "attachments"—such as special carburetors, stoves, hot spot manifolds, water sprays, and other devices—have not stood the exacting test of time.

The ALLWORK KEROSENE TRACTOR—because of the inherent correctness of its design for burning kerosene—has established an eminent record covering years of successful performance.

Small and Powerful

In spite of its unusually low cost of operation, the ALLWORK KEROSENE TRACTOR has more power than has ever before been built into a tractor so small. It is only 50 inches wide, 55 inches high, has a 75-inch base, and turns in a nine-foot radius. These specifications, combined with an abundance of reserve power, make the ALLWORK admirably qualified for all work in California.

OLIVER, KILLEFER or KNAPP PLOWS

When you order your ALLWORK TRACTOR, equip it with implements from exceptional Railsback stock.

We can furnish either Oliver implements, Killefer tools, or Knapp Orchard Disc Plows—all eminently fitted for local conditions.

We urge you to visit our salesrooms, or write to us for particulars

L. M. RAILSBACK CO.
Representing
Allwork Kerosene Tractors
California, Nevada, Arizona, Hawaiian Islands and Philippines
Los Angeles County Distributors for:
OLIVER Implements
KILLEFER Implements
Thomas Rakes
Thomas Crown Mowers
Black Hawk Spreaders
Black Hawk Planters
Steel Wheel Trucks
Hardie Sprayers
Superior Drills
Winona Wagons
Aspinwall Potato Machinery
Knapp Orchard Disc Plows

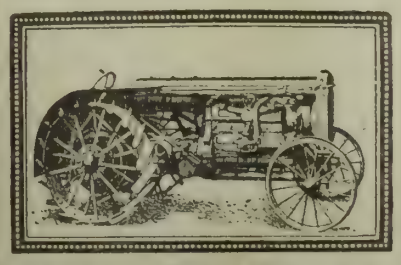
L. M. Railsback Co.

LOS ANGELES

Implement Division
115-119 So. Los Angeles St.
Phone 67466

MARTIN J. KOPPEL
District Manager for Northern California and Neveda
Travelers Hotel, Sacramento, Cal.

Tractor Division:
234 No. Los Angeles St.
Phone 12569



Allis-Chalmers Farm Tractors

The 1830

A four plow tractor with 20% surplus power for ANY unusual load.

H. V. CARTER MOTOR COMPANY • Distributors
52 Beale St., San Francisco, Cal.

SAVE MONEY—BUY PIPE FROM US

Farmers, Miners, Builders—people in every kind of business are saving money buying used or renewed pipe from us. We sell every kind of pipe. Send in a list of your requirements today and get our prices. We have saved hundreds of people 33 1-3 to 50 per cent on their pipe bills. Here's a partial list of some of the miles of pipe we have in stock for immediate delivery.

8,000 ft.	6 in.	Riveted	16 gauge
700 ft.	8 in.	"	16 "
5,000 ft.	12 in.	"	12 "
1,000 ft.	18 in.	"	12 "
800 ft.	22 in.	"	14 "
300 ft.	24 in.	"	14 "
500 ft.	36 in.	"	12 "

10,000 feet light wrought iron 8-inch pipe with cast-iron collars.

All above pipe thoroughly overhauled and inspected and ready for immediate use.

We also have large quantity standard pipe and screw casing, pressure tested and guaranteed.

Don't delay—write for our prices on your pipe requirements today.

PACIFIC PIPE COMPANY
229 Howard Street, San Francisco, Cal.

Makes a Dandy Christmas Gift

Everybody wants one—boys and grown-ups too. Toy model of big Avery Tractor. Cast iron—beautiful red and black enamel—gold striping—rolling wheels. About 3¼ inches high, 4½ inches long. Get your boy one for Christmas. Makes ideal table ornament too. Send 35c (50c in Canada) with names of five possible tractor, motor cultivator, motor truck or thresher buyers—and we will mail it postpaid.

AVERY CO., 15412 Iowa St., Peoria, Ill.
Branch Houses, Distributors and Service Stations Covering Every State in the Union

AVERY
Motor Farming, Threshing and Road Building Machinery

Adaptable to Many Purposes

Because of its low platform, tilting body, lightness of weight, and strength, Reliance Tractor Trailer is adapted to many uses, especially for the farmer. If desired, this trailer can be equipped with side stakes.

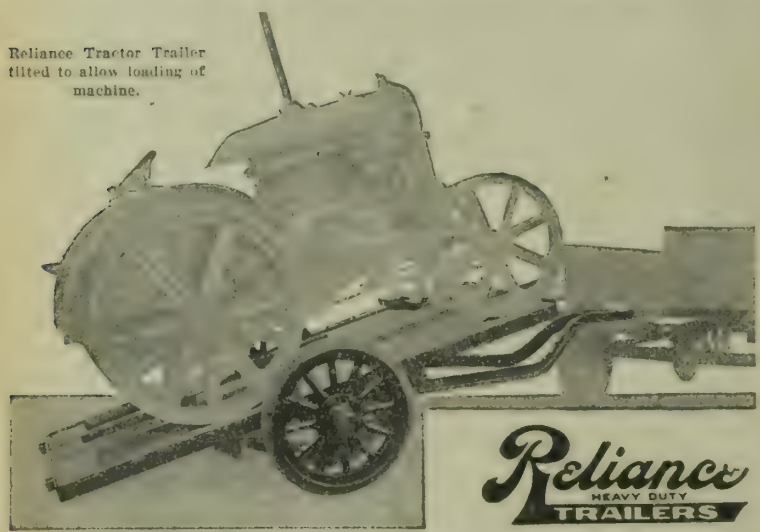
Truck By Trailer

Reliance Heavy-Duty Trailers are built in many models and sizes—both two and four-wheel—for every purpose. They save truck power because they combine rugged strength with surprising lightness of weight. They are designed so that heavy castings and all auxiliary parts are entirely eliminated without sacrificing an ounce of strength. Perfect tracking qualities. Special coupling that relieves frame and steering device of injurious twists and strains resulting from uneven roads.

Write for full descriptive catalogs, prices and name of nearest dealer

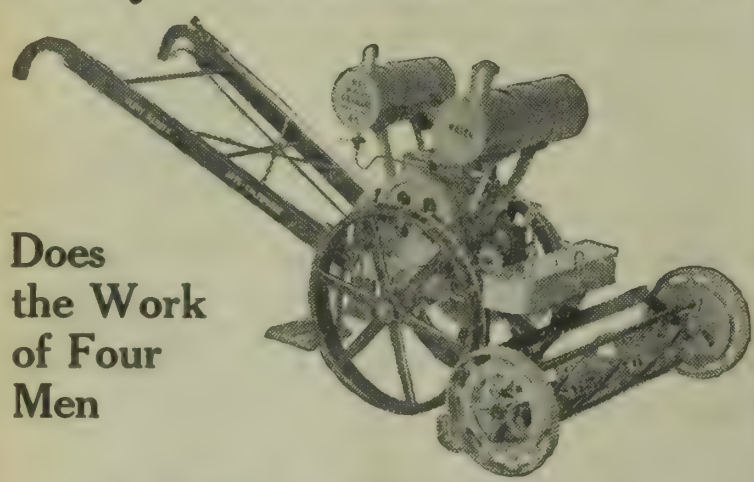
Reliance Trailer & Truck Co.
(INCORPORATED)
1648 HOWARD STREET SAN FRANCISCO

Reliance Tractor Trailer tilted to allow loading of machine.



Reliance HEAVY DUTY TRAILERS

Merry Garden Auto Cultivator



Does the Work of Four Men

Saves Time, Labor and Money

Cultivates four to five inches deep and to within one-half inch of plants. Furnishes power for running lawn mower, washing machine, saw, pump, separator, etc. An essential tool for any farm.

Equipped with 2 H. P. Evinrude motor. Travels 120 to 200 feet per minute.

PRICE, $230, F. O. B. CLEVELAND
Deliveries made from San Francisco

Manufactured by
ATLANTIC MACHINE AND MFG. CO.,
Cleveland, Ohio

Northern California Distributors

AUTOMOTIVE DISTRIBUTING CO.,
408 Clay Street,
San Francisco

FOUR THOUSAND AND MARIOUT SEED BARLEY

Limited surplus of high-class seed of these two heavy producing varieties, grown directly from University Farm Stock.
Car Lots (400 sacks or more) $4.00 per cwt. F. O. B.
Smaller Amounts ..... $4.50 per cwt. F. O. B.
Samples on request.

F. P. Wray, Davis, Calif.

MECHANICAL POWER ON THE FARM

WHAT HAPPENS TO LUBRICATING OIL?

(By C. W. Stratford, Consulting Engineer Associated Oil Company.)

Prepared at request of the California Tractor and Implement Association, to increase public knowledge of the practical points of Power on the Farm.

The total yearly expenditure for engine oil is a small item of the total operating and maintenance costs. This is the most conclusive argument for more frequent changing of oil than is customarily practiced.

Used oil from engine crank cases should be collected in a container for that purpose and the sediment allowed to settle out. The clear oil above the sediment may be then poured off and used for other lubrication, or if necessary, may be mixed in desired proportions with fresh engine oil and used again. Used oil may be completely regenerated into good oil. Such regeneration requires some special equipment and a knowledge of oil properties and of the necessary refining methods.

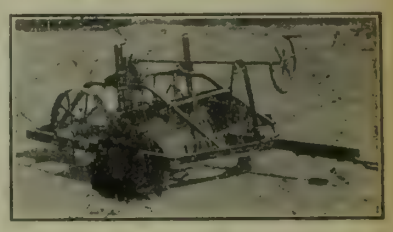
The elements of all types of gc lubricating systems comprise a pur or equivalent means of circulation, ducts, strainers on the inlet side the pump and in the breather pi through which the oil is filled, and the main container for the oil supply, usually the sump of the engine, or, sometimes, a separate tank. All lubricating systems employed in automotive engines may be classified as two distinct methods of application, Splash and Pressure Feed. Lubricating systems which do not clearly fall under these two headings are varying modifications of the lubricating methods of full splash and full pressure feed. The more expensive automotive engines, especially those which operate under the heaviest load, are generally equipped with pressure feed. Most automotive engine manufacturers have so designed the details of engine parts and the application of the lubricating system to their engines, as to prevent the entrance of excess oil past pistons into the explosion chambers or the direct leakage of the oil from the engine.

Were it not for the fact that all automotive engines operate at high temperatures, the practical limitation of the use of engine oils would be the rate of their leakage from the mechanism and the contamination of the oil with metal dust worn from the bearings. Without heat and contamination, the life of hydrocarbon oils would be virtually everlasting. Heat progressively destroys lubricating properties of all oils. Assuming a given quality, this destruction progresses at a rate dependent upon the degree, high or low, of the operating temperatures of the engine. Full load engines, like farm tractor, aviation, and similar high duty engines, destroy the oil in a very short time. Pleasure car engines, running under light loads, destroy it at a much slower rate. It is because of these variable heat conditions in different engines that oils of different viscosities are required. Sources of heat are the atmosphere, friction of movement of engine parts and the heat of combustion within the cylinder.

Contamination of the lubricating oil in crank cases of automotive engines is an ever-present cause of defective lubrication. With even the best oil, this contamination with fuel hydrocarbons, water, carbonaceous or metallic sediment or road dust soon renders it unsatisfactory for further use. If it is not removed and replaced with good fresh oil, its continued use will

THROOP Land Leveler

"The Leveler Supreme."



"There's a Throop Leveler for every Tractor."

FEATURES

—Mfg. in six, eight, ten and twelve-foot sizes.
—Exceptionally well built.
—Operates as easily as an auto.
—Enormous capacity.
—Positive action under all conditions.

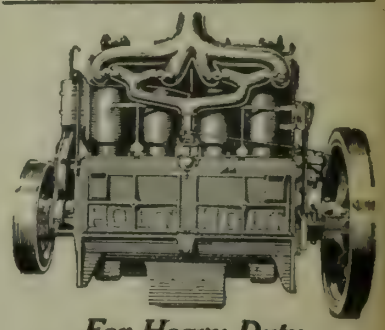
CONLEY MACHINERY AGENCY
17 S. Aurora St., Stockton, California
Dealers Wanted.

Allis-Chalmers Farm Tractors

The 6-12

Pulls two 12-inch plows, a two-row cultivator with 26½ inch clearance, mower, rake, binder or any standard four-horse implement. Delivers 12 H.P. at the belt—a one man tractor with any implement.

H. V. CARTER MOTOR CO.
Distributors
52 Beale St. San Francisco, California



For Heavy Duty

The "Caterpillar" Motor is entirely a Holt product, from the casting of the cylinders to the final testing and adjusting.

Designed especially for the extraordinarily severe service required of "Caterpillar" Tractors, the Motor is free from any weakness of design, construction or performance.

Neither adapted nor merely assembled, the "Caterpillar" Motor creditably shoulders the responsibility for the "Caterpillar" Tractor's power performance.

The Holt Manufacturing Company
Stockton, Calif. Peoria, Ill.
Los Angeles, Calif. Spokane, Wash.
San Francisco, Calif.

CATERPILLAR
Reg. U.S. Pat. Off.

result in high upkeep costs and unsatisfactory service.

Lubricating oil in the crank case is contaminated by leakage of fuel from the cylinders, either in the liquid or gaseous state. Very heavy fuels are not completely vaporized, and are blown down past the pistons. Another source of fuel contamination is the questionable habit on the part of some users to over "prime" their engine before starting. Surplus fuel injected into the explosion chambers washes off the lubricating oil on the cylinder walls and is blown down into the crank case with the oil. The source of water is from the combustion of fuel hydrocarbons into water vapor and the oxides of carbon. At low temperatures, this water vapor blows past the pistons into the crank case and is there condensed mixing with the oil. In some motors, the inlet to the pump is so low as to permit the drawing in of water by the pump which forces it through the ducts to the bearings. Water is a poor lubricant on bearing surfaces and wear immediately occurs.

In hot weather, the operating temperatures are high enough to cause the water vapor to pass out through the breather pipes before condensation takes place, and therefore, very little trouble is experienced in summer. The water mixed with used oil, especially oil that was poor in the beginning, often forms a thick emulsion. This emulsion is dangerous to the life of the engine for the reason that it may clog up the circulating pump or the oil ducts and prevent a sufficient quantity of lubricating oil from reaching the surfaces.

In freezing weather, water in the crank case or the pump may solidify and cause injury to the oil pump and entirely block the entrance of the oil to it.

In new engines rapid abrasion and wear of the sliding surfaces takes place during the process of "running in." After these surfaces have become polished and microscopically grooved in the direction of motion, this wear practically ceases and the most efficient lubrication begins. In view of this rapid initial wear, it is imperative that the oil be grained at very frequent intervals, in order to remove all metal dust which would otherwise act as a grinding compound.

GAS-POWER HAY BALER.

Frequently we have seen horses furnishing power for hay and straw balers. Always it takes a man or boy contantly on the job to prod the horses around. Frequently also we use tractors and gas engines hitched to balers. One of these recently observed was that operated by Joe Valpredo of San Bernardino county. A six-horsepower engine was chain-connected to the baler mounted on the same truck. The engine tender frequently bucked up the hay on a wheel buck and then helped pitch it onto the platform. Thus, one engine tender, one pitcher, one feeder, one tieman who also stacked the bales, and one little girl to push tie-wires through the machine, were baling 30 bales of straw per hour. Baling cost the owner $6 per ton and the baled straw was selling at $10 per ton. High baling cost is due to high labor cost. The price for wire is extra high also.

TRACTOR WINCH TO CLEAR LAND.

Soft traction makes no difference to a tractor pulling vines or stumps or boulders if the tractor is equipped with a winch and cable such as has recently been standardized for Holt tractors. The attachment is located across the front of the machine. Power is taken from the transmission case via shafts, gears, and universal joints. The new equipment makes it possible to use practically the full engine power in pulling anything the cable will hook to; and one setting will clear the ground for a considerable distance in all directions by merely turning the tractor to face its work. No trouble with digging in or sliding on side hills or pulling on poor traction need worry the user.

Thorobreds

The $50,000 Hog from Mississippi

The Hart-Parr 30 from Iowa

"SCISSORS" the Grand Champion Duroc herd boar, didn't just happen to be a good hog. He is owned by Pinecrest Farm, Charleston, Mississippi, and was purchased from Mr. Ira Jackson of Ohio, who states that "Scissors" is the cumulative results of twenty-five years hog breeding experience. It takes years of study and careful mating to produce a grand champion hog.

The same principle holds good in building a tractor. Hart-Parr Company have been building tractors longer than anybody else, hence our tractor should be nearer perfection. Our Hart-Parr 30 is the logical result of twenty years experience in one line—it is a thorobred.

SPECIALIZING

Some tractor manufacturers refer to previous engineering experience in other lines as an indication of their skill in tractor building. It proves nothing. A good ration for hogs will not make a cow give more milk, and engineering principles that worked out well in an automobile or some other machine, will not necessarily work out in tractor building.

The Great Gran'daddy of All Tractors

Old Hart-Parr No. 1, built in 1901 worked successfully for ten years on a farm near Clear Lake, Iowa, and its last owner did not dismantle it until 1917. That's surely a wonderful record. Other Hart-Parrs have done as well and you may expect big things of the Hart-Parr 30 of today.

We produced the first successful oil tractor and have been building tractors continuously ever since. We are specialists. We have learned one thing and learned it well.

Our catalogue will be a source of valuable information for the tractor buyer. Copy mailed on request.

Long-Life Features of the Hart-Parr 30

One piece cast steel frame, making an engine bed solid as concrete—no bend, no twist.

A two-cylinder twin motor—fewer parts to wear out.

A slow-speed motor—750 revolutions per minute.

Force feed fresh oil lubrication, that keeps fresh oil on bearings at all times.

All working parts easily accessible, making it easy to keep the tractor in adjustment and repair. The Hart-Parr 30 is obviously simple.

The Hart-Parr Aftersale Service that teaches the farmer to take good care of the tractor.

Sturdy construction that dates back to the old Hart-Parr 60's with a record for long life.

Many of the old Hart-Parrs that plowed the virgin prairies of the Northwest are still in use today. The great grand-daddy of all Tractors was old Hart-Parr No. 1, built in 1901.

HART-PARR COMPANY
Founders of the Tractor Industry
467 Lawler St., Charles City, Iowa

A POWERFUL STURDY THREE-PLOW KEROSENE TRACTOR
HART-PARR 30
BUILT BY THE FOUNDERS OF TRACTOR INDUSTRY

40 Cords a Day

Easily Sawed by One Man with new OTTAWA. Get your own fuel at less than 2c a cord, then supply big demand for fire wood at $20 a cord up. **Beat the Coal Shortage!**

OTTAWA LOG SAW

Over 4 H-P. 310 strokes a minute. Wheel-mounted. Easy to move, cheap and easy to run. Engine runs other machinery when not sawing. New clutch lever starts and stops saw while engine runs. **Cash or Easy Payments. 30 Days' Trial. 10-Year Guarantee. Send for Big FREE BOOK and Special Low Factory Price NOW. Write to**

Ottawa Mfg. Co.
2719 Wood St.
Ottawa, Kansas.

WITTE

2 H-P. Pulls 2¾

Big Value--Big Surplus power. Immediate shipment. Offer includes engine on skids--ready to use. From Pittsburgh add $5.00. All sizes 2 to 80 H-P. lower Now.

$54.95 F O B K.C.

WITTE ENGINE WORKS
2862 Oakland Ave. Kansas City, Mo.
2862 Empire Bldg. Pittsburgh, Pa.
Engine Catalog FREE

Motor truck springs ten inches longer than those commonly used, but automatically letting the load rest nine inches down from the ends of the springs when heavily loaded, are used on the new Armleder truck. Another innovation is the spring mounting of its engine on the frame.

The causes and remedies for troubles with tractors, threshers, and plows are tabulated in a most convenient little pamphlet just received at our desk and presumbably for free distribution from the office of the Avery Co. at Peoria, Ill.

Red Crown gasoline has a continuous chain of boiling points. It is an all-refinery gasoline.

STANDARD OIL COMPANY
(California)

Dispersal Sale

160 HIGH-GRADE HOLSTEINS

110 MILK COWS
40 TWO-YEAR-OLD HEIFERS
10 YEARLING HEIFERS
3 REGISTERED HOLSTEIN BULLS

MONDAY, DEC. 6, 1920

M. S. GARCIA, Owner, MARYSVILLE, CALIF.

Ranch 10 miles north of Marysville on Oroville Road; 6 miles southwest of Honcut.

This is one of the best producing herds in Northern California, and the cows are mostly young and well marked, and bred to registered bulls.

We will also sell:

8 HEAD YOUNG HORSES

Plows, Wagons, Mowing Machines, Silage Cutter, Separators, Etc.

TERMS OF SALE: CASH

Owner: M. S. GARCIA, Marysville, Calif.

Auctioneer: COL. BEN A. RHOADES, Los Angeles. Sale Manager: C. L. HUGHES, Sacramento, Calif.

JAVA COCOANUT CAKE MEAL.
Made where the cocoanuts grow.
Sun-dried—not smoky or rancid.
Carried in modern ventilated steamers. Shipped in solid cakes.
Inspected and ground in San Francisco

Has your past experience in feeding cocoanut cake meal been satisfactory?

We particularly request a trial of our meal by those who in the past have been disappointed.

Your feed dealer may not have our brand in stock but can obtain a large or small lot promptly.

Trade INSULINDE Mark

Look for it on the sacks

Java Cocoanut Oil Co., Ltd.
Dept. 10
16 California St., San Francisco
Largest manufacturers cocoanut products in the world.

Winsor Ranch Guernseys
Herd headed by Veda's May King of Edgemoor, Grand Champion at L. A., he by ITCHEN MAY KING, Grand Champion at the National.
Some outstanding bull calves coming along.
MORRIS C. ALLEN, Mgr. FRANCIS BROWN, Herdsman.
Bonita, Calif.

CHEAP BEANS
FOR HOG, SHEEP and POULTRY FEED
In ton lots and over.
Write BRAY BROTHERS
Established 1855. 200 Sacramento Street, SAN FRANCISCO

GUASTI BERKSHIRES
Weaned pigs, both sexes, from sows that farrow large litters and raise them. Priced reasonable — they are money-makers.
ITALIAN VINEYARD COMPANY
ALEX. M. WILSON, Supt. Guasti, Calif.

DIGESTER TANKAGE
Send for Sensible Folder on Feeding Hogs
WESTERN MEAT COMPANY
Animal Food Dept. 704 Townsend St., San Francisco

CLARK, HUNTER & CLARK
LIVESTOCK AUCTIONEERS
915 I St., Modesto, Calif.
Registered Hog Sales a Specialty

America's Pioneer Dog Medicines

BOOK ON
DOG DISEASES
And How to Feed
Mailed free to any address by the Author
H. CLAY GLOVER CO., Inc.,
118 West 31st Street, New York

Livestock and Dairy Notes

Dairy Cattle

The Creamery Operators' Association meeting at Hanford last week was the largest, most enjoyable and interesting ever held.

Gertie's Golden Dolly a registered Jersey yearling heifer from the herd of A. A. Jenkins, Tulare was purchased by the Stanislaus County Jersey Calf Club recently.

The Visalia Co-operative Creamery payroll amounted to $31,482.32, or an average of 73 cents per pound for cream delivered during six in October.

A dairyman up in Yakima, Washington reports 60 tons of sun-flower silage from two acres. This silage is becoming very popular in that territory.

In studying Eastern butter markets one is struck by the fact that, for some reason, quality is away below normal. It is estimated that less than 2 per cent of the butter going to New York in October graded as fancy. Experts so far have been unable to solve the problem.

The San Joaquin County Cow Testing Association reports for the month of October Frank George of Ripon had the "top" cow with a production of 104.9 pounds of butter fat during the month. Cows tested numbered 1055 of which 176 produced 40 pounds of fat or over.

The California Dairy Council proposes a Dairy Products and Machinery Show to be held at Stockton next year during the California Creamery Operators Association meeting. They are starting with the idea of making this exhibition comprehensive and complete in every detail.

St. Mawes Beauty, bred by Ed. Cary of Carlton, Oregon, and sold by him in 1918 to Ayredale Farm, Bangor, Me., is 8 years old, has dropped five calves, produced 62,267.4 pounds of milk and 3500.92 pounds of butter fat, an average of 12,453.5 pounds of milk and 700.18 pounds of fat a year. This year completes her 5th consecutive Register of Merit record.

It is reported that all arrangements have been made for exportation to Germany of 35,000 Texas cows. No effort is to be made to secure purebreds and one wonders just how far this shipment will go toward building up Germany's depleted dairy herds.

A comparison of price received at recent California Holstein sales with those obtained in the middle west indicate that they run pretty much the same. At a recent sale held by the Minnesota Holstein Breeders Association, the females averaged $595. At a County Holstein Breeders Association sale in Illinois the females averaged $404. Back there, as with us, bulls seem to drag, prices for fine young fellows ranging between $100 and $200.

An eastern magazine gives the following as a reasonable day's work for a dairyman's hired man. 5:00 to 6:30, milking; 6:30 to 7:00, breakfast; 7:00 to 12:00, field work; 12:00 to 1:00, dinner; 1:00 to 5:00, field work; 5:00 to 6:00, milking; 6:00 to 6:30, supper. The plan assumes that all the men milk and all do field work. This division gives 9 hours a day to field work and 2½ hours for the milking. It is explained that where more than the average number of cows are kept, more time will be devoted to milking and correspondingly less to field work. Probably this is done to avoid cutting down the meal hours. What would California dairy help say to a work day like that?

Owing to shortage of labor, Mr. R. F. Fisher of Carlotta, Humboldt County, has decided to disperse his entire herd of high-producing Holsteins at the consignment sale at Sacramento on December sixteenth. Among the animals to be sold are "Sugar Queen Topsy", who has recently become the leading producer of the county, with a semi-official record of 830 pounds of fat and over 23,000 pounds of milk. Another top-notcher is "Princess Zozo Pietertje 2nd.", who has qualified for the advanced registry with a yearly production of 750 pounds of fat. These records were made under very ordinary conditions. "Sugar Queen Topsy" combines both beauty and utility, for at the recent Humboldt County Fair she won the silver cup offered for the cow showing the highest development of dairy type.

Charles F. Holman of Stockton and Earl Graham of Compton are the winners in the University of California State Dairy Cow Competition for the monthly prizes for September and October according to announcement by Professor Woll. Cows owned by Holman averaged 71.05 pounds of butter fat while those of Graham averaged 83.26 pounds. Cows in five herds competed for the prize in September, and six in October

For the first time in history at the Pacific International Livestock show at Portland, in competition with the students of the agriculture colleges of Washington, Oregon, Idaho, Montana and Utah, California students won high honors on all products, George R. Jaehnig, first of all in judging dairy products and cheese, Leland H. Neilson, second in judging dairy products and cheese, and first in judging market milk, with Mr. E. Spainhower averaging high in the contest.

Beef Cattle

Ferd Hoffman and Raymond Prewett are starting a purebred Hereford herd near Byron. The tsock was purchased at a recent sale at Sacramento.

At recent purebred Aberdeen-Angus sales in the east 226 head of cattle sold at 5 sales in 4 days for $328,520 or an average of $1,437.82. Can't make "Doddie" breeders believe there is any slump in good cattle.

C. N. Langton owner of the Diamond L. Ranch and breeder of Aberdeen-Angus writes that he is completely sold out of bulls and has nothing old enough for service for sale. This shows that those who have "Doddie" for sale can dispose of them readily.

The Pacheco Cattle Co. of Hollister continued their winnings at the Northwest Livestock Show at Lewiston, Idaho, by capturing firsts in the Shorthorn classes on young herd and calf herd. Also this well-known firm had the junior champion female in Sultan's Dale.

As we go to press we have had presented to us a preliminary program for the Cattlemen's Conference called for December 6th and 7th outlines proceedings of especially great interest to all beef cattlemen of the 12 western states. Forty-five cattlemen's associations will participate.

The average prices at the purebred beef cattle sales at the Northwest Livestock Show at Lewiston, Idaho on Nov. 10 and 11 were not as high as those obtained at recent California sales. The 23 head of Shorthorns averaged about $160 and the Herefords about $190. T. S. Glide of Davis purchased one of the Shorthorns. Harry C. Cranke of Nezperce, Idaho cried the sales.

The noted Aberdeen-Angus bull Oakville Quiet Lad recently died in Iowa at the age of 14 years. He has had 219 sons and daughters registered since 1911. He was the sire of Idolmere the supreme champion of the breed in 1919 at Chicago, U. of C. Jock grand champion steer at the Panama-Pacific in 1915 and U. of C. Jock 32, champion purebred Angus steer at the 1919 International.

Inspectors appointed by the State Department of Agriculture as agents of the Office of Cattle Protection are instructed to refuse to inspect cattle for marks and brands when such cattle are loaded in cars prior to inspection. All inspectors are instructed to notify railroad agents that inspections must be made in the loading corrals and not in cars and that no

certificates of inspections will be issued unless these instructions are complied with.—J. B. N., State Departments of Agriculture.

The destruction by fire of several of the Bouquhan Shorthorns purchased for the Prince of Wales Herd, at the dispersal sale of Stephen Mitchell, held at Balcairn, Scotland, October 15th, is commented on by the "London Field" at follows: "The loss in money is substantial, as the bull Collyne Master Lavender, brought 3000 guineas and the cow Bouquhan Violet, sold for 1250 guineas." It is of considerable importance and interest to Shorthorn breeders generally, especially to California breeders, to know that one of the best-bred animals of the Bouquhan Herd, with a double blood line on the dam's side of the celebrated Broadhooks' family, heads the Ormondale ranch Herd, and that this line of purple breeding is being perpetuated in California.

Swine.

Nourished largely on by-products of its extensive farming operation, the Sutter Basin Company has established one of the biggest purebred Duroc-Jersey swine herds in the West near this place.

LIVESTOCK DIRECTORY.

Rate, 4c. per word. Cash must accompany all orders.

SWINE.

Duroc-Jerseys.

FOR SALE — 3 Duroc-Jersey Junior yearling boars out of Ireland Joe Orion from a daughter of Cherry Volunteer 2nd; weight between 4 and 5 hundred, born September 22, 1919. Splendid type big-bone, high back. These boars will please you and are priced right. One was grand champion at Ventura county fair. Your pick, $125 F. O. B. Oxnard. They won't last long. Berylwood Stock Farm, Hueneme, Ventura Co., Cal.

DUROCS—BIG-TYPE—HIGHEST QUALITY—popular blood lines. Herd headed by Johnson's Defender, Jr., and Western Pathfinder. Bred sows and gilts and young boars for sale at moderate prices. Greenwood Farm, Witherow & Stafford, Live Oak, Cal.

BRED SOWS AND GILTS and young stock. Pathfinder and Great Wonder I Am breeding. Monthly payments, if you wish. Derryfield Farm, Capital National Bank Bldg., Sacramento.

BOYANNA BIG-TYPE DUROCS—Breeding stock; priced right for sale. Inquiries invited. Satisfaction guaranteed. J. Boyd Harrold, Dixon, Cal

BIG-TYPE DUROCS—Herd headed by California Orion King. Am offering excellent young boars at right prices. Inquiries invited. Harvey M. Berglund, Dixon, Calif.

GOOD SPRING AND FALL GILTS—Strong in Pathfinder blood, sired by Pathfinder Wonder. Hamlin Farm, Box 697, Sacramento.

WINSOR RANCH DUROCS—Young boars and some top gilts bred to WINSOR'S GIANT ORION—Morris C. Allen, Mgr., Bonita, Cal.

REGISTERED DUROCS — Choice gilts and weanlings, either sex. Breeding and satisfaction guaranteed. H. E. Boudier, Napa.

BIG-TYPE DUROCS — Gilts and boars of Great Orion Sensation breeding. Falfadale Farm, Perris, Cal.

FOR THE BEST in Durocs, write June Acres Stock Farm, Davis, Cal.

Poland-Chinas.

AN OCTOBER YEARLING BOAR out of the 1920 Grand Champion Sow. Two March Boars, one by Long Big Bone Jr., out of the 1919 Reserve Grand Champion Sow. He headed the 3rd prize litter Sacramento this year. One by The Westerner, out of the 3rd prize Junior Yearling Sow this year. These are tops, priced low, to move them. Alex D. McCarty, Route C. Box 338, Modesto, Cal.

POLAND CHINAS—Some promising young boars; also 2 yearling boars, 300 lbs. Big-bone type, excellent breeding and 2 bred sows, farrow in November. Pedigree on application. Edward A. Hall, Rt. 1, Box 39, Watsonville, Cal.

ELDERSLEY AND SHADY BROOK Farms big-type Poland-Chinas that make money for the Feeder, the Farmer and the Breeder. Prices reasonable. J. H. Ware, Brown's Valley, Calif.

TOHOQUA POLAND-CHINAS—A good tried boar and some choice young breeding stock for sale. Ferguson & McKaig, Orland, Cal.

WAUKEEN HERD POLAND-CHINAS — Home of King's Big Bone Leader. A few service boars for sale. Les McCracken, Ripon.

LAKESIDE STOCK FARM—Large, smooth and big-boned Poland-Chinas. Geo. V. Beckman & Sons, Lodi, California.

BIG-TYPE POLAND CHINAS—Stock of all ages for sale. Houck & Lewis, Winton, Calif.

POLAND-CHINAS—Strictly large type. J. F. Lehman, Lodi, Cal.

REGISTERED POLAND-CHINA SWINE — Prize-winners. Finest stock in the State. Bassett Bros., Hanford, California.

REG. BIG-TYPE POLAND-CHINAS—Service boars; weanling pigs. J. H. Cook, R. 4, Chico.

Berkshires.

ANCHORAGE FARM BERKSHIRES
Orland, Calif.
HERD BOARS—STAR LEADER, Junior and Reserve Grand Champion of the World. The Grand Champion carload of barrows, over all breeds, at the San Francisco Live Stock Show, was sired by a son of Star Leader, NATOMAS BARON DUKE, grand champion of California. For sale, bred gilts, open gilts, young boars and weanling pigs. Write for booklet, prices and list of sows.

BRED GILTS.

Sired by Mayfield Rookwood 2d, a Grand Champion Boar, out of 600-700 lb. sows, and actually bred to "ACHIEVER," our English Blood Boar, the Sire that puts more bone and pork-making qualities into his pigs.

Priced reasonably and absolutely guaranteed.
Castleview Ranch, Santa Rosa, Calif.

The only herd of English Berkshires in the West. Bigger, better, stronger litters. More pounds of meat for less feed. Weanling pig, $35. Satisfaction guaranteed or money refunded at once. Sandercock Land Co., 703 Market St., S. F. In charge Natomas Land Sales.

GRAPE WILD FARMS—Berkshires—Guernseys. Big-type Berkshire Boars of serviceable age, sired by Big Leader—greatest son of Grand Leader 2nd. Panama-Pacific Grand Champion. A. B. Humphrey, Prop., Escalon.

BERKSHIRE BOARS—Real herd sires. We are offering these at sacrifice prices to move them quickly. Write for description and price. R. J. Merrill & Son, Morgan Hill, Cal.

REGISTERED BERKSHIRES—Seven sows, one boar, forty pigs. Best of breeding. Priced to sell. Payment plan to responsible people. F. H. Wood, San Miguel.

Hampshires.

NO, YOU DON'T SEE many Hampshire hogs advertised. Look through this paper. Once in a while a breeder of Hampshires runs an ad for a few issues, then quits. Other breeds seem to be advertised continually. Count them up in this issue. Why is it? Well, I guess it is because a few ads quickly sells out the Hampshires. We have a few weanling pigs—three more litters coming next month. A few open and breds gilts from the best Hampshire blood lines in California, direct lineage from Gen. Tipton, Mose Messenger and Pat Maloy—sires of International renown. Write us. We like to tell about them. Rio Hondo Rancho, Route 1, Compton, Cal.

QUALITY BERKSHIRES — Young stock, both sexes. Geo. P. Upham, Martinez .

REAL GOOD BERKSHIRES — Cholera immune. Frank B. Anderson, Sacramento, Cal.

Miscellaneous Swine.

WHAT DO YOU KNOW about hogs? Probably more than we do, but if you will give us your address on a postal we will be glad to send you a little book—"Hampshire History," which tells you all about this breed in America since the year 1830. Rio Hondo Rancho, Compton, Cal.

FOR SALE
300 HOGS
(Feeders)
From 100 to 200 lbs.
M. KINDERGAN
Spy Rock, Calif.

FOR SALE—Car of good stock hogs. All sizes. Most of them are purebred Durocs. L. R. Adams, Island Mountain, Trinity County, Cal.

YORKSHIRE SWINE — Registered Boars, Sows. Young stock. Mahajo Farm, P. O. Box 597, Sacramento, Calif.

DAIRY CATTLE

Holsteins.

HOLSTEINS

THE LEWIS COMPANY

Registered Holstein Cattle
Bulls, Heifers and Calves
of Ormsby breeding
Tuberculin tested
Lewis Building, San Jose

ASEVEDO BROS. CO.
Patterson, Cal.
Breeders of
REGISTERED HOLSTEINS
For Sale

Young bull, sired by King Abbekirk Johanna 24th, and out of a dam making 24 lbs. as a 4-year-old

FOR SALE—Ten registered Holstein cows, milking, and two heifers, springers. Seven with A. R. O. records, including 19-lb. junior 2-year-old, 19.88-lb. junior 3-year-old and 21.85-lb. 4-year-old. All young and healthy, fine individuals, tuberculin tested. Must be seen to be appreciated. Will sell on easy terms. R. H. Davis, Rt. C, Box 196, Modesto, Cal.

CREAMCUP HERD — Registered Holsteins. Pontiac bull calves. M. Holdridge, Rt. A, Box 437, San Jose.

REGISTERED HOLSTEIN-FRIESIANS — Both sexes choice stock; tuberculin tested. Sunnybrook Ranch, H. H. Sisson, Mgr., Willits.

REG. HOLSTEINS, both sexes. World's record backing. Kounias Reg. Stock Farms, Modesto, Cal.

REG. HOLSTEINS—A. W. Morris & Sons Corp., Importers and Breeders, Woodland, Cal.

F. H. STENZEL, SAN LORENZO—Breeder of Registered Holsteins. High test producers.

REGISTERED HOLSTEINS — Best blood lines of the breed. R. L. Holmes, Modesto, Cal.

CHOICE HOLSTEIN bulls for sale. No females. Millbrae Dairy, Millbrae, California.

GOTSHALL & MAGRUDER — Breeders of registered Holstein-Friesians. Ripon, Calif.

SIX BROTHERS DAIRY—Registered Holsteins and Duroc Jerseys. Turlock, Calif.

EL DORADO HERD OF REG. HOLSTEINS—Alex. Whaley, Tulare, California.

Milking Shorthorns.

REGISTERED MILK AND BEEF SHORThorns, bulls and heifers for sale; catalogue free. Thomas Harrison, Santa Rosa Stock Farm, Santa Rosa, California.

INNISFAIL HERD MILKING SHORThorns—Young stock for sale; both sexes. Owned by Alexander & Kellogg Leased by J. D. Rowe & Son, Davis, Cal.

WILLOW BROOK HERD—Milking Shorthorns. A few registered bulls and heifers for sale. W. T. Roberts, Penn Grove.

BREEDERS OF REGISTERED SHORThorns—Milk strain; choice young stock for sale. John Lynch Ranch, Box 321, Petaluma.

Jerseys.

SERVICE JERSEY BULL, bull calves Financial King blood, Chester White boars, prize winners. Best blood, type, production. N. H. Locke Co., Lockeford, Cal

FOR SALE—Purebred Jersey bull, 16 mos. old. Prize winner at two fairs this fall. $250.00, if taken now. W. H. Alfred, Loleta, Humboldt Co., Calif.

TWO JERSEY BULLS from cows testing over 500 pounds fat. E. W. Doane, Merced.

SUNSHINE FARM JERSEYS—"Production counts." E. E. Greenough, Merced, Cal.

PUREBRED JERSEYS from Register-of-Merit dams. Purvine & Son, Petaluma.

REGISTERED JERSEYS—E. F. Smith, Route 1, Box 424, Hayward, Cal.

Ayrshires.

EL DORADO RANCH AYRSHIRES—Young service bulls, nicely marked from high-producing strains. All registered and tuberculin tested. Prices reasonable. El Dorado Ranch, Grafton P. O., Yolo Co., Ry. Station Knights Landing.

PENOBSCOT FARM REGISTERED AYRshires—Long lived, hardy, good "rustlers." High butterfat producers. Choice individuals; all ages; reasonable prices. Cool, El Dorado Co., 9 miles from Auburn, Cal.

STEYBRAE AYRSHIRES — Registered; all ages. E. [illegible] McFarland, 414 Claus Spreckels Building, San Francisco.

NORABEL FARM AYRSHIRES — Le Baron Estate Co., Valley Ford, Cal.

Guernseys.

PUREBRED GUERNSEY HEIFERS—Heifer calves and bull calves for sale at reasonable prices and on terms, if necessary. The mothers are wonderfully bred, and with high milk and butterfat yields. The sires have made Guernsey history. Also a few purebred Holstein cows, heifers and a herd sire for sale. Prices and terms on application. If you desire to start with purebreds, now is your opportunity. S. J. Strauss, P. O. Box 62, Modesto, Cal.

BEEF CATTLE.

STRATHMORE STOCK FARM—Registered and purebred Shorthorn bulls, suitable for range or registered herd sires, some ready for service. Turney Bros., Strathmore, Tulare Co., Cal.

SHORTHORNS—The foremost beef breed—Have a limited number of stock for sale, both sexes. If you wish to start a small herd I can probably supply your needs. T. T. Miller, Hollister, Cal.

RANCHO SAN JULIAN SHORTHORNS—Purebred range bulls, unregistered, for sale. Estate Thos. B. Dibblee, Santa Barbara, or Lompoc, Calif. John Troup, Supt.

ALAMO HERD REGISTERED HEREFORDS (founded by Governor Sparks). Herd and range bulls. Reasonable prices. W. D. Duke, Gazelle, Siskiyou county, California.

THE NEVADA HEREFORD RANCH—Jno. H. Cazier & Son Co., Prop., Wells, Nevada. Reg. Hereford cattle. Breeding stock for sale.

CARRUTHERS FARMS, Live Oak, California. Shorthorn cattle and Berkshire swine of quality and select breeding.

WM. BRIGGS & SON, Dixon, Cal. Breeders of Hereford cattle and Rambouillet sheep.

SIMON NEWMAN CO., breeders of Registered Herefords, Newman, California.

HEREFORDS — Mission Hereford Farm, J. A. Bunting, Prop., Mission, San Jose, Cal.

REGISTERED HEREFORDS—H. H. Gable, Diamond G Ranch, Esparto, California.

GEORGE WATTERSON — Breeder Registered Herefords. Bishop, California.

REGISTERED SHORTHORNS — Fair Oaks Ranch, Willits, Calif.

SHEEP AND GOATS.

F. A. MECHAM ESTATE, Petaluma, Cal.—Breeders and importers of Shropshire, Rambouillets and American Merinos, both sexes. Also Red Polled cattle. Take electric car at Petaluma or Santa Rosa for Live Oak Ranch.

FOR SALE—Rambouillet rams and ewes—purebred; the very highest grade of large smooth body; heavy shearers; the wool and mutton type. Immediate delivery of individual or carload lots. You can find none better or of higher grade. Address Glenn, Cal. Location, 8 miles south Hamilton City, 1 mile west Ordbend. Windell Orchards Co.

OAKDENE GOAT FARM, Walnut Creek, Contra Costa Co., Cal.—Breeder of milk goats. Nubian, Saanen and Toggenburg registered grades. Bred and fed for milk production.

FOR SALE—Purebred Rambouillets, 4 rams, 6 ewes, 8 mos. old. Harvey Brown, 735 5th St., Santa Rosa.

DORSETS—ROMNEYS—Dorset ram lambs for sale. John E. Marble, South Pasadena.

SHEEP FOR SALE—1000 ewes. Will sell in lots to suit. Chas. G. Owens, Livermore.

HARVEY S. VAN VLEAR, Lodi, Breeder and importer of registered Hampshire sheep.

CALLA GROVE FARM, MANTECA, CAL.—Breeders and importers of Hampshire sheep.

KAUPKE BROS., WOODLAND, CALIF.—Breeders and importers of Hampshire sheep

CARL LINDHEIMER, Woodland, Cal.—Rambouillet Ram lambs for light use.

BULLARD BROS., Woodland, Calif.—Breeders and importers of Rambouillet sheep.

MISCELLANEOUS.

BUTTE CITY RANCH
SHORTHORN CATTLE, SHROPSHIRE Sheep, Berkshire Hogs, Shetland Ponies, Bronze Turkeys, White Plymouth Rocks. Stock for sale at all times. W. B. Dwyer and W. S. Guilford, Box P, Butte City, Glenn county, California.

FOR SALE OR TRADE—Percheron stallion reg. (weight 2000). Will exchange for work horses or cattle. Address Ralph L. Clark, R. F. D. 2, Box 74, Lodi, Cal. Phone 24F4.

REGISTERED BROWN SWISS, carrying best blood of the breed. M. J. Pedrotti, San Rafael, Calif.

HILLCREST STOCK FARM
Shorthorn Cattle
Won at Sacramento Both Championships
7 Firsts and 5 Second Prizes
Shropshire and Merino Sheep
RAMS AND BULLS FOR SALE
Single or in Carload Lots
T. S. GLIDE, Prop. DAVIS, CALIFORNIA

20,000 CALVES
HAVE BEEN RAISED
ON WATER AND
AN-FO BRAND CALF MEAL
YOU DON'T NEED SEPARATE
NO SCOURS
At Feed Dealers, or
ANIMAL FOOD CO., OAKLAND

ORMONDALE RANCH
SHORTHORNS
REDWOOD CITY, CAL.
HERD SIRES
BOQUHAN GUINEA STAMP, the great imported young Broadhooks bull.
GOLDEN GOODS JR., sire of LITTLE SWEETHEART, Grand Champion International Show, Chicago, 1919.
Bulls and Heifers for sale.
Duroc-Jersey Hogs for sale.
JAMES McDONNELL, - Supt.

WILL BREED A FEW COWS
To the Great Herd Sire
KING PONTIAC PAUL NETHERLAND
A son of THE KING OF THE PONTIACS
The only double century sire
C. L. MORSE, PHONE 1008J Modesto, Calif.

PUREBRED JERSEY BULL
Dropped September 9, 1919
Sire—FINANCIER'S REMUS, 104,413
Dam—ROMULUS LEGACY LORENE, 294,130
Record 457 lbs. butterfat.
T. B. Purvine & Son
Petaluma, California

The Holmes-DeWolfe Guarantee Sale

DEC. 15, 1920

R. L. Holmes and H. A. DeWolfe

of Modesto of Ripon

Will sell 45 head of registered Holsteins consisting of 40 females and 5 bulls.

This is an especially good lot of cattle, the majority of which are of breeding age.

The younger stock are selected for their exceptionally good breeding.

Four Granddaughters of world-record cows are listed. A granddaughter of Duchess Skylark Ormsby, a granddaughter of Tilly Alcartra and two granddaughters of Adirondac Wietske Dairy Maid. Few sales have granddaughters of three such noted cows. The cows and heifers are an especially good lot, selected with reference to good udders, excellent type, quality and breeding. They are good enough to go into the best herds, or as foundations for new herds.

A FEW OF THE MANY GOOD ONES ENTERED:

A three-year-old daughter of the 30-lb. cow, MAY KORNDYKE, sired by KING KORNDYKE SADIE VALE 22ND.

A 24-lb. three-year-old daughter of KARL BOS whose dam is a sister of Laurameka, who made 1326 lbs. in a year.

Two 2-year-old daughters of SIR VEEMAN KORNDYKE PONTIAC. Bred to a son of Sir Skylark Ormsby Hengerveld.

A granddaughter of COLANTHA JOHANNA LAD who made 24 lbs. of butter and 602 lbs. of milk, giving 109 pounds her best day.

A sister of BELLE FASKIE DE KOL WITKOP, the highest money-winning cow of the breed in 1919.

Two splendid cows bred to SIR PIETERTJE KORNDYKE ORMSBY, a son of Sir Pietertje Ormsby Mercedes. Such breeding is not listed in many sales in the West. Moreover, both of these cows are soon due, one the first of January.

A daughter of the 41-lb. bull, SIR JOHANNA DE KOL RAG APPLE, bred to the 35-lb. bull Segis Pontiac Abbekerk, and a daughter of Sir Aaggie DeKol Acme, bred to the same bull, and many others bred to Sir Skylark Ormsby Korndyke and Segis Pontiac Abbekerk.

The former bull is listed in the sale, as is also his two-year-old brother, two very good young bulls just ready for service, and a beautiful bull calf.

Every animal tuberculin tested and sold subject to a 60-day retest.

TERMS OF SALE—One-third cash, one-third in six months and the balance in one year to responsible parties.

Sale under the management of the

STANISLAUS COUNTY HOLSTEIN BREEDERS' ASSOCIATION

Auctioneers, GEO. A. GUE and C. N. CLARK.

Watch for further information in later issues.

America's Best Duroc-Jerseys

From point of size and quality and show ring records, the 1200 head of purebred Duroc-Jerseys on the big Diamond Bar Ranch are noted throughout the country. They have in their veins the blood of the greatest sires that America has ever produced.

ADD THIS TRIO TO YOUR HERD

Boar and two unrelated sows, seven to eight months old, all registered and sired by such famous boars as Ace of Pathfinders, Mammoth Sensation Jr., Great Pathfinder. Offered now for $500 for the trio.
Registered spring boars sired by the same boars as mentioned above.
A limited number of registered purebred sows may now be had at reasonable prices.
Unregistered purebred gilts in quantity (carlots or less). Price, $35 a head.
Registered boars to go with these gilts at correspondingly low prices.

A GUARANTEE PROTECTS YOU IN EVERY INSTANCE

Act promptly. Address Department D.

Particulars upon request.

DIAMOND BAR RANCH

SPADRA, Los Angeles County, California

F. E. LEWIS, Owner & Manager
R. K. WALKER, Hog Department

Some Plain Words for Plain Dairymen

(Written for Pacific Rural Press by Ralph Newman.)

There is nothing original in what is here said, nor is there anything new. It has all been said before in these columns and doubtless will have to be said many times more before the millennium dawns. But there is a timeliness about the message now that makes this a psychological moment for voicing it.

The dairy industry has been in the dumps, but that is a complaint common to all, and wise men have been indicating a way out. They have said if we are to get a profit from the business we must secure higher producing cows. And they have piled up a huge mass of facts to prove the contention. "Better cows for profit," is more than a slogan; it is a necessity. Most of us, though, couldn't afford to buy a whole herd of high record cows and not many of us could find them if we could afford to buy them; there are not enough of them yet to go around. Hence the wise men say the thing to do is to breed them. And the way to breed them is to start in with a purebred sire of proven producton.

Purebred Sire Not a "Cure All."

Now I would not contend, as some enthusiasts do, that all the dairyman needs to make him prosperous is cows that will produce more than the average herd now does. That is only a part of the truth. The dairyman will never be as prosperous as he should be, no matter what kind of cows he has, until he has secured and exercises the right to control not only the production but the manufacture and distribution of his product.

That is part of the foundation of the business and should not be lost sight of. The man, or set of men, who are responsible for the "better cow" argument would have us believe, perhaps, that the dairymen should be restricted to production only, and wish to prevent them by this argument, which is true in some cases, from entering the manufacturing and marketing field.

On the other hand, the dairy industry cannot be made permanently prosperous by any attempt to make the public pay for inefficiency, and in this day any dairy is ineffcient—most decidedly so—that is operating with cows that will not average 200 lbs. of fat a year. There are a few cows that will make six times that much. There are a respectable number that will produce five times as much, an ever-increasing number will turn out treble that amount, and it is not too much to say that, given a few more years of intelligent effort, all the cows in the state could be made to at least double the average production of today. It can be done; it must be done, if we are to keep the confidence of the public in our efforts for a prosperous dairy business.

Keep Fighting, but Fight Right.

The thing to do in the present emergency is to keep fighting for the principle and practice of co-operation from cow to market, and, at the same time, to work for herd improvement. The two must go hand in hand. No dairyman can put up a very forceful argument if he is keeping cows that produce but a measly 150 lbs. of fat a year while he does nothing to improve that production. That dairyman is in a mighty poor position to look the world in the face and ask the world for more money to meet his cost of production, when the world knows he is putting high-priced feed into cows so blamed poor that they are incapable even of paying for their feed. "Let us demand justice." Sure thing! Work the demander overtime to make up for the years of ox-like plodding when no demanding and little murmuring even was heard. But let us come to the tribunal with our case all in order and the loop-holes all plugged. Maybe you think you can do that with a scrub herd behind the barn and a scrub bull in the pen. You think, under these conditions, you can make a conscientious plea, do you? If you think that—we hate to say it, but it must be done—you should be reminded that a man may be conscientious but woefully weak and ignorant at the same time. If you go to court backed by a scrub bull, the judge will likely tell you that you are in the wrong place and advise you to go to night school instead.

The Purebred Sire an Essential Now Easily within Reach.

The first step toward getting into a position where we may demand justice with no chance for any comebacks is to head the herd with a high production purebred sire and begin breeding cows that will make two quarts of milk grow where one grew before. The importance of the purebred sire no longer needs argument. What this kind of a sire has actually done by way of increasing herd production is now so well known that the man who doubts is a rare bird. Still in many herds—all too many—the scrub or the grade still holds sway. Why? Well, some dairymen still keep a bull just to keep cows freshening. They raise no calves, but depend on purchases to keep up the herd. Experience has shown that this is short-sighted policy. A herd may be maintained at a certain number of cows as cheaply that way as by raising heifers in some locations, but the quality of the herd is rarely improved. The man is constantly buying cows that someone else has discarded, and he gets a herd of cast-offs. The other justification of the grade bull runs about like this: "I can't afford to go to a breeder and

Facts in BLACK & WHITE

Ten Purebred Holstein Cows against 20 Scrubs

Two neighbors, on adjoining farms—one milks 20 scrub cows—the other 10 purebred Holsteins. They care for their cows in the same way; they get almost the same amount of cream and the same-sized check from the factory where both sell their milk. Though both men take in the same amount of money, the man with the scrubs uses the whole of his receipts to pay running expenses, while the Holstein man lays aside nearly half. Another item: The Holstein man feeds his skim milk to purebred calves; the other man feeds his to scrub calves. It costs no more to raise a $100.00 purebred than to raise a $30.00 scrub.

Send for Free Illustrated Booklets.

THE HOLSTEIN-FRIESIAN ASSOCIATION
230 Hudson Street
Brattleboro, Vermont

HOLMES STOCK FARM
MODESTO.
Registered Holstein Friesians
Prize winners at all the Shows. Inspection invited and satisfaction guaranteed. Write for prices.
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Are you getting them? Calf profits mean more to you now than ever before.
BLATCHFORD'S CALF MEAL
has been known since the year 1800 as the complete milk-substitute. Costs less than half as much as milk—prevents scouring—promotes early maturity. Sold by dealers, or direct from us.
Write for New Data *See actual figures showing how to increase your calf profits.*
COULSON CO. - - - Petaluma, Cal.

pay from $500 to $1000 for one bull." You cannot afford to keep a grade bull even if you had to pay $2000 for a purebred sire to increase the production of your herd—not if you are going to stay in the game. If anything has been made plain by recent events, it is that the law of the survival of the fittest is working. None but dairymen with profitable cows can expect a profit from now on, and the purebred sire is the first step toward a profitable herd.

Purebred Bulls for a Song.

You dairymen with a grade sire, if you would but act now, it would not be necessary to pay $2000, or $1000, or even $500 for a bull sire to improve any grade herd. And that is why this article is written at this time. We have told you that the sales this fall were giving dairymen the opportunity of a life time to get better blood. We told you the simple truth. I have ached as I have seen finely bred bulls, with good production records on both sides of their pedigrees, many of them ready for service, going for a song to men who have bought them as a speculation when dairymen, in sore need of them, whether they know it or not, might have had them had they only been there to bid. For example: Just the other day eight young bulls, some of them by famous sires out of cows with over 600 lbs. of butter in a year, and all of them bound to improve any grade herd they might enter, sold for $70 to $140. They went to men who will expect to resell them at a handsome profit. Don't blame the buyers. They were wise in seizing the opportunity. Kick yourselves for not getting in on these bargains.

The fancy price arguments will not hold water this fall. You can buy splendid young bulls almost at butcher prices. This is not an advertisement; it is a sermon. Now is the accepted time. There are still several sales coming before the year ends, and it may be a long time before you have such opportunities again if you ever do. If you have a grade bull, send him to the butcher, attend these sales, and buy yourself a real bull that will start you on the right track. If you do not deem this good advice—well, you do. Act on it.

CENTRAL CALIFORNIA MILK PRODUCERS ASSOCIATION HOLDS DECISIVE MEETING.

(Written for the Pacific Rural Press by Ralph Newman.)

By a vote of 807 to 45 the members of the Central Association decided at the meeting on the 20th. to stay in the State Association and join the rest of the state in working out a plan for the co-operative marketing of dairy products. And by what was practically an unanimous vote, they went on record against signing any contract with anybody other than the State Association before April 1st. for the marketing of their product. Then, by the same sort of decisive vote they instructed the "member's committee" to draft amendments to the by-laws which will make it possible to get a legal expression from the membership on any subject without a repetition of the heart-breaking experiences endured in the past few months. This committee will report to a meeting to be called by the chairman.

Technically perhaps the meeting had no quorum, but the expression was so overwhelming that the opinion was generally expressed that the Board of Directors would bow to the will of the meeting and thus end the long drawn out controversy.

Now let all the dairymen of the state rise and devoutly sing the doxology—and if any cannot sing, let them whistle it. As Mr. Bigelow, representing the State Market Director said, the conflict in the Central Association had grown to be more than a mere family affair. It was hurting the whole great co-operative movement, and it is cause for general rejoicing that, so far as can be seen, they have settled the dispute and are ready once more to get down to real co-operative business.

THE FINNELL HEREFORD SALE.

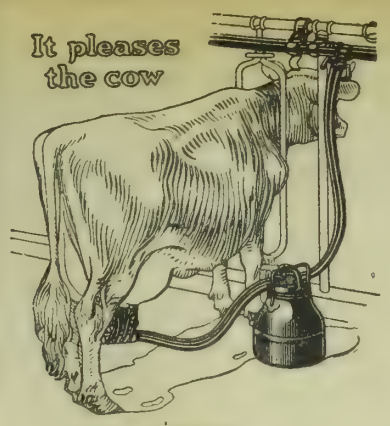
Rainy, disagreeable weather resulted in a small attendance at the Hereford sale held at Galt last Thursday by the Finnell Stock Farm Co. A small crowd however, did not prevent a live, snappy sale. Sixty-two females sold at an average of $240. It was quite an even lot and sold at uniform prices. A few cows with calves at foot sold from $315 to $355.

The offering was all range stock and only in fair condition. Most of it however, carried good breeding and some of it was especially well bred. A number of the cows were in calf by Beau Blanchard 37th. a half brother to the Cazier herd sire.

Any one in the least inclined to doubt the ruggedness and virility of purebreds in general or Herefords in particular, or who has even a slight suspicion that purebred cattle are pampered pets that do not stand the hardships of practical range conditions should step forward and be introduced to Arcadia Belle Flower, one of the offerings in this sale. This cow will be nineteen years old next March. According to the owners she had a calf last spring and is with calf now. She is in fair flesh and looks rugged and vigorous. Had she not been catalogued it is not likely that a man present would have guessed within seven or eight years of her age, judging from appearance.

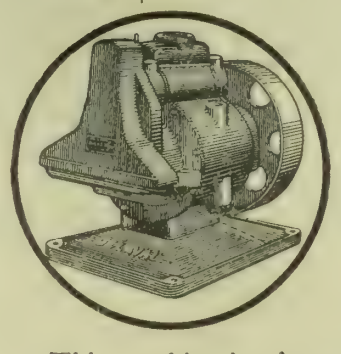
As a result of the sale two new herds were established. I. L. Borden of San Francisco bought thirty-two females and one bull and G. F. Silliman of Watsonville bought twenty head. Other buyers were Geo. P. Robinson of Sacramento, with eight head and Lafe Ward of Galt and N. E. Welty of Vernalis with one each.

How prize-winning stock begets its like is illustrated in the grand champion Hereford bull at the Los Angeles Livestock Show and the 1920 State Fair, Beau Blanchard 76th, belonging to J. H. Cazier & Sons. It was his calf dropped last March by a cow belonging to Wm. Briggs & Son of Dixon that won junior championship at the State Fair this year.



The DE LAVAL MILKER

Pulso-Pump



(The Pulso-Pump is not shown in the part of the Milker installation pictured here. It is placed with the power in any convenient part of the barn)

The De Laval Pulso-Pump produces the vacuum which draws the milk from the cows, and it also controls the action of every Udder Pulsator.

This combination in one unit of the vacuum-producing and the pulsation-controlling features of the Pulso-Pump is a decided forward step in milking machine construction.

The mechanism of the Pulso-Pump is entirely housed in to keep the oil in and the dirt out; it runs in oil, evenly and quietly.

The De Laval Milker is a distinctly different type of milking machine. It is alternating, positive, uniform and gentle in action—and requires no adjustment of any kind. It is faster, more reliable and more sanitary than any other method of milking.

Write to nearest De Laval office for Milker Catalogue, mentioning number of cows milked

DE LAVAL DAIRY SUPPLY CO.

61 BEALE STREET SAN FRANCISCO, CAL.

"Silent Alamo" Farm Light Plant
—furnishes electric light and power for the country home. Runs without vibration. Write for catalog.

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The all-round water system for the household. Furnishes water under pressure at small cost. Send for catalog.

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—enable dairy farmers everywhere to add hours to the day for other duties. Write for catalog.

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Get 25 per cent more milk, save feed, and save labor, by making your cows comfortable with Louden Equipment. Write for catalog.

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Cut out this ad, sign your name, check the catalogs you want, and mail to us.

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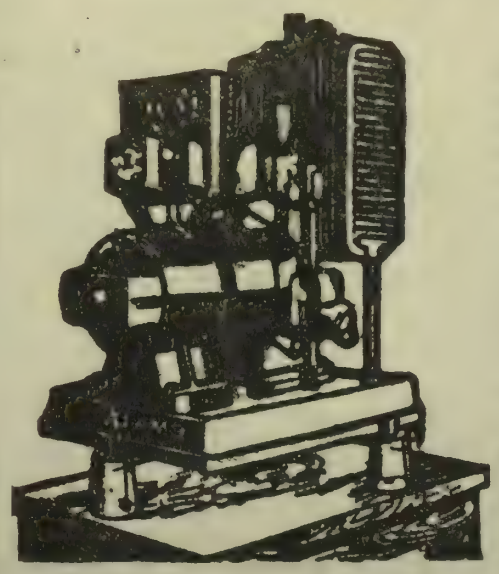

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PROVIDES RUNNING WATER for house and barn Supplies power to run small power machinery—operates the churn, separator, washing machines, electric fan, etc.

THE QUIETEST RUNING and most powerful motor used on any similar plant. No ruinous vibration. Requires the minimum of attention. Motor automatically stops when oil gets low, water runs low, and when batteries are fully charged. Trouble-proof.

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—which tells you how to select an electric light and power plant. And ask for the Duro Catalog with it. The silent Alamo and Duro Water System make an ideal equipment for the farm home anywhere. This combination gives you the same convenience enjoyed in the city residence.

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Livestock Queries and Replies

Articular Rheumatism.—A 3-year-old heifer, fresh in June, became lame 2 months ago. Could see nothing wrong at first, but now her front knees are badly swollen. Grinds her teeth at intervals. She eats well but will not go out to pasture. Lies down most of the time. What is the trouble and remedy?—A. F. M.

Apply to the enlarged knees, cloths soaked in pure methyl salicylate or hot saturated solution of Epsom salts or baking soda and cover with a waterproof bandage. Apply Iodine ointment to swollen areas thoroughly once a day. Put on liquid diet and give absolute rest. Give 2 drachms of Iodide of Potash daily. Dissolve this in water and mix in feed. Have the following filled: Rx.—Acetanilid, 2 ounces; Caffein, 1 ounce; Camphor Monobromate, 1 ounce. Mix and make into 12 powders. Give 3 daily.—Dr. E. J. Creely.

Alfalfa Hay for Hogs.—What should be the proportions of alfalfa hay or meal and barley or milo maize for hogs? Would it pay to buy bones at a slaughter-house and cook them for hogs?—P. C., Bakersfield.

Alfalfa hay, if of excellent quality, can be fed to brood sows in racks, but if ground there will be much less waste. In feeding a mixture of grain and alfalfa meal, it generally pays to have the grain ground or the hogs will reject some of the alfalfa. Where it is all ground the mixture is so intimate that it will all of necessity be eaten at the same time. Alfalfa is very high in fiber and for this reason is not as good hog feed as some other substances. About 1 pound of alfalfa meal to 2 or 3 of barley will give a very good feed. It is better soaked for 12 hours. Cooking will not pay for the fuel, let alone the labor. No, it would not pay to buy bones for hogs as so much of them are not digestible even if they were in condition to be eaten after cooking.—Livestock Ed.

Pumpkins for Pigs.—What can you tell me of the feeding value of pumpkins for hogs? Would they injure sows either before or after farrowing?—F. A. H., Modesto.

Pumpkins are excellent feed for either growing or breeding swine if fed judiciously. If they are fed as an exclusive diet, they may cause digestive disturbances. Some grain should be fed in connection with them. About two-thirds as much grain by weight as pumpkins should be fed. Cooking is of no advantage. The seeds are not injurious when fed with the pumpkins. In fact, they are an excellent part of the vegetable so far as food value is concerned. The seeds are somewhat of a vermifuge and hogs receiving the whole pumpkin as part ration will be free from worms.—Livestock Editor.

Worms.—Please give remedy for long white intestinal worms of the dog.—J. B., Warm Springs.

Starve completely for 25 hours. Give the following powder wrapped in small amount of Hamburg steak: Areca nut, 20 grains; Santonin, ½ grain, Jalap, 5 grains. Follow in 2 hours with 3 tablespoonfuls of castor oil.—Dr. E. J. Creely.

Nasal Disease.—Sheep cough a great deal and have an excessive nasal discharge. It is worse in fall and winter. Please give the proper name of the disease and remedy.—J. F. S., Santa Margarita.

This is known among veterinarians as infectious respiratory disease, confined chiefly to the upper air passages of the head. Give the following electuary. Equal parts of pulverized Chlorate of Potash, Acetanilid, Desiccated Iron, Gentian Root, with enough molasses to make a free mixture. Apply twice daily about one tablespoonful on the tongue of each affected animal.—Dr. E. J. Creely.

Immobilite.—I have a horse that is troubled with sleeping spells. If stopped while working even for a few minutes he will be so completely overpowered that he will fall flat in the harness. This condition has been in existence some 4 years. Appetite good, but hair is harsh and dry. Seems somewhat dazed when moving but is a good puller.—J. D. P., Laton.

Trouble due to brain lesion. Very little good will come from treatment. Several months on an exclusive diet of green feed has worked wonders in a few cases Does your horse back when called upon?—Dr. E. J. Creely.

Warts.—The head of one of our calves is covered with warts. There are also some large ones on its neck and body. What is the remedy?—F. E. S., Brown's Valley.

Apply Fowler's solution of arsenic every other day and stick silver nitrate on the intervening days.—Dr. E. J. Creely.

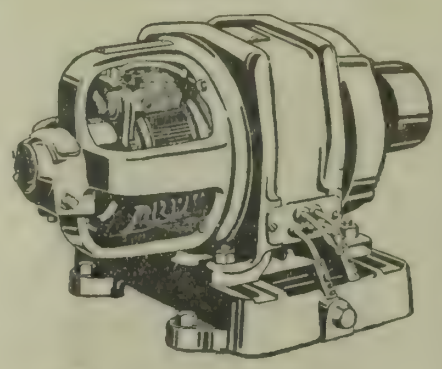
Bringing in the New Help

ELECTRICITY hooked up to G-E motors will do many things to make farm life more pleasant and profitable.

To provide water for all uses—as handy helpers at the silo, wood pile or cider press—to clean up tasks in the dairy, barn, workshop and field—G-E motors are time, labor and money savers.

In the farm home G-E motors take the deadly grind out of wash day—put an end to endless sweeping and in many other ways add to happiness and comfort. If you are near a power line—you need G-E motors.

Call your local G-E Motor Dealer or write to the nearest G-E Sales Office.



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MAKES HARD WORK EASY

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MOHR STEEL CO. 2810 26th St., San Francisco.

UNIVERSITY OF CALIFORNIA MAKES CLEAN SWEEP.

Every animal entered by the University of California in the Pacific International Livestock Show at Portland won prizes in open competition, Dean Walter Mulford announced today.

Grand champion steer of the show was the title bestowed upon U. C. Jock the 4th, a senior yearling, Aberdeen Angus steer, who won also the honors of being the first prize senior yearling steer, the first prize steer, and champion Aberdeen-Angus steer. Second highest honors went to the University of California on the senior yearling Shorthorn steer, California Majestic, who won also the honors of first prize senior yearling Shorthorn class, champion Shorthorn steer of the show and reserve grand champion.

In addition to winning the Grand Championship and Reserve Grand Championship, first, second and third prizes were received on Duroc-Jersey barrows; first and second prizes on pen of Duroc-Jersey barrows; first prize on pen of Berkshire barrows; first and second prizes on Hampshire hogs; first, second and third prizes with University sheep, and Grand Championship for wethers.

LITTLE SWEETHEART WINS.

T. S. Glide's great Shorthorn cow, Little Sweetheart, again came into her own at the Northwest Livestock Show in Lewiston, Idaho, and at the Pacific International in Portland, Ore., the great round-up show of the Pacific Coast, when she was made grand champion female of the breed at both places in competition with the Hercules Matchless the Day and Rothrock heifer, that defeated her at the Western Royal in Spokane. This decides quite emphatically as to the supreme merit of Little Sweetheart.

CALIFORNIA MILKING SHORTHORNS WIN.

The California Milking Shorthorn breeders cleaned up at the Pacific International this year. Among the principal winnings were those of Thos. Harrison of Santa Rosa, who had the junior and grand champion bull in Count Tickford. Mr. Harrison won 25 ribbons with 33 entries. J. D. Rowe & Son of Davis, with the Alexander & Kellogg herd, had senior and grand champion female in Bellevue Daisy. This same cow was first in the class of 5-year-old cow in milk, and Alma, owned by the same firm, was first in the 3-year-olds in milk. Chas. L. Weaver of Tulare had senior champion bull in North Star and second in both classes of "cows in milk."

COMMUNITY ICE BEATS THE TRUST.

(Continued from page 703.)

for the coast districts of central California.

Turkey Red Wheat, Cal. No. 770.

This is a hard winter wheat and is the only variety of that class produced in commercial quantities in California. It is not adapted to the interior valley of the state and is grown chiefly in the mountainous regions of northern California, where winter varieties are required for fall planting to avoid winter killing.

The original home of this wheat is in the area of Russia just north and east of the Black Sea and north of the Caucasus Mountains. It came to the United States with the Mennonite immigrants and was first grown by them in the middle Great Plains region, principally in Kansas, about the year 1873 in the vicinity of Newton. Each immigrant family brought over a bushel or more of seed, so that the wheat immigrated with the people.

It is the highest quality milling wheat grown in California and is used by the milling companies for blending with low gluten varieties produced in the interior valleys to improve their quality.

It yielded at Davis in 1920 (A region to which it is poorly adapted) 33.3 bushels per acre.

Hard Federation Wheat, Cal. No. 3063.

This is one of the best varieties of wheat yet tested at the University Farm at Davis and will be distributed for general cultivation in California in 1921. It is a selected hybrid variety developed by J. T. Pridham of Australia in 1907 and has been extensively tested at Davis and at the U. S. Plant Introduction Gardens at Chico. It ripens early, possesses a stiff straw, which stands up well in rich land, has a retentive chaff which holds the grain tightly without shattering, and yields a hard grain of high milling quality. At the University Farm in 1920 it yielded at the rate of 37.1 bushels per acre. Sonora wheat, under similar conditions yielded 32.4 bushels per acre.

C. B. Orvis bought a flock of 1,250 head of straight Merinos all two years old, from G. F. Coakley of San Jose. Mr. Orvis will lamb these ewes east of Stockton. E. F. Callaghan negotiated the sale.

Poultry for Profit

SOUNDS LIKE ROUP

To the Editor: My chickens are troubled with some kind of a disease. I can't find a cure for it. They eat very good, but get lighter in weight and have watery eyes and nose and smell bad. Some just get thinner and die. The feathers turn back and look shaggy and dirty. This is a disease that has been troubling here for about two years. Can you recommend some cure?—J. E. B., Tulare.

The discription of this trouble indicates that possibly these fowls may be suffering from roup, known also as contagious catarrh, but as recent careful investigations have proven that roup is a very rare disease we incline more to the theory that they are troubled with aspergillosis or "going light". Aspergillosis is caused by molds which first grow on the mucous membrane of the air passages. When the disease becomes well developed the lungs, liver, spleen, and kidneys are affected. Sometimes even the interior of the bones are affected resulting in swollen and inflamed joints and lameness. The disease may be spread from bird to bird in the same flock. These injurious molds form on such material as straw, leaves, weeds, musty and damaged grains, etc., and the fowls inhale them in breathing or swollowing food. It is supposed that when once present in a flock aspergollisis is transmitted from generation to generation through the eggs. for this reason fowls that have had the disease, even a slight attack, should not be used for breeding purposes. The disease may be prevented by having clean, dry, open front houses and avoiding the use of moldy litter and musty grain or grains that have been damaged in any manner. It is a very dicicult disease to cure but sometimes affected birds may be saved by applying flowers of sulphur or tincture of iodine to the diseased patches in the mouth and throat, and causing the birds to inhale vapor of turpentine. Place the fowls in a closed room and pour spirits of turpentine on hot bricks or stones until the atmosphere of the room is well charged with the vapor.

HOLLOW CONCRETE FOR POULTRY HOUSE.

To the Editor: What are the relative advantages in material for chicken unit to be built in Atascadero? I want to build it of hollow concrete tile and I am told by local chicken men that this will not be good for the chickens, being too cold a material, thereby giving them disease. I can't quite accept this as a scientific truth so I am asking for expert advice on this matter. I can build much cheaper of the concrete tile than I can with wood at this time.—Dr. E. J. D., Atascadero.

If the poultry house is to be of the open front type, well cured hollow concrete tiles are recommended for the ends and back of the structure, and for the "half partitions" or "wind breaks" that divide the roosting sections (when the house is a long one), provided the roosts are so constructed that the fowls will not come in contact with the tiles while roosting. The tiles may be used also for the partitions in an open front house that is intended to be permanently divided into two or more separate units. The prejudice against this material is probably due to the reports of some investigators in Europe, where stone is extensively used for poultry-house construction. The development of some of the poultry diseases has been charged to stone houses by these investigators, but it must be considered that these European houses are usually built like a box with only a small door or opening for the passage of the fowls to the outside yards. In winter the fowls are freuently confined in these close houses for a long period of time. Sunlight and fresh air are comparative strangers to the interior of these houses.

OVER-FAT HENS.

To the Editor: I would like to know if there is any feed good for hens that are too fat? I see mine are very fat, and would like to bring them back to natural condition without hurting their laying power.—Subscriber, Sebastopol.

In nearly all cases hens become too fat for satisfactory egg production through feeding an excess of grain, which is the heat and fat forming part of the ration. Feed a greater proportion of mash and correspondingly cut down the grain. Usually laying fowls should be given an equal quantity by weight of each, grain and mash.

POULTRY PRATTLE.

It seldom pays to keep any chicks which do not make rapid growth and which are not as large as they should be at all stages of growth. Do not select an early maturing bird simply because it is early maturing.

The following is the relative number of males and females kept for breeding purposes based on over 200,000 head of stock (of all kinds) listed with the U. S. Department of Agriculture: Poultry—One rooster to 23.3 hens; geese, ducks, turkeys, etc., one male to 8.5 females.

According to the monthly bulletin of the California development board, Petaluma hens produced 21,678,365 dozen eggs between January 1 and October 1 of this year. This is a gain of 30 per cent over last year, despite which prices of eggs in this region have increased. The Petaluma product this year was figured at 722,612 cases.

Poultry Breeder' Directory

Rate, 4c. per word. Cash must accompany all orders.

THE MISSION HATCHERY
Planning for your early chicks? We are, and booking orders for R. I. Reds, Barred and White Rocks, Black Minorcas, White, Brown, Buff Leghorns; delivery January and later. Write for prices and particulars, stating your needs. Eggs from Breeding Stock of Quality. Chicks hatched right and carefully packed for safe delivery—express or parcel post, at reasonable prices. We aim for the good will of satisfied customers; will you try us out?
The Mission Hatchery, Campbell, Cal.

BUFF ORPINGTONS—Sullivan's Commonwealth Strain; we originated and have bred in line for 20 years. If you want eggs and finest type of this breed, one of our males at this time. $7.50 and $10.00 each; exhibition birds. Write for prices. Book for eggs for February delivery, $3.00 and $5.00 for 15. Mr. and Mrs. W. S. Sullivan, 100 Market Road, Agnew, Santa Clara Co., Calif.

BARRED PLYMOUTH ROCKS — "Nothing Better in Poultry." Wonderful layers. Choice hens and pullets for sale; also fine cockerels that will improve your flock. Now booking orders for hatching eggs. I have made a specialty of Barred Rocks for over twenty-two years. That's why our birds win at all the leading shows. Catalog free. Chas. H Vodden, Box 3, Los Gatos, Calif.

SUPERIOR WHITE LEGHORNS — WE BREED THEM.—Order your spring chicks now to insure desirable delivery date. We raise all chicks from our proven producers from OUR OWN YARDS and guarantee them vigorous heavy layers. A card brings full information and catalogue. Bolfing Poultry Farm, Gilroy, Calif.

PEERLESS WHITE WYANDOTTES — Our 200-egg strain, bred for years for show qualities and high-egg production. Fifty cockerels, 100 pullets for sale. Trios and mated yards. Eggs for hatching. Catalogue free. J. W. Atkinson, Box 8, 130 Willard St., San Jose.

BABY CHICKS—Stop! Look! Listen! Before you place your order for Single-Comb White Leghorn Baby Chicks, write for my booklet telling you about my large, heavy-laying stock, etc., and price and terms. H. A. Schlotthauer, Exeter, Calif.

BABY CHICKS from good layers. Booking orders now for 1921 delivery: R. I. Reds, Barred Rocks, White Rocks, White Leghorns, Brown Leghorns. Safe arrival guaranteed. Write for circular. Stubbe Poultry Ranch and Hatchery, P. O. Box 67, Palo Alto, Calif.

SANTA CRUZ CHICKS—White, Brown and Buff Leghorns, Anconas, Minorcas, Barred Rocks, Reds, Buff Orpingtons, White Rocks and White Wyandottes. Write for 1921 folder with price list. B. W. Archibald, Soquel, Santa Cruz Co., Calif.

WHITE LEGHORN BABY CHIX from heavy-laying Hoganized Stock. Safe arrival of full count, live, strong chix guaranteed. Price list and interesting literature on application. The Pioneer Hatchery, 408 Sixth St., Petaluma, Cal.

BABY CHIX
We specialize in Rhode Island Red and Black Minorca chix from stock bred for eggs, vigor, color. Any number at popular price. Secure date early. Denton Poultry Yards, Campbell, Cal.

PRUSSIAN HILL POULTRY RANCH—Superb Barred Rock, Black Minorca and Blue Andalusian cockerels. March hatch at $5.00 each. A few extra at $7.50. Pullets at $2.00 each. Geo. I. Wright, Mokelumne Hill, Cal.

DARK CORNISH Breeding Trios, $25. Our own "Victor" strain, with importations of England's best, bred successfully twenty-six years. W. S. Templeton, Route A, Box 25, Santa Clara, Calif.

WATCH US GROW—"Quality Chicks." We are now booking orders for the season of 1921. White and brown Leghorns, R. I. Reds and Barred Rocks. Order early. E. W. Ohlen, Campbell, Cal.

MAMMOTH BRONZE TURKEYS—Prize winning eastern strain; large bones, vigorous, well marked. Hens, $10; toms, $15 and $20. Mrs. W. S. Adams, Rt. 2, Box 73, Petaluma, Cal.

S. C. WHITE LEGHORN Baby Chicks from our own Bred-to-Lay stock. Now booking for January to July delivery. Our prices are right. Model Poultry Farm, W. C. Smith, Prop., Corning, Cal.

NEWTON POULTRY FARM—White Leghorn Baby chicks from our well-known, carefully selected stock. Best strain. Big plant. Order now for spring delivery. Any number. Los Gatos, Calif., Dept. 1.

GOLDCROFT BUFF ORPINGTONS, Columbian Wyandottes and White Leghorns. Heavy laying strains. Breeders and young stock. Samuel Abrams, Box 13, Los Altos.

VIGOROUS WHITE PLYMOUTH ROCK Cockerels, farm raised. May hatch; weight 6 to 8 lbs., $6.00, $7.50, $10.00. L. A. Bryan, Planada, Calif.

BARRED ROCKS, WHITE ORPINGTONS—heavy layers; winners at leading shows. Special prices on old and young stock. R. P. Lutzi, 1450 23d Ave., San Francisco.

LARGE NUMBER of Choice Stock Toms and hens; also Geese and Herding Collie Dogs. Stock shipped from St. Helena and San Miguel. John G. Mee, San Miguel, Calif.

HART'S MAMMOTH BRONZE TURKEYS—Large, well-marked, year-old hens. Thrifty young stock of both sexes. Albert M. Hart, Clements, Cal.

FOR SALE—7 Cyphers incubators (400-egg size), all in first-class hatching condition. Meyer Poultry Farm, Rt. A, Box 17A, Modesto, Cal.

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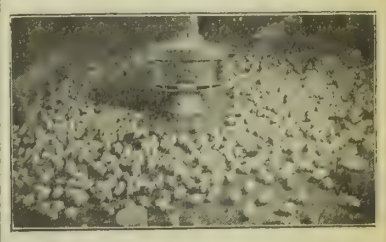

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THE CHILDREN OF NEW ENGLAND.

By William Herbert Carruth.

The year rolls round, the day returns
That bids New England's children all,
While clear the light of memory burns,
Their fathers' ancient home recall:
The limpid streams, the green-clad hills,
The salt seas dashing on the shore,
The fervent faith, the stubborn wills,
The courage of the men of yore.

Beneath the broader western sky,
Upon the soil their zeal made free,
We emulate that zeal and vie
With them in love of liberty.
Forgotten be the bars of creed,
The pride of party and of state,
United we in generous deed
For all that makes the nation great.

While here we linger fondly on,
The memories of the glorious past
Bid us a valiant race to run
In steadfast service to the last.
One final journey waits us, when
We join those blessed pioneers
Whom God has guided from our ken
Beyond the havoc of the years.

THE THANKFUL HEART.

It was on a Monday during the lunch recess in Miss Harvey's class, with "Thanksgiving only three days away" and all the lassies in Grade 5A eagerly discussing the coming holiday.

Sadie Smith was going "to grandma's at Rye Beach; Dollie Dixon was expecting an aunt and four small cousins to help in the celebrating; Gertie Grey was going to spend the day at a great-aunt's in Boston, and Mollie Mellish was "going in our new auto to Aunt Amy's out on Long Island"; and all of them were going to have turkey with the usual "go-witherums" and unlimited pumpkin pie.

Then up spoke Adolfine Schneider.

Home Circle Department

"We don't get a turkey," she said casually. "My mother says they're awful high this year, so we have lamb stew with dumplings—to make it look like more."

"No turkey!" cried Dillie Dimock, aghast. "Why, Adolfine, you've got to; it wouldn't be Thanksgiving without turkey!"

"Oh, yes, it would," said Adolfine, serenely. "If you can't have turkey, you just get yourself something else; and we're going to have kale and chestnuts, too."

"And pumpkin pie," added Fannie Foster; "you are going to have pumpkin pie, Adolfine, aren't you?"

"Nope," cheerfully answered her little friend; "we don't none of us like pumpkin pie. We're going to have raisin rice."

"When are you going to have your dinner?" continued Fannie, with an involuntary shudder; "in the middle of the day, or on Thursday evening?"

"We don't have it on Thursday at all," replied Adolfine, carefully shaking out her napkin over the trash basket; "we have it tomorrow because our Aunt Tina goes away on Wednesday, and she wants her Thanksgiving dinner with us before she goes. So we have our Thanksgiving on Tuesday."

"Oh, but, Adolfine," cried Dollie and Mollie and Gertie all in one horrified breath; "you got to have it on a Thursday, and you just can't have it before the twenty-eighth."

"Oh, yes, you can," smiled Adolfine, airily, "if you got to; and we got to on 'count of my aunt Tina. You can have your Thanksgiving just whenever you want to, my Aunt Tina says."

Amid the many "Why, Adolfines!" and "Did you evers!" and "The ideas!" called forth by this rast assertion, Bettie Baker was distinctly heard to "feel thankful that I havent got to eat lamb stew; for of all stews lamb stew is the worst stew ever."

"There's much, much worser things than lamb stew," stoutly maintained Adolfine; and dumplings just taste delicious; and I feel awful thankful I got a grandmother who knows how to make dumplings."

"Sure, and you've the thankful heart, darlint," cried Mrs. Ryan, who had just finished scrubbing the supply-room, seating herself for a five-minutes' rest on the little spare desk in the corner, "and that's a thing to be mighty thankful for. You see, children, however little we may think we have worth bein' thankful for, there's always something worse you might have had; and you can always be thankful for what you haven't got, can't you now? I found that out a year or two ago, when, the day before Thanksgiving, I was that cross wid my Mike—wid him out of a job and the children startin' in on the whoopin'-cough—for trying to make me say I was thankful for this and that. I was that cross and contrary I just wouldn't feel thankful; 'Thankful! for what, sure?' thinks I as I was fallin' asleep.

"We hadn't slep' more'n three or four hours before some one was pounding, pounding on our front door; and, when Mike—and me right after him—went to open it, there was the Murphys from down the street. 'Oh, Mrs. Ryan,' cried they, 'won't you please take us in for the night, for we're all burnt out and haven't a roof to cover us?' Just to think of that now!

"Of course, we took 'em in, her and her two children and her husband, too—whenever he wasn't running back to the old home seeing what he could save from the ruins,—and we made them just as cosy as we could; but I doubt me that any of 'em slep' much more that night. You see they'd been that scared—bein' woke right up out of their sleep and having to be took down the fire-escape by the firemen with hardly enough clothes to cover 'em—that the children didn't rightly get over it for a week. And, though but few of their things were so spoiled by fire and water that they couldn't be used again at all, it did take an awful rubbin' and scrapin' and polishin' to make 'em look real nice again. And as for the smoke smell! sure, it was two whole days with every windy wide open all the time before I got rid of it, and me only havin' had some few of their clothes and other belongings in my rooms at all.

"Early next morning we gave em all a good breakfast and what we could scrape together of clothes for 'em to wear for a day or two, and then the four of them went down the street together. And then when I turned into my own little kitchen and took out my Russ turnips and the fine hambone to get ready for our Thanksgiving dinner, it come over me all of a suddent like that I did have something after all to be thankful for, an I told Mike so. And ever since then, wheniver I feel as though things weren't just going as easy as might be, I think of the fire and the smoke and the smell and the awful scare I might have had, and I feel most thankful for what I've escaped; and all the time," concluded Mrs. Ryan, picking up her mop and brush, fixing the class with an impressive eye, "I do try to keep me a Thankful Heart; for sure that's the thing to be truly thankful on Thanksgiving Day and every other day in the year."—Kate Hudson.

TAFFY APPLES.

Take small red apples, pick stem and bloom end out, take meat skewers and spear pointed end into stem end of apples. Make syrup of one part sugar and one-half part water. Boil until it becomes brown, but do not burn. Dip apples into boiling taffy and place on a greased platter so they will not touch and stick together.

THE DOCTRINE OF DO LITTLE.

(Written for Pacific Rural Press.)

The other day the writer gave "a lift" to a walking tourist in the hope of learning something new. Perhaps he didn't get anything brand new, but he did hear a phase of philosophy emphasized in such a way as to set him thinking.

This knight of the road preached strongly what highbrows are calling the doctrine of relaxed endeavor. He called it getting as much as you can for as little as you can. He said a "soft time" should be our goal and he intimated that the good things of life are ours of right; that we ought to take them and enjoy them whether we have struggled for them or not—whether, in the old-fashioned view, we deserve them or not. His philosophy sounded familiar. We have been bumping into it everywhere lately in fiction, in the movies, among the social reformers, in political revolution—yes, in the hay field. Because of this philosophy there is a general let down of endeavor, and an honest day's work for an honest day's joy is out of style.

Maybe we are old-fashioned, but we believe our perambulating friend is dead wrong. His idea is false. The facts of existence show that it is not given to mortals to make enjoyment for its own sake the goal of life. The good things that do not come as the reward of earnest endeavor are not good when grasped. They have turned to cold, dead ashes.

Moreover, his ideal can never become a reality. The "good thing" before him at the time was Chowchilla. The "soft" way of getting there would have been to ride with me, but so thoroughly convinced was I that his philosophy was false that I dumped him out and let him walk, believing that he would appreciate Chowchilla more if he achieved it by the honest exercise of his legs. And what I did to him, life does to all who become devotees of his cult.

PECULIAR BIRDS.

(Written for Pacific Rural Press.)

We wish all the Pacific Rural Press boys and girls might have heard the young weather bureau man tell about the funny birds he had seen in the South Seas. For instance:

There is what he called the mimic bird. Perhaps from some bird book you may find its real name. This bird is a big clumsy fellow with boundless conceit, for he will attempt to imitate every movement one makes. Shake your head, the bird shakes his head. Bow low and the bird will do the same. Swing your arms and this mimic will flop his wings like a Dutch windmill in a stiff breeze. And so on through a long list of antics.

Then there is another large bird with powerful wings and marvelous eyes. He will skim along a hundred feet above the ocean, until his keen eye detects a fish in the water, when he will make a sudden dive, disappear sometimes for a minute, and then reappear with a fish which he swallows whole as he flies away.

That is, he gets away with it, unless a "man-o'-war" bird happens to be about. This man-o'-war bird hasn't extra good eyesight and he evidently doesn't consider himself a submarine.

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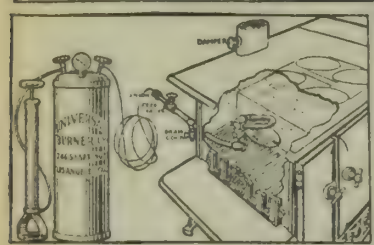

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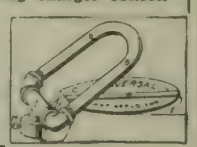

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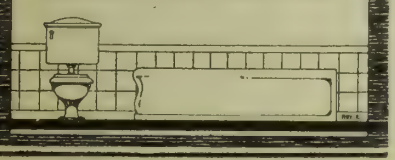

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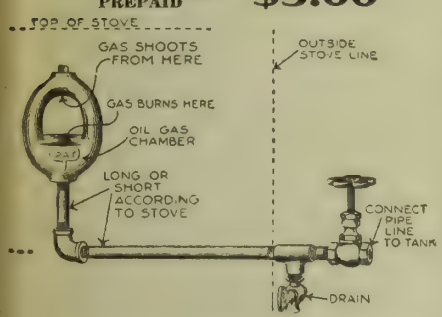

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But he likes fish, so he lurks in the offing until the diver has risen high and swallowed the fish, when, in true man-o-war fashion, he gives chase, overhauls the diver, seizes him by the neck, and shakes him until the fish is disgorged. Then the noble warrior swoops down, catches the fish before it strikes the water, and away he goes with the spoil of war.

It must be some place, that South Sea Island region, to develop birds like these. Some of these days, when we get the school-house movies, we may be able to see them perform.

GET BETTER SOAP.

(Written for the Pacific Rural Press by Bridget O'Hara.)

A joker is not always that one best card they give us to complete a deck of cards. It may be like the soap manufacturer's joker—a joke on the public. The average soap we people use today is most often from 40 to 80 per cent soap and the remainder is made up of the joker, a filler of sand, sawdust, chalk or borax, depending upon whether we buy washing soap or toilet soap.

Take washing soap, for example. Besides this filler material it nearly always contains free acid or free alkali, so it will "eat" out the dirt more easily. Few of us realize it, but it is true that the waists and dresses we wear are seldom worn out through their being worn, but really through their being "eaten" out with lye or in the soap we use to wash them. When we buy cake soap and rub it into the fabric over a wash board, it gives these "eating" chemicals a first-class chance to rub noses with the threads and the first chance they get these threads turn to I. W. W.'s and fray out.

The first thing a busy woman likes to have on Monday morning is a tub of warm suds. The powdered soaps are coming to be more and more used because they furnish good suds so quickly. Also the average powdered soap of today is of a higher quality—less joker in it than in cake soaps. It was recently the privilege of the writer to go through the plant of the Household Supplies Co. in Berkeley, which makes the E-Z-Way soap. This is even an improvement over the other kinds of powdered soaps because no rubbing is necessary. Two teaspoonfuls of soap will fill a tub with suds at once, because it is entirely soluble and contains no joker. Just a bit of pure soap will do the work most of us have always used a cake of the joker kind to accomplish. Pure soap will do so many more things than ordinary washing soap, which most women never use except on Monday. Your husband can use it for his shave; you can use it to launder the sheerest chiffons and silk shirtwaists just by rinsing, and without discoloring. It will take out fruit stains on your dresses and bring back little Johnnie's overalls to their original blue without more than a rub or two. Any soap that is real soap and is all soap can do one of these things.

They say that the world over Monday is the universal wash day. But there is so much difference in the way the washing is done. European and Latin-American peasants and Orientals still do the family wash by pounding it between stones as they did hundreds of years ago. Our washing board of today is surely a step better than this, but it, too, should be relegated to the museum, with other relics of bygone days. If this were done the average woman who does her own washing would never have that back-broken feeling on Monday noons. Many think it can't be helped. What she needs is a washing machine and a pure, powdered, peppy soap. If she can't have the machine she still can have the soap. Better soap certainly makes housework lighter.

"My brother bought a motor here last week," said an angry man to the salesman that stepped up to greet him, "and he said if anything broke, you would supply him with new parts." "Certainly," said the salesman. "What does he want?" "He wants two deltoid muscles, a couple of knee-caps, one elbow, and about half a yard of cuticle," said the man; "and he wants them at once."

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THE MARKET REPORTS

SAN FRANCISCO

WHEAT.

San Francisco, November 24, 1920.

Acute inactivity prevails in the wheat market with prices nominal and buyers apparently uninterested. With sharp declines in other markets and the poor demand, a slump is awaited locally with indications pointing toward lower prices next week.

Wheat, spot .....$3.75@3.90

OATS.

Prices so far are the same with some quantity of stocks on the market. Although a little interest was displayed earlier in the week, buyers now feel inclined to await possible developments concerning the price situation, which seems to be affecting all the grains.

Red Feed, ctl. .....$2.55@2.60

BARLEY.

Barley is quoted slightly lower with not much trading. The market is apparently falling and buyers are not touching spots. Future dealing is however proceeding normally.

CORN.

Complete inactivity prevails with prices nominal. Sales may be expected during the coming week at lower figures.

Feed Barley, ctl. .....$2.05@2.10
Egyptian, white, ctl. .....Nominal
do, brown .....$2.50@2.60
California .....$3.00@3.10

FEEDSTUFFS.

The market is stronger than it has been for several weeks. This condition is undoubtedly due to the recent heavy rains, which have compelled farmers to use feedstuffs to care for stock during the inclement weather. The feedstuffs market does not suffer as other grains are, but appears to be in a very good condition.

Rolled Barley, per ton .....$48.00@49.00
Rolled Oats .....$55.00@56.00
Alfalfa Products .....$39.00@40.00
Cracked Corn .....$58.00@60.00
Bran .....$63.00@64.00
Mill Run $66.00
Poultry Scratch, ctl. .....$3.75@3.90

HAY.

The hay market has held up remarkably well during the week and is in a strong condition. This is undoubtedly due to the effects of the recent heavy rains, which caused a sharp decline in hay receipts and at the same time created a demand for the product, which is being used for stock duruing the wet period. While a week ago it looked as if the bottom might drop out of the market, the light arrivals precluded any such tendency. Receipts for the week were only 565 tons. During the previous week receipts were 1509 tons.

Although current prices are unchanged and the market seems to hold up well, buyers continue to only purchase for their daily wants on a hand-to-mouth basis. Right now reports of flood damages and results of the storms make any predictions precarious. However, it is thought that prices are secure for at least another week. Further light receipts are predicted. Price quoted f. o. b. San Francisco less $1.00 per ton commission charges:

Wheat, hay, new .....$28.00@29.00
Tame oat, new .....$24.00@27.00
Wild oat, new .....$18.00@20.00
Barley .....$17.00@20.00
Alfalfa, 2nd cutting .....$22.00@25.00

RICE.

Rice is becoming stronger with a scarcity of stocks on hand. With the exception of California No. 2, prices have generally advanced a little.

California Fancy, ctl. $5.75
do, Choice $5.00
Southern Honduras, long grain $9.25
China, No. 1, double mat $8.50
Blue Rose, fancy $7.25
Fancy Head (Philips & Co.) $10.00
California Japanese, No. 1 .....$5.75
do, No. 2 .....$5.00

FRESH FRUITS.

Casaba melons have become a drag on the market with a nominal price prevailing. No sales are reported for the last part of the week. Pears are selling normally. Berries are almost finished, and only a few straggling cases are arriving. Apples continue to arrive in large quantities and a fair demand is reported. However, indications point to a decline soon in all varieties of apples except Newtown Pippins, which are in an exceptionally advantageous position.

Apples: Wagner's, 40-lb. box $2.00
do, Spitzenberg, Oregon .....$2.50@3.00
do, Jonathan .....$2.50@3.00
do, Bellflowers, Watsonville ..$1.25@1.75
do, Newtown Pippins .....$2.00@2.25
Pears (32-lb. box) .....$2.00@3.50
Strawberries, 6 12-oz. boxes.....$1.00@1.50
Casaba, crate $1.00
Raspberries, drawer .....75@90c
do, 8-oz boxes .....30c@40c
do, 8-oz. boxes .....40@50c
Grapes, crate (20 lbs. net) ....$1.50@3.00

POULTRY.

Turkeys advanced sharply during the last three days of the week, due to the most acute shortage ever known at Thanksgiving time. Rains are responsible for the light deliveries during the past week. A decline in broilers and hens will doubtless take place immediately. On the whole, the poultry market is firm in tone because of the light receipts from the country.

Broilers, small, alive, per lb. .....60@62c
do, large .....47@50c
Hens, mixed color .....38@40c
do, Leghorns .....33@38c
Roosters, young .....34@38c
do, old 25c
Friers .....40@42c
Squabs .....70@80c
Geese .....35@40c
Ducks .....35@40c
do old .....35@38c
Belgian Hare, live .....20@25c
do, dressed .....24@30c
Jack Rabbits .....Nominal
Turkeys, young, large, lb. .....50@55c
do, old lb. 50c
do, dressed, lb. .....60@65c

BUTTER.

With the cheaper grades plentiful and quoted at a nominal price, the market on Extras remains steady. Dealers trading stocks show a reduction and receipts are normal. Thanksgiving needs stimulated the demand earlier in the week.

	Thu.	Fri.	Sat.	Mon.	Tu.	Wed.
Extra	53½	54½	..	54½	54½	54
Prime 1sts	51½	51½	..	..	..	..
Firsts	48½	48½	..	..	..	..

CHEESE.

Full cream Jack is only moving in a small way with the price unchanged. Demand continues strong for California Fancy Flats, with Oregon Young Americas quoted at a higher figure. Special makes have been selling well for the holiday trade.

California Flats, fancy, lb. 30c
do, Firsts .....Nominal
Oregon Triplets 26c
do, Y. A., fancy 36c
Full Cream Jack 29c

EGGS.

Eggs have dropped sharply during the week and the last day saw further declines which are thought to be bottom prices. The low prices are the result of a discontinuance of Eastern shipments, with a consequent tendency to flood the local market. Although stocks here are now greatly in excess of the demand, indications point to a upward trend before long.

	Thu.	Fri.	Sat.	Mon.	Tu.	Wed.
Extra	88	88½	..	78½	78½	76½
Ex. Pullett	76½	77	..	70	70	62½
Undersized	67½	69	..	64½	63½	58

HONEY.

Prices remain as suoted last week and conditions in the market are unchanged.

Water White (extracted) .....11@13
White .....13@15c
Amber Alfalfa .....10@12c
Light Amber (comb) .....25@30c

POTATOES, ONIONS, ETC.

Heavy shipments of Oregon ad Nevada potatoes are arriving and although the recent rain held up digging on the river for a few days, California shipments are now commencing in large quantities. To date, potato prices are unchanged but declines may take place any day. Onion prices are the same with a normal market. All grades of vegetables arrived in only small quantities, due to the rains. With the exception of carrots, however, prices are all unchanged.

Turnips $1.00
Beans, green .....8@10c
Carrots, per sack .....$1.00@1.25
Lettuce, local, doz. .....25@30c
Cucumbers, Alameda, large box ..$1.00@1.75
Tomatoes, Alameda, large box.... 75c@1.50
Summer Squash, box 35-40 lbs... $1.25@1.75
Potatoes, New River, cwt. .....$1.50@2.10
Onions, yellow, sack .....50@80c
do, Red ..... Nominal
Green Onions, box, 25 lbs. .....$1.50@1.75
Celery, crate ..... $3.00@3.25

BEANS.

A good demad is reported for colored beans, but the white varieties have suffered slightly in a quiet market, because of declines in Michigan white beans. This condition has had the effect of reducig the demand for California whites to a minimum. However, while a quiet market prevails, its condition does not in any measure idicate a panic. Red Kidneys are on the market quoted at $10 to $10.50.

(Wholesale prices, sacked, per ctl.)

Red Kidneys .....$10.00@10.50
Bayos .....$11.00@11.25
Blackeyes .....$5.75@6.00
Cranberries .....$6.00@6.25
Red Mexican .....$5.75@6.50
Pinks .....$5.75@6.00
Large Whites .....$4.25@4.50
Small Whites .....$4.40@4.60
Limas, S. F. prices .....$7.25@7.40
do, Baby, S. F. prices .....$6.75@6.90

DRIED FRUITS.

There is a great pressure to sell on the part of the packers while the market is very weak. While the demand is almost negligible, prices remain unchanged.

Apricots.

Extra fancy Moorpark, lb. 30c
Fancy Moorpark, lb 23c

Growers Quality.

Growers' quality—Fancy, lb. 26½c
do, lb. 24½c
do, Choice lb..... 22½c
do, Slabs, lb.....20c
do, Standards, lb. 18c

Raisins—The following prices have been established as the opening prices of the California Associated Raisin Company for the 1920 crop of raisins.

Muscat, Sun Maid, seeded, pkg. 36-16s, 20½c
do, Fancy ..36-16s, 20½c; 48-12s, 15¾c
Bulk, seeded, Baker's Sun Maid, 25-lb. 19½c
do, Fancy Sun Maid, 25-lb. boxes..... 20c
do, 4-crown, recleaned, lb. 23½c
Loose, 1-crown, recleaned, lb. 19½c
Layers, 3-crown, flat pack, 5-lb. box..$1.30
do, 3-crown, flat pack, 5-lb. box..$1.30
Clusters, 4-crown, flat pack, 20-lb. box $4.70
do, 4-crown, flat pack, 5-lb. box..$1.40
Sun Maid, 100-lb. boxes $20.50
Thompson Seedless, Sun Maid, recleaned, lb. 20c
do, Sun Maid, bakers, lb. 21c
Sultanas, Sun Maid, recleaned, lb. 19¾c
do, Sweat-box, layers, lb. 18½c

..Figs—Following prices have been established as the opening prices for the 1920 crop of dried figs.

White Adriatic, 12-10 oz. $1.25; fancy, $1.30
do, 12-8 oz. .....$2.00; fancy, $2.05
do, 50-6 oz. .....$3.10; fancy, $3.20
do, 70-4 oz. .....$3.30; fancy, $3.40
Adriatic, bulk, Standard, 50-lb. boxes, lb. 9c
do, bulk, fancy, 50-lb. boxes, lb. 13c
Black Mission, Standard, 50-lb. boxes, lb. 7c
do, Fancy, 50-lb. boxes, lb. 12c
Prices f. o. b. Fresno.

(Peach Growers, Inc., prices f. o. b. Fresno.)

Peaches.—Following prices have been established as the opening prices of the California Peach Growers for the crop of dried peaches.

Yellows, Standard, lb 15½c
do, Fancy, lb. 17½c
do, Extra fancy, lb. 18½c
do, Slabs, lb. 15¼c
Muirs, Standard, lb. 15¾c
do, Fancy, lb. 18¼c
do, Extra fancy, lb. 19½c

The above prices are bulk basis.

Shipment: September, October, November. Seller's option. The above prices are guaranteed against Association decline until Jancrop of Prunes.
uary 1, 1921.

Prunes—Following prices have been established as the opening prices of the California Prune and Apricot Growers, Inc., for the 1920

(Calif. Prune and Apricot Assn., f. o. b. California.)

Sunsweet Brand, 20-30s, flat, lb. 25c
do, 30-40s, bulk, lb. 16c
do, 40-50s, bluk, lb. 15c
do, 50-60s, bulk, lb. 12c
do, 60-70s, bulk, lb. 11c
do, 70-80s, bulk, lb. 10c
do, 80-90s, bulk, lb. 9c
do, 90-100s, bulk, lb. 8½c

First half September shipment, ½c premium; last half September shipment, ¼c premium. The above prices apply only to contracts already issued.

SPECIAL DECIDUOUS REPORT

Sacramento, Nov. 24, 1920.

There is very little to be said in connection with the deciduous market, as all shipments are practically stopped. However, there are a few Emperors in districts where the rainfall was light that continue to move a few cars. Eastern sales are holding up well on sound stock. Emperors $1.85 to $4,25. Tokays $1.50 to $2.50 per crate. Cornichon $3.90 per crate.

LOS ANGELES

Los Angeles, Nov. 23, 1920.

BUTTER.

A steady market and very good demand was had the past week for all extras. There was a dropping off in the receipts and the consuming trade took what coming in without trouble. Low grades, however, still dull and weak. Receipts the past week 225,000 pounds against 298,100 pounds the week before. We quote:

California extra creamery 56c
do, prime first 54c
do, first 52c

EGGS.

With a picking up in the receipts the past week and the Thanksgiving demand being supplied, the market Monday broke sharply and there was but little demand at the decline. Receipts by rail for the week were 516 cases. The market, both here and elsewhere, reached its crest the first part of our review week, but with a slow but steady increase in the production the break came and a steady settling of prices is expected from this forward. We quote:

Fresh ranch, extras 76c
do, Case count 73c
do, Pullets 68c

POULTRY.

Receipts the past week were pretty good of everything. But under the stimulus of the Thanksgiving demand all offerings were sold without trouble and brought last week's prices.

Broilers, 1 to 1½ lbs. 38c
do, 1½ to 1¾ lbs. 43c
Friers, 2 to 3 lbs. 40c
Hens ..... 33@38c
Roosters (soft bone) 3 lbs. and up 36c
Ducks ..... 28@32c
Turkeys .....43@45c
Geese 25c

FRUITS.

The fruit market now is confined to apples. Pears, peaches, grapes and figs are now all out of the market save those out of cold storage. Apples in good demand at the prices below.

Apples, Bellfleurs, 3½@4 tiers $1.40@1.50
do, Newtown Pippins, 3½@4 tiers .....$1.75@2.00
do, A. B. C. grades, 3½@4 tiers ..... $1.40@1.50
do, Banana, lb. .....7@9c
do, Jonathan, lb. .....5½@6½c
do, Delicious, lb. .....6@7c
do, Black Twigs, lb. .....4@6c
do, Winesaps, lb. .....5@5½c

VEGETABLES.

Staples show but few changes from a week ago, but the market for green stuff was unsettled. All good fresh stuff in fair demand, but poor stock hard to move. Potatoes continue slow sale. Fancy stock was in a little better demand and tone of the market firmer under the influence of lighter offerings. Sweet potatoes steady and demand fair. Onions are as dull as ever annd market weak under excessive offerings and a slow demand. Lettuce coming in freely and sharply lower, but demand good. Cauliflower also in fair demand but lower. Rhubarb higher and selling very well. Peas steady and in fair demand and the same may be said of No. 1 tomatoes. Summer squash and cucumbers unchanged. Green peppers steady and selling fairly. Celery dull but steady.

Potatoes, local, cwt. .....$1.75@2.00
do, Northern, cwt. .....$2.15@2.40
do, Idaho Russett, cwt. ....$2.15@2.25
Sweet Potatoes, lb. .....3@3½c
Cauliflower, local crate.....25@40c
Celery, pony crate .....$2.00@2.25
do, Northern, crate .....$3.00@3.50
Onions, Stockton, white, cwt. ....$1.25@1.50
do, yellow, cwt. .....90c@1.00
do, Australian Brown, cwt. ..$1.05@1.10
do, local, crate .....40@50c
Lettuce, crate .....40@50c
Rhubarb, per 30-lb. box .....$1.15@1.25
Peas, lb. .....13@14c
Carrots, bunches, ...30@35c
Summer Squash, local, lug .....$1.00@1.25
String Beans, green, lb. .....7@9c
do, wax, lb. .....7@9c
do, Kentucky, lb. .....9@10c
Cucumbers, lug .....$1.75@2.00
Tomatoes, home-grown, No. 1 lug ..75c@1.00
do, No. 2 .....25@35c
Bell Peppers, lb. .....3@4c
do, Chile, lb. .....3@4c

BEANS.

While this market continues quiet, yet there was some little doing the past week in limas, the first for a long time, and blackeyes and pinks sold fairly and brought a little more money. Whites continue dead dull.

Limas, per cwt. $6.00
Large white, per cwt. .....$4.50@5.00
Small white, per cwt. .....$3.00@3.25
Pink, cwt. .....$5.35@5.50
Blackeyes, cwt. .....$5.30@5.35

HAY.

A draggy though uchanged market was had the past week. Receipts were good and demand light. Buyers having pretty well stocked up the week before were out of the market most of the time and made but few purchases. What business done, however, was at steady prices.

Barley hay, ton .....$21.00@24.00
Oat hay, ton .....$24.00@27.00
Alfalfa, Northern, ton .....$25.00@27.00
do, local, ton .....$28.00@32.00
Straw, ton .....$ 9.00@11.00

WALNUTS.

The season is fast drawing to a close with the Association. It continues to report a very good demand at steady prices. Shipments have now dropped down to only five cars a day. We quote Association prices:

No. 1 .....22½c
No. 2 ..... 16½c
Fancy budded 25½c

Orchard run from independent growers 12@14c and demand good for what coming in.

REPORT OF SALES.

Turlock, Nov. 16, 1920.—80, 195, $13.25, Seim & Son; 7,255,$12.75, Seim & Son; 14, 153, $12.75, Seim & Son; 2, 125, $12.25, Seim

Special Livestock Market Report

San Francisco, November 17, 1920.

CATTLE—In line with the active demand for beef cattle herein mentioned last week prices have responded. Owing to the luxuriant growth of grass on the ranges, we should not be surprised to hear of more cattle going into the feed lots, in spite of tight money market.

Steers, No. 1, 1000-1200 lbs..... 9 @10c
do, 2nd quality ..... 7½@ 8½c
do, thin ..... 6 @ 6½c
Cows and Heifers, No. 1 ..... 7½@ 8c
do, 2nd quality ..... 6 @ 7c
do, thin ..... 3 @ 4c
Bulls and Stags, good ..... 4½@ 5½c
do, fair ..... 3½@ 4c
Calves, lightweight ..... 9½@10c
do, medium ..... 8 @ 9c
do, heavy ..... 7 @ 8c

SHEEP AND LAMBS—The local mutton and sheep market continues active with prices ruling stronger to higher for wethers. Lambs are in demand at advaced prices.

Lambs, milk ..... 9½@10½c
do, yearling ..... 8 @ 8½c
Sheep, wethers ..... 7½@ 8c
do, ewes ..... 4 @ 5c

HOGS — While receipt of hogs during the week were about equal to the average for the past month, it did not prevent a sharp break in prices, and the outlook does not indicate an early recovery.

Hard, fat, grain-fed, 100-150 lbs. 12c
do, 150-225 lbs. 13c
do, 225-300 lbs. 10½c
do, 300-400 lbs. 11½c

Los Angeles, Nov. 23, 1920.

CATTLE—A dull and lower market was had the past week for cows. Offerings excessive and killers took off 50c a cwt. and were not anxious buyers at that. Good heavy steers, however, continue scarce and in good demand to the extent of the supply. Canners are 50@75c lower and very dull.

Per cwt. f. o. b. Los Angeles.

Steers, prime to choice, 1050-1000 lbs. .....$10.00@10.50
do, good to prime steers, 900-1000 lbs. .....$ 8.00@ 8.50
Prime cows and reifers.....$7.50@8.00
Good cows and heifers .....$6.50@7.00
Canners ..... $3.25@3.50

HOGS—Offerings continue good and market weak, though not quotably lower. Demand mainly from the fresh meat trade. Curers buying but few as hogs in the Central West are being cured at lower prices than ours.

Per cwt. f. o. b. Los Angeles.

Heavy, averag'g 275@350 lbs. $10.00@11.50
do, 225@275 lbs. .....$11.50@12.00
Light .....$12.50@13.00

Rough docked 20 lbs. piggy sows 40 lbs. and stags 40 per cent.

SHEEP—There is othing new in this market from a week ago. Lambs and yearlings continue in good demand and market steady. Ewes and wethers still dull.

Per cwt. f. o. b., Los Angeles.

Prime wethers .....$6.00@ 7.00
Yearlings .....$6.00@ 7.00
Prime ewes .....$5.00@ 6.00
Lambs .....$10.00@11.00

& Son; 8, 350, $11.25, Seim & Son. Two cars sold, 18 consignors.

Madera, Nov. 18, 1920.—85, 193, $13.50, Jno. D. Biddle; 28, 151, $12.00, J. E. Buckholtz; 10, 147, $11.50, Jno. E. Buckholtz; 4, 307, $11.50, Jno. D. Biddle. One and one-half cars sold, 10 consignors.

Fresno, Nov. 19, 1920.—85, 206, $14.15, Cudahy Packing Co.; 44, 204, $13.95, Virden Packing Co.; 38, 162, $12.95, Virden Packing Co.; 6, 285, $12.95, Virden Packing Co.; 23, 150, $12.05, Los Angeles Packing Co.; 13, 278, $10.00, J. W. Ries. Two and one-half cars sold, 18 consignors.

Bakersfield, Nov. 20, 1920.—97, 193, $13.25; E. B. Miller; 90, 214, $12.80, E. B. Miller; 32, 196, $12.65, Bakersfield Market; 24, 155, $11.15, Bakersfield Market; 13, 300, $10.65, Bakersfield Market. Three cars sold, 24 consignors.

WEEKLY BUTTER AVERAGES.
Cents per pound for Extras.

Week Ending	San Francisco 1919	San Francisco 1920	Los Angeles 1919	Los Angeles 1920
Jan. 2	66.19	62.80	63.16	65.00
" 9	61.00	63.70	64.00	65.00
" 16	61.70	62.58	64.16	66.00
" 23	55.83	55.50	62.16	61.00
" 30	44.91	62.50	49.00	66.00
Feb. 6	43.58	64.75	47.33	68.60
" 13	46.80	60.75	47.60	64.00
" 20	51.58	60.80	63.16	64.00
" 27	53.90	59.40	55.00	66.00
March 6	56.16	58.66	59.00	62.00
" 13	55.58	57.50	58.00	59.00
" 20	54.41	59.50	56.00	59.00
" 27	56.41	58.58	58.00	62.00
April 3	54.23	56.00	55.50	56.00
" 10	57.16	55.41	56.00	55.00
" 17	52.41	55.76	54.00	56.00
" 24	52.41	55.00	54.00	55.00
May 1	52.41	54.66	54.00	55.00
" 8	52.91	52.90	54.00	55.00
" 22	57.91	52.83	59.00	54.00
" 29	57.91	51.41	59.00	54.00
June 5	54.12	50.90	57.00	54.00
" 12	53.58	51.25	57.00	54.00
" 19	53.16	53.66	57.00	55.50
" 26	52.83	55.75	55.00	57.00
July 3	52.37	56.91	55.00	57.00
" 10	52.13	57.70	54.00	58.00
" 17	52.71	56.80	56.00	58.00
" 24	54.24	55.91	57.00	58.00
" 31	55.08	56.58	57.00	....
August 7	55.50	56.10	59.00	58.00
" 14	52.33	57.08	57.00	58.00
" 21	52.66	57.50	56.00	59.00
" 28	52.66	59.70	58.00	61.00
Sept. 4	56.20	63.90	59.00	63.00
" 11	58.70	65.87	61.00	65.00
" 18	59.70	65.62	62.00	67.00
" 25	60.58	64.20	66.00	67.00
October 2	62.70	62.90	67.00	65.00
" 9	63.41	63.80	67.00	65.00
" 16	62.90	61.75	65.00	63.00
" 23	62.00	56.20	65.00	59.00
" 30	62.25	54.60	64.00	54.00
Nov. 6	62.66	52.21	64.00	55.00
" 13	64.50	52.90	66.00	55.00
" 20	63.83	54.25	66.00	56.00
" 20	76.86	82.00	75.00	76.00
Dec. 4	76.30	....	67.00	....
" 11	63.91	....	67.00	....
" 18	64.60	....	67.00	....
" 26	65.66	....	68.00	....

WEEKLY EGG AVERAGES.
Cents per dozen for Extras.

Week Ending	San Francisco 1919	San Francisco 1920	Los Angeles 1919	Los Angeles 1920
Jan. 2	75.60	62.50	69.50	60.00
" 9	69.91	61.20	66.66	58.00
" 16	58.70	62.66	62.41	58.00
" 23	52.58	57.66	54.66	55.00
" 30	48.75	58.00	52.33	55.00
Feb. 6	42.00	48.16	43.00	47.00
" 13	40.90	45.41	37.80	45.00
" 20	36.41	44.10	39.33	43.00
" 27	37.40	45.60	33.60	42.00
March 6	37.58	41.33	37.00	38.00
" 13	37.16	37.41	37.00	38.00
" 20	38.41	39.66	39.33	41.00
" 27	40.41	41.91	42.00	40.00
April 3	42.41	40.83	45.00	39.00
" 10	42.91	40.83	45.00	40.00
" 17	45.10	39.41	46.00	40.00
" 24	45.00	39.33	46.00	39.00
May 1	45.00	42.91	44.00	42.00
" 8	46.50	42.60	42.00	44.00
" 15	47.91	42.91	50.00	44.00
" 22	49.16	43.50	51.00	44.00
" 29	47.58	41.33	49.00	43.00
June 5	45.50	41.30	46.00	42.00
" 12	47.60	42.08	47.00	43.00
" 19	45.91	43.66	47.00	45.00
" 26	49.66	42.75	50.00	47.00
July 3	43.97	45.91	51.00	48.00
" 10	47.60	47.70	51.00	50.00
" 10	47.66	51.00	51.00	51.00
" 24	49.33	54.58	51.00	52.00
" 31	53.16	56.25	52.00	52.00
August 7	55.50	54.50	56.00	52.00
" 14	55.00	54.50	56.00	54.00
" 21	51.80	53.66	52.50	56.00
" 28	53.91	56.10	52.00	58.50
Sept. 4	56.70	62.60	53.00	61.00
" 11	61.50	64.50	61.00	61.00
" 18	61.83	67.00	58.00	67.00
" 25	62.75	67.60	68.00	67.00
October 2	68.70	71.70	68.00	70.00
" 9	69.91	77.20	69.00	75.00
" 16	67.70	83.50	71.00	78.00
" 23	72.25	79.60	73.00	78.00
" 30	70.08	74.20	73.00	75.00
Nov. 6	81.25	77.50	75.00	79.00
" 20	76.86	87.62	75.00	88.00
" 27	64.30	54.00	67.00	56.00
" 27	76.66	....	75.00	....
Dec. 4	80.90	....	77.00	....
" 11	79.16	....	77.00	....
" 18	71.16	....	68.00	....
" 26	68.91	....	65.00	....

SPECIAL CITRUS REPORT.

Los Angeles, November 24, 1920.

The orange market is somewhat between seasons. There are still a few cars of Valencias going forward. The latest sales in New York $5.40 to $12.46. The general rainfall throughout Central California citrus belt put a damper on early shipments, less than 75 cars out to date. As a result of the setback, there will be but few cars of early navels arrive in Eastern markets in time for Thanksgiving trade, and as Valencias are cleaning up rapidly, it looks as though Florid will be called upon to fill the wants.

The lemon market, to say the least, is rotten. New York and Boston report little better feeling as a result of the market clearing up on storage stock. F. O. B. quotations are on a basis of $2 to $2.50 per box.

MARKET COMMENT.

First Wool Sale.

The first open wool sale in Australia, according to Consul H. P. Starrett at Adelaide, Australia, since 1916 took place in Adelaide on October 1. The total to be offered in Australia during October did not exceed 100,000 bales. 20,000 bales were offered at the Adelaide sale, but only about 5000 bales were actually sold. The demand was confined to the higher qualities such as supercombing or spinners wools. The highest price received was 58 cents. No demand for shoddy course wool.

Orange Picking Stopped.

The recent rain put a stop to orange picking and packing, for the time being. The San Francisco market has been well supplied, arrivals of new crop valencias being as much as eight cars in one day. Prices have ranged from $4.25 to $5 per box. Now that the weather is favorable for picking it may be expected a great rush will be on.

An Occasional Car of Pears Going.

An occasional car of fall pears is sold in New York and Boston. The last sale reported in Boston, grossed $2112.00. B. Clargean $455 to $5.10. Wherever this fruit is sound and has the appearance of good keeping quality it is stored f · better prices.

Deciduous Fruit Shipments.

There will be but little increase over the present figures of deciduous fruit shipments for the season of 1920, which are 35,201 against 29,425 cars in 1919 and 10,000 cars more than the season of 1918. The greatest increase in any one variety has been in grapes.

HOLMES-DEWOLFE SALE.

The dairy business year in and year out continues to be the one best bet as a sure method of making a livelihood and a "stake" as well. The silver lining of the cloud of hard times is always in evidence if the rancher has a good bunch of cows to milk. Notice, we said good. Ordinary scrubs are not sure. Get good ones, such as will be sold when R. L. Holmes of Modesto and H. A. De Wolfe commence to sell Holsteins at their auction. The kind that will put the "smile on your face that won't come off."

Classified Advertisements.

Rate, 4c. per word. Cash must accompany all orders.

COUNTRY LANDS.

STOCK RANGES TO LEASE.

10,000 acres for cattle, all equipped, rolling open range, at $1.25 per acre.

8,000 acres for sheep or cattle, well fenced, open range, at $1 per acre.

720 acres, improved, excellent feed, 5-year lease, at $1.25 per acre.

STOCK RANGES FOR SALE.

11,000 acres, excellent improvements, 1,000 acres farmed, early range, at $20.

7,000 acres, well fenced, well watered, all open range, at $13.50 per acre.

3,000 acres, well fenced, well watered, improved, at $20 per acre.

3,000 acres, a very good lambing range, 800 acres farmed, at $28 per acre.

2,000 acres, a fine range, near Livermore, Cal., well fenced and watered, at $30 per acre.

1,400 acres, with stock and implements, 3 sets of buildings, fenced, well watered, on Honey Lake, Lassen County, $45,000.

1,200 acres, all can be farmed, fenced, two wells, a good range for lambing, $25 per acre.

772 acres, two sets building, fenced and watered, a cattle range, at $17 per acre.

667 acres, improved, well watered by river, Eldorado county, price $13 per acre.

560 acres, fenced and improved, rolling, open, well watered, at $30 per acre.

Remember, these ranges are classed in price according to the quality of the range, and are sold on terms, which can be had by calling on or writing to the office of E. F. CALLAGHAN, 421 Yosemite Bldg., Stockton, Cal. Phone 208.

FOR SALE BY OWNER—82 acres river bottom, mostly in alfalfa and orchard (walnuts, pears and almonds) yielding large crops. Own irrigation, highway, railroad station, store on place, $850 an acre. 80 acres Linden district, rich soil, close to Calaveras river, $300 an acre. Both places real bargains at price offered. For terms and full description. Box 2260, Pacific Rural Press.

FOR SALE—150 acres irrigated farm on Newlands Government Project; 88 acres under ditch and in alfalfa. On main lie S. P. railroad within one-fourth mile of Fernley, Nevada. Fine dairy country. Also first-class alfalfa hay, $22.00 F. O. B. Fernley, W. A. Pray, Fernley, Nev.

MEXICAN LANDS—400 acres in American colony near Hermosillo and Southern Pacific Railway. Rich river bottom land; will grow anything; two crops each year. Investigate this opportunity to start big farming at small cost. Owner, 329 Ochsner Bldg., Sacramento, Cal.

FOR SALE—80 acres deep alluvial soil. Good water; near highway; adapted to alfalfa, prunes, almonds and grapes. No floods, alkali, or hardpan. 25 miles State Capitol, 65 miles San Francisco. Owner, Box 2290, Pacific Rural Press.

$20.00 TO $25.00 PER ACRE.—Fine level irrigable fruit and alfalfa lands, abundant water, fertile soil, ideal climate, close to railroad. Write Chamber of Commerce, Willcox, Ariz.

FOR SALE—$4,000—Seven acres improved place. Young orchard, trees, house, well, etc. One hour's ride from Oakland. Write B. Webster, Concord, Cal.

FOR SALE—85 acres near Vacaville on State Highway. $17,500.00. House and barn, 20 acres orchard. R. S. Lurvey, Vacaville.

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Recleaned Seed for sale.

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Seed Growers
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WANTED TEN THOUSAND GOOD DAIRY Cattle to consume our surplus alfalfa hay. Dairy opportunities unexcelled on the Newlands Irrigation Project. Never failing water supply. Adequate storage. Mild climate. Good dairy market. Great variety of crops. Our alfalfa hay unexcelled in feeding value. Supplements not essential. Orders handled. Leasing or feeding contracts available. Address Alfalfa Project Alfalfa Association, Fallon, Nevada.

PRUNES, LARGE, SWEET, Evaporated French prunes—packed in sanitary boxes; will keep 10 and 20 pound boxes, 22c per pound; 40 pounds and over, 20c per pound—all delivered prepaid any California express station. Buy direct from grower and obtain best fruit at less cost. Sunset Ranch, Live Oak, Calif.

SAFETY OILING SYSTEM for Fords—corrects the defects in the Ford system, filtering and forcing the oil to all parts of the motor on all grades. Write for our free booklet. It is educative and interesting. Paul Vining, Dist. Corte Madera.

BERRY PLANTS — Strawberries, Loganberries, Currants, Gooseberries, Blackberries, and Raspberries for immediate delivery. All stock first-class and strictly true to name. Write for prices. M. J. Moniz, Berry Specialist, Sebastopol, California.

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All sizes standard pipe and wrought iron screw casing. All kinds of fittings. Guaranteed good as new. Write for prices. **Weissbaum Pipe Works, 160 Eleventh street, San Francisco.**

SET YOUR STRAWBERRY beds now. The Shasta Banner yields three crops in a season. 100 plants, P. P., $2.50. Special price in thousand lots. F. M. Wit, 24 Cal. St., San Francisco

EXTRACTED ALFALFA HONEY direct from producer—60-lb. can, $8.50; case, 2 cans, $16.00. Sample by mail, 20c. Freight paid 150 miles. Remittance with order. E. Jackman, Firebaugh, Fresno Co., Cal.

ALL SIZES OF PIPE and screw casing, both new and second-hand, dipped and undipped. Guaranteed. Prices right. Shecter Pipe Works, 304 Howard St., San Francisco.

APPLES FROM GROWERS — Bulk pack. Bellflowers, $1.30 per box; No. 2 grades, $1.00; Newtowns, $1.75; No. 2, $1.25. Edward A. Hall. Rt 1, Box 39, Watsonville, Cal.

APPLES FROM GROWER — Newtown apples, No. 1, 4 tiers, $1.75; No. 2, per box, $1.25. Edward Dunn, Rt. 1, B. 209 Watsonville.

$1200—ONE HOLT "30" ENGINE, just overhauled; in good condition, with 5 disk moline plow. Cost, new, $465; outfit for $1200. J. M. Nelson, San Jose, Cal.

CORY THORNLESS Mammoth Blackberry. Write for descriptive price list. Get your plants from the grower. Wm. Mortenson, Rt. A, Box 209, Lodi, Calif.

FOR SALE—Budlong 7-ft. double-disc, excellent condition; also 140 feet 6-inch O. D. well casing, dipped in asphaltum. H. Portus, Santomas Road, Campbell.

WANTED—A position by a first-class orchardist of 30 years. California experience. Also understands tree surgery. Box 53, Rt. 2, Los Gatos, Calif.

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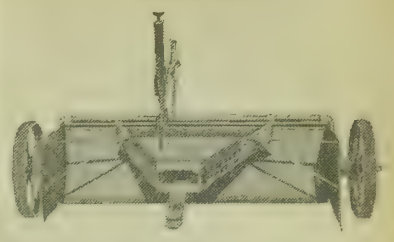

The **PURVIANCE** has made good. Sold on money-back guarantee. We will ship anywhere C. O. D. If not entirely satisfactory return to us within 10 days, freight prepaid, and full purchase price will be refunded. Order a **PURVIANCE** now and get your leveling done on time.

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Renovate the old house at small cost.

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1,500—5 cross panel pine Doors..$3.25 each
200—3-in. roll rim Tubs, white porcelain enameled ....$35.00 each
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60,000 ft. Wall Board, $35.00 to $60.00 per M.
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1-ply—108 sq. ft. Roofing $1.15
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We have everything—Doors, Sash, Nails, Plumbing, Lumber, Shingles, Lath, Cement.—Write us and save money. Guaranteed stock at LET LIVE prices—NEW and SECOND HAND.

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Better Trees Are Not Grown

Prices most reasonable.

We ship any quantity, anywhere on approval. Return at our expense if not better trees than you usually get.

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FIVE-INCH CENTRIFUGAL PUMP—Dow steam pumps. Oil pumps. 35 H. P. steam engine. Best offer. Will sell separate. X. E. Burns, Santa Clara.

CROLEY'S BALANCED HOG FEED—The cheapest feed to fatten hogs. Write Geo. H Croley, Townsend St., San Francisco, Calif.

FOR SALE — Mariout Barley Seed—clean and good quality, weighing over 100 lbs. per sack. J. D. Rowe & Sons, Davis.

WANTED SECOND-HAND 3 H. P. 3-Phase G. E. or Western motor. State price and age. Box 2280, Pacific Rural Press.

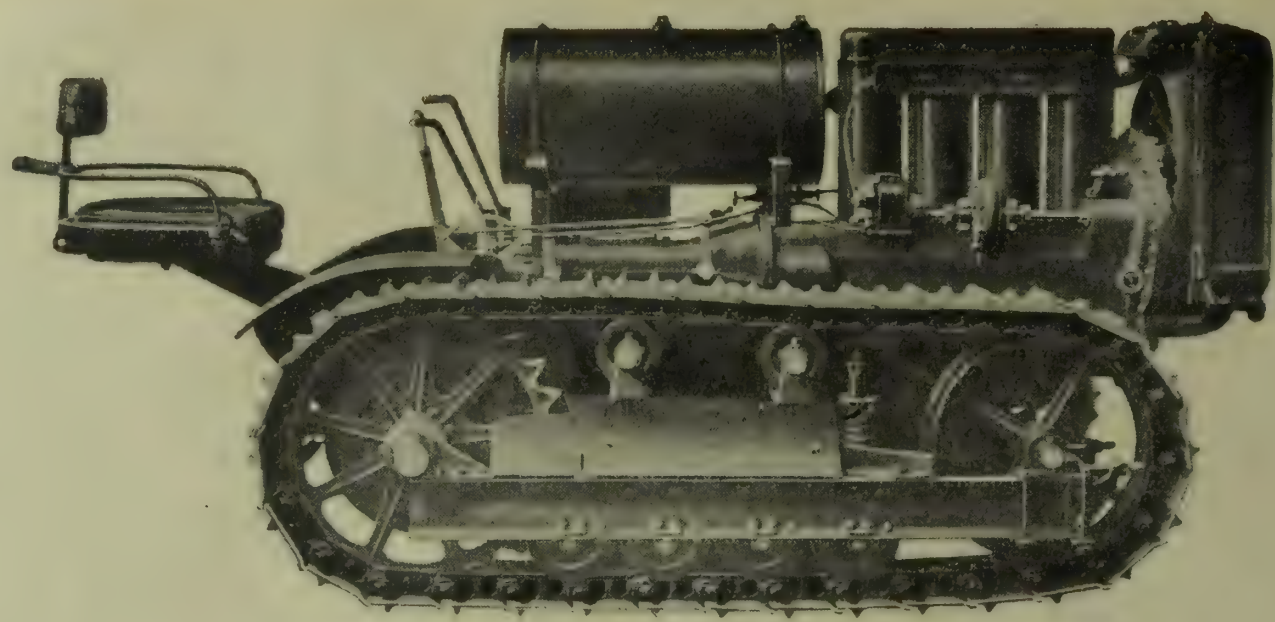
TREES, PLANTS, ALFALFA SEED, Etc.—Full stock, best varieties now . Write, J. L. Lawson, San Jose, Cal.

FOR SALE—A heavy farm wagon, hand made; almost new. Write for particulars. Henry Witt, Napa, Cal.

STRAWBERRIES — Plant now for good spring crop. Cash Nursery, Sebastopol.

CERTIFIED KADOTA FIG trees and cuttings Beckwith Fig Gardens Co., Reedley.

SPANISH PEANUTS—Only $4.40 for a 40-lb. sack. James McKee, Riverside, Calif.



Advance Announcement

BEST TRACKLAYER "Thirty" TRACTOR

Due to the insistent demand of farmers and orchardists upon the C. L. Best Gas Traction Company for a high grade tractor that could be used where the power required did not justify the purchase of a Best Tracklayer Sixty, the Company has perfected a 20-30 Horse-power model of practically the same design as their famous "Sixty"

AFTER months of trials and tests, this model is declared an exceptionally high-grade tractor, and factory production has been started. The design and materials used in this new "Thirty" are the outcome of a decade of high-grade tractor-building experience, and the knowledge gained by the successful operation of the Company's various models in the field. With each model, improvements have been made until today the "Thirty" stands a mechanically perfect tractor.

This new model is especially adapted to orchard work. It is small, compact, turns in its own length and is very easily managed. It will also eat up practically any belt job to which you may put it.

Working parts of the "Thirty" are entirely enclosed, and all gears are run in a bath of oil. Anti-friction bearings are generously used at points where long manufacturing experience dictates. Manganese steel tracks insure long life to the truck units. All working parts, though enclosed, are easily reached. The power is generated from a Best motor —a motor which has long been recognized as the leader in heavy-duty tractor motors—bore 4¾", stroke 6½", valve-in-the-head. The following additional description of the new "Thirty" will prove interesting:

Power Rating: Twenty h. p. at the drawbar, 30 h. p. at the pulley.

Speed: High, 3 1/16 M. P. H.; low, 2 M. P. H.; reverse, 2½ M. P. H.

Dimensions: Length (not including seat), 9' 4". Height, top radiator, 59". Width over all, 11½" shoes, 53¼". Width between tracks, 30¼". Ground clearance, 11½". Drawbar, 16½" high. Track centers, 41¾". Standard equipment, 11½" shoes. Length of track on ground 60".

Stationary Drive: Standard pulley, diameter 12", with a 7" face. Pulley speed, 800 R. P. M. Belt speed 2513' per minute.

Weight: 6700 pounds.

Write for full information, specifications, prices and name of nearest dealer.

Ready for Delivery about February, 1921

C. L. BEST TRACTOR CO.

San Leandro California

VOL. C—No. 23 Fiftieth Year

THE PACIFIC RURAL PRESS

SAN FRANCISCO DECEMBER 4, 1920 LOS ANGELES

California State Lib. F.L.P.

THE Scotch Ayrshire finds many congenial localities in California and the illustration pictures them taking advantage of the choice bits of herbage along a lane on Norabel Farm at Valley Ford. The Ayrshires are noted for their rustling ability, their willingness to travel over hill and dale to secure the wherewithal to produce an abundance of the lacteal fluid. It is not necessary for them to have a rough country either, as their adaptability is of the greatest. Not only do they respond to generous treatment and lush pastures in warm climates, but the cold, raw, foggy weather found at times on the Pacific Coast has no terrors for them.

Always attractive with the alert appearance and beautiful lines of almost perfect dairy animals, in later years the white color has become partially dominant over the red, making a herd of Ayrshires a very pleasing picture in either a setting of green coast foothills or the level alfalfa lands of the interior.

One hundred and ninety-eight

The quality and service of the Willard automotive battery is clearly shown by the accompanying list of 198 passenger cars and motor trucks, whose makers have adopted Willard as standard equipment. 167 of these cars and trucks, made by battery-wise manufacturers, now use the Still Better Willard, the only battery with Threaded Rubber Insulation.

*Acason
*Acme
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*All American
*Allis Chalmers
*American
*American Beauty
*American La France
Anderson
*Apex
Apperson
*Armleder
*Atterbury
Auburn
*Austin
*Avery

*"B. E. L."
*Bacon
Barrie
*Bell
*Bessemer
Bethlehem
*Betz
*Bour-Davis (E)
*Braddon
*Brockway
*Buffalo
*Buick (E)
Canadian Briscoe
*Cannon Ball
*Capitol
Carroll
*Case (E)
Champion
*Chevrolet (E)
*Clydesdale
*Cole
*Collier
*Colonial
*Comet
*Commerce
*Commodore
*Corliss
*Crawford (E)
*Cunningham
Curtis

*Daniels
*Dart
Davis
Day-Elder
*Denby
*Dependable
*Diamond T
*Dixie Flyer
*Dodge
*Dorris
Elcar
*Elgin (E)

*F-W-D
*Fargo
*Fergus
*Ferris
*Franklin
*Fulton

*G. M. C.
Gardner
*Garford
*Giant
*Glide
Grant
*Great Western

*H. C. S.
*Hahn
*Hatfield
*Hawkeye
*Haynes
*Henney
*Highway
*Holmes
*Holt
Huffman
*Hupmobile
*Hurlburt

*Independent
*Indiana
*International

*Jordan (E)

*Kissel (E)
*Koehler

*L. M. C. (E)
*Lancia
*Landa
*Lewis-Hall
*Lexington
*Luverne

*M. H. C.
*McFarlan
*McLaughlin (E)
*Madison
Maibohm
*Marmon
*Master
*Menges
*Menominee
*Mercedes
*Mercer
*Merrit
Meteor
Metz
Miller
*Mitchell (E)
Moore
*Murray

*Napoleon
*Nash
*Nelson
*Nelson & LeMoon
*Noble
Noma
*Northway
Norwalk

*Ogren
*Old Hickory
*Oldsmobile (E)
Olympian
*Oneida
*Oshkosh

*Paige-Detroit (E)
*Parker
*Parret
Paterson
*Peerless
*Peugeot
*Phianna
Piedmont
*Pierce Arrow
*Premier
*Preston

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*Rainier
*Renault
Reo
*ReVere
*Riddle
*Rock Falls
*Rowe

*Sayers
*Selden
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*Singer
*Southern
*Standard
*Standard 8
*Stanley
Stanwood
*Stearns-Knight (E)
*Sterling
Stewart
*Studebaker
*Stutz
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*Tarkington
*Thomart
Tiffin
*Titan
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*Velie
*Vim
Vogue
*Vulcan

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*Ware
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*THREADED RUBBER INSULATION.
(E) FOR EXPORT

WILLARD STORAGE BATTERY COMPANY
Cleveland, O.

Willard STORAGE BATTERY

General Agricultural and Horticultural Review

AGRICULTURAL NOTES.

The new cotton crop of Egypt is estimated at 612,000,000 pounds, according to a cablegram from the American Consul at Alexandria.

The potato crop in the Twelfth Federal Reserve District gained 432,000 bushels in the November 1st forcast, and is now placed at 38,019,000 bushels.

Twenty acres of farm land on McCoy avenue, San Jose, has been sold by the Tavonese Farm Company to Salvadore Lima. The price paid was $14,000.

Four hundred couple attenden the opening of the Brown's Valley Farm Center Community Hall, Saturday Night, November 27, which was celebrated with a grand ball.

Rain has done considerable damage to the potato crop of Oregon, Washington and Idaho and in the latter state a portion of the crop was lost through freezing in the ground.

The total annual consumption of cleaned rice in the United States is estimated at 8,072,200 bushels, or approximately 3 pounds per person. In Porto Rico the annual consumption per capita is 98 pounds.
sity farm students.

From November 24th to 28th inclusive there were 154 cars of lettuce, 145 cars of cauliflower, 15 cars of lima beans and 99 cars of mixed vegetables shipped from Southern California.

The Fresno Irrigation District is seeking permission to vote on a $2,000,000 bond issue to pay for the water rights and works of the Fresno Canal Co. has been taking an average of 350,000 acre feet of water per year from Kings river.

California is the third largest rice producing state in the union, according to the present crop estimate. The leading producing states for 1920 are as follows: Louisiana, paddy rice, 24,640,000 bushels, Texas, 10,146,000 bushels, California 9,421,000 bushels.

E. C. Riddle, president of the Elko County Farm Bureau has been selected by the Nevada Farm Bureau to represent Nevada at the session of the American Farm Bureau Federation to be held in Indianapolis in December. H will represent 1800 Nevada farmers.

California bean growers have started a movement for a protective tariff high enough to place them on a competitive basis with Oriental beans. Otherwise, reports S. D. Pine of the Growers' Association of the Chamber of Commerce, the industry will suffer a decline.

Imperial and San Joaquin Valleys report fair progress in picking cotton and sufficient labor supply, ginning is keeping pace with picking. The market continues stagnant and few sales are reported, prices ranging from 17 to 21 cents for short staple and 50 to 60 cents for long staple.

Consul Caldwell at Kobe Japan reports that, although no information as to acreage is available, the 1920 crop of peanuts is estimated, with shells, at 10,600 tons. The amount available for export at Kobe from the present crop are estimated at 500 tons of unshelled and 1000 tons shelled.

According to E. R. Long of Mc Farland, Kern County the alfalfa market is slower this year than in 1919. Long has closed down his alfalfa meal mill after grinding 1000 tons of alfalfa. He says that alfalfa was held at such a high figure from July to October it didn't pay to handle it extensively.

The Tulare County Farm Bureau today announced its decision to do its own buying and selling and will name a manager to start buying all kinds of farm machinery for members at wholesale prices. The bureau has already contracted with lumber mills to buy at wholesale prices and distribute it to members, plus two per cent.

The last of the Valencias in the Eastern markets, totaling about 20 cars, will be cleaned up this coming week. The Valencia market has held up in splendid shape and the fruit has been giving entire satisfaction. Few new crop navels reached the Eastern markets in time for the Thanksgiving trade.

From the East Indian Islands and other remote parts of the world have come requests for the "pedigreed" grain which the University of California Davis farm is offering for sale. Already 3750 sacks of the grain seed has been sold in small lots to farmers in all parts of the United States. This grain is the result of several years experimenting by the Univer-

The electors in the West Stanislaus Irrigation District have voted overwhelmingly to form the district which will comprise 36,000 acres of land. The district takes in a strip of two miles wide and thirty-five miles long. It includes Miller and Lux interests. The new system will turn a vast area of purely grain lands into more intensive small diversified farms.

Use by the 43,000,000 hunger-stricken people of Europe of American cornmeal and sort products would save them from starvation and at the same time take up a large surplus of corn now held in the United States without a market. This suggestion has been presented to Mr. Hoover, with a request that he assist in putting it into operation.

County Agent A. A. Jungerman of Stanislaus states that during the last year there has been a profit, which can be traced by actual figures, to the farmers of Stanislaus county of $93,760, due to the various demonstrations and projects of the agricultural extension service. This report will be forwarded to Washington, and the state leader's office at Berkeley.

Millions of bushels of grain, fruit and evegetables and a big tonnage of cotton were lost to American farmers in 1919 by plant diseases, according to figures compiled by the plant disease survey of the department of agriculture. Lack of prompt application of known measures were the cause. It is estimated the losses at 112,000,000 bushels of wheat, 50,000,000 bushels of oats, 80,000,00 bushels of corn, 50,000,000 bushels of potatoes, 40,000,000 bushels of sweet potatoes, 185,000 tons of tomatoes, 350,000 bales of cotton, 5,000,000 bushels of peaches and 16,000,000 bushels of apples.

HORTICULTURAL JOTTINGS.

The value of the citrus crop of California for the year ending August 31, 1920, was $81,200,000.

J. F. Neswander, Vice-president and general manager of the peach growers estimates the 1920 fig crop at 9000 tons.

Charles Cadolo has sold his forty-five acre vineyard east of Escalon to the San Joaquin Valley Land Co. for $16,000.

From November 24th to 28th, inclusively, there were 96 cars of oranges and 55 cars of lemons shipped from Southern California.

Leonard H. Day, of Hollister, has resigned, effective January 1, 1921, as County Horticultural Commissioner of San Benito County.

On November 24th there were 584,325 boxes of apples held in cold storage in Los Angeles, against 567,695 boxes same date in 1919.

General exports of the United States during October increased by nearly $150,000,000, while imports decreased approximately $1,000,000.

Financing of the "Burbank Gardens" at Santa Rosa in which there will be a public display of many of the Luther Burbank creations, has been completed.

Ninety-two acres of orchard land, planted to young trees, situated east of San Jose, has been sold for $40,000 to John Mirasson, pioneer resident of San Jose.

It is estimated by the Bureau of Markets that there are 69,000 barrels and 149,000 boxes of apples afloat destined to Liverpool, Glasgow, Cardiff and Manchester.

Dried fruit valued at $18,000 on the Seifert ranch on the White road, near San Jose, was distroyed by fire a few days ago. The fruit consisted of prunes and apricots.

The first step of the California Peach and Fig Growers toward the marketing of the fig crop this year is the purchase of the Hanson fruit packing plant at Fresno.

Thomas Holmes, the owner of the historic Hock farm in Sutter county, has just died. Several years ago he purchased this farm, historically famous as the home ranch of Captain Sutter.

W. G. Marshall, has been appointed as assistant chemist on the staff of Geo. P. Gray in charge, Chemistry Division of the Department. Mr. Marshall was formerly with Hawaiian Fertilizer Co.

There are 12,000 boxes of foreign lemons in port at New Orleans. This constitutes the available supply for the next thirty days.

On November 21-22 there arrived in New York from Florida 240 cars of oranges and 177 cars of grapefruit.

From July 1st to September 30, 1920. 79,549 crates of grapefruit were exported from the Isle of Pines to the United States, as shown by invoices certified at the American consulate at Nueva, Gerona, Cuba.

The Klakia ranch, 30 acres of full bearing orchard of almonds, apricots and olives has been sold to Arthur F. Rousseau. The consideration being $35,000. This is considered one of the best small holdings in Tulare county.

Sentinel Butte a vineyardist of Woodlake, Tulare County, harvested 35 cars of grapes from 60 acres of vineyard. A large percentage of the fruit was packed in drums containing saw-dust which is being held in cold storage for the holiday trade.

Prof. H. H. Kildee of Ames, Iowa, who judged at the Iowa State Fair and the Los Angeles Live Stock Show, says that Diamond Bar Ranch, Spadra, has the best bunch of spring gilts that he has ever seen in any Duroc herd in America.

A few days ago the superintendent of the Greystone winery at St. Helena, Napa county, handed a local vineyardist a check for $1,857 for the Petit Syrrah grapes from three acres. Another vineyardist near St. Helena, on the same day, was paid $4,700 for his crop from less than 10 acres.

Representatives of Florida and California fruit growers appeared before a committee of the interstate commerce commission recently to argue their petition for suspension of proposed deversion and reconsignment charges on fruits and vegetables as ordered by the commission. The issue, it was said, affected growers throughout the country.

Nearly $275,000 in cash was paid a few days ago for the Hanna ranch of 315 acres near Gilroy. It was part of the Miller & Lux estate. It is one of the most beautiful country estates in California. It is highly improved, 194 acres being in vineyard and the balance in bottom land along the Uvas creek.

Orange picking in the Lindsay district, which is the center of the citrus industry of Central California, is now in full operation. Everyone of the 18 packing-houses in the district is being operated at full capacity. Oranges are being shipped from the district at the rate of 100 cars per day. To date 271 cars have been shipped and there are 2,500 cars yet to go. Market has been good, around $5 to $6.50 f. o. b.

At the National Beverage Exposition, held in Cincinnatti early in November, the California Grape products were enthusiastically received, so reports E. M. Sheehan, manager of the California Grape Growers' Exchange. The exhibit was prominently located and over ten thousand people tasted California grape syrup diluted with water so as to make it into the state of unfermented grape juice.

The grain market, both domestic and foreign, is quiet. Millers are only purchasing sufficient wheat to meet their current needs, whereas in former years they have accumulated large stocks at this season. The export demand, which was brisk earlier in the year, has fallen off, and withdrawn from the local market. Other grains show the same tendencies as wheat, and similar conditions prevail in the general grain market.

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THOS. F. McCONNELL - - Livestock
RALPH NEWMAN - - - - - Dairy

EDITORIAL

FUMBLING WITH FARMING AND FINANCE.

To the Editor: The great complaint about farmers is that they are not business men. The U. S. Steel Corporation, the biggest steel manufacturers in the world, was investigated by the government and passed all censure. It is evidently a simon-pure purity club! It announced that the basic price of steel would remain unchanged and that the corporation would cut down its production one-third in 1920. There has been no complaint of the consequent high prices.

Why is it not also right, just and patriotic for the great body of American farmers to cut down production also? This will make farm prices high enough so that the farmer can afford to buy high priced manufactured goods and factory men will not need to be thrown out of employment as they now are in the East. Prices will remain high enough so that 8 per cent mortgages can be paid off. If prices drop, 8 per cent mortages will bear double interest or 16 per cent, and never will be paid off. The only ones who will suffer will be the small group of eastern and international bankers, who, having acquired immense sums from war contracts, which put the common people heavily in debt to pay, are now trying to double the money and interest by forcing falling prices. Otherwise taxes which are fixed charges will be double and the whole country will be like the south after the civil war or worse.

Accordingly, I believe it is the duty of every good American farmer to cut down his production one-third and invite the farm bureaus throughout the country to bring all possible pressure to have all farmers do this. To show that I am in earnest I am henceforth going to work but five days in the week. For the last three years I have worked seven days per week. I am now going to spend two days fishing or hunting and in the local library. Of course, I may go on the rocks for lack of co-operation among my fellow farmers. However, I invite all farmer to do as I do. This is a free country but cannot remain so any longer if we keep on overproducing. I am not worrying about anyone starving. If we do not produce enough food, let food be imported. Europe owes us immense sums; let us give her a chance to square up. I may never be President, but I hope I am right!—R. D. K., Richland.

Yes; you are logically right—if your premises are sound and your prescription workable. If steel is held up so a farmer's tools and supplies are not reduced; if his clothing is held up so that he pays war prices for manufactures, while his own cotton, wool and hides are lying unsalable in weather or warehouses, and if the wages he has to pay are twice as high as he can earn for his own time, he ought to spend one-third of his time in recreation, just as the profiteers do. If other interests are entrenched so strongly that four economic principles and laws cannot get over the top, and if these interests are able to keep shooting poison gas into the producing fields in the shape of prices below the cost of production, perhaps the farmers had better try a degree of isolation and inacitvity, and let the public see whether it needs them or not and shape its attitude toward them accordingly.

But we doubt the feasibility of your prescription of voluntary reduction of production. Reduction is sure to come but it will be enforced. Prices below cost will enforce it in their own cruel ways; they will throw some out of production and they will kill the desire and enterprise of others, etc. In fact, it does not appear to us that your proposition for a voluntary reduction of production is necessary: "For what is your sword?" said the rustic to the glittering warrior. "To kill the king's enemies by chopping their heads off," quoth the soldier. "Fool you are," replied the rustic; "they will die of themselves if you let them alone!" And so, it seems to us, it is with the present figures of production. They do not need to be killed. The murderous influences now in action will get them! If these present records of production are of any value to the public, it must save them!

We are, of course, not ignoring the fact that forehanded farmers may abandon annual crops and thus voluntarily add to the idle land of those who are forcibly pinched out. In our view there are at least two reasons why perennial farmers will not take our correspondent's advice. One is they can not; the other, they will not. And now comes in the confidential remark to the reader that R. D. K. is running a bluff on both of us. He says he will quit two days a week forthwith. We know him for a dairy farmer and how he can arrange with the cows to sit with him two days in the week in the public library, passes our understanding. The fact probably is that no matter how brave he is on paper, he will never try to put it over on the live stock. And it is the same way with all people who have continuous investments in any kind of production: they cannot quit unless knocked off the perch. As to their unwillingness to quit, it goes the same way without argument, because we preached on that text in the issue of November 6.

RESERVE BANKS OPEN TO FARMERS.

To the Editor: Our present banking system will not prove altogether a succes. It is organized and caters too much to the speculator and middle-man and neglects the producer. In my judgment, there must be some banking reform. The farmers should see to it that we have a banking system which will assist them. If you know of any move on foot kindly place me in touch with it. I was raised on a farm and am now living on the farm, but I spent about fourteen years of my life in the country banking business. I know something of the banking game; also know the farmers' needs. My plan would be to get all the ideas possible from the farmer upon this subject and from their ideas block out a system. I have some ideas on the subject. The trouble with our present system is, it is run too much by the big city banker and he doesn't know the farmer's needs. Many of the country bankers know and are loyal to the farmers, to the best of their abilities, but the system will not permit them to do as they would like.—P. A. V., Watsonville.

You are planning to do just what every other farmer who has experience in financial affairs should undertake, and that is, to master the fundamental principles which will affiliate finance and farming for the good of both. One needs the points of view of both to see understandingly into both and the converging of the two points will unify the scene and depict the dawn of the greatest material prosperity to mankind. And that time is coming. When a man with as wide business experience as Fred M. Pickering writes on the subject, as he does on another page of this issue, it is a good indication that both farming needs and the relation of farming prosperity to all other prosperity, are being understood. When a great government financier, as he was reputed to do a few weeks ago, gets the idea into his nut that the way to reduce the cost of living consists in refusing loans to farmers, and causing them to sell, and then refusing loans to wholesale buyers so they could not buy—was the latest patented process to make reconstruction of our industries, it is surely time we developed a new breed of financiers. How on earth can a farmer sell (except. of course, for small current consumption) if no one, who is aiming even at a legitimate speculative profit, can get credit to buy with, and how can a farmer hold for sale as demand develops in the course of the season, unless he can get advances on warehouse certificates? And what was the result? Nothing doing, either on spot or futures, except for a fraction of what the crop cost, and there would have been even less of that if a few hungry Europeans had not bought stuff for shipment abroad. No wonder farmers say that bankers do not understand farmers' needs; no wonder farmers are exhorting each other to suffer rather than to sell; no wonder they are combining to reduce over-production when there is only overproduction of stupidity in nation-wide financial theories and policies. Fortunately, there are now in progress many movements toward financing farming more intelligently. All the great national agricultural societies have committees at work upon the questions, and they will be ready to bring up to the next session of Congress expert and definite demonstrations of facts and of methods by which food-producers will have due consideration in the administration of the great national credit reserves. The country has now a great reserve system, which works well in restraining the great flutters which people get in their heads. It now needs a system which will give them assurance against great flutters in their stomachs. When we saw a few years ago the great portfolios of papers coming into the Bank of France, from the rural communities for re-discount, we remarked our pleasure at the sight. "Yes," said the official, "this is the best security; it is better than commercial paper; better for the country and for us." That is what we need in this country. We need ample reserves for the use of which agricultural paper is looked upon as more creditable than any other.

CALIFORNIA FIT TO LEAD.

We have an impression, which we trust is not merely local conceit, that California is pre-eminently fitted to put over the proper view of farming upon the great financial leaders of the country. In California from the very first the conception of agriculture was of a capital-using industry, conducted by men who knew how to use capital. Farming in California has never been looked upon as an automatic machine, sure to rattle but still always sure to go, and turning out a product with its own motive power, no matter what one did for it or with it. That seems to be something of the idea of farming which prevailed in the oldest eastern states. A bank was the place where the farmer could put his money. If a farmer wished to borrow money from the bank he would do to watch—for he must be going down hill. Of course, that is a very old idea and has probably vanished now, even from the places where it was once held, because farmers have come to be looked upon as men of enterprise and not so entirely as creatures of thrift, as they once were. But, unless we are mistaken, there came out of this old state of the public mind the conception that it was the banks' business to get all the money possible out of the hands of the plodding farmers who created it, pay them a little interest for the use of it, and then lend it at a higher rate to a storekeeper who wished to buy goods, or to a carpenter who wished to build a store, or to a tavern-keeper who wished to put a new front on his gin department. Those were proper commercial and constructive uses for money! It was strange that a farmer should need money. Is he not making it all the time? What use can he have for it himself? And so the proper place for the farmer seemed to be behind or under the bank, while all other great and expansive persons and concerns were welcome through the plate glass to the marble counters. Of course, the development of farming in the Middle West rather changed this conception of the relation of banking to farming, which arose farther east, but the idea still prevailed even in the newer parts of the country that the farmer belonged in the basement somewhere, although he had risen a little from the foundations or been pulled in through the fuel entrance. And it seems clear enough that with all the recognition which has come to the large owning of farming lands and to great near-farming production, even to the organization of great trusts therein, still common farming and those who live by it are not recognized as on a commercial and financial level with other industries and industrialists. The state of this country in which farming and the farmer come nearest to their own in the public mind and in financial classification, is California. It has always been that way. California farming enterprises have always been original, her substances unique, her markets remote and their need of borrowed capital for development recognized. California farmers have no doubt a larger per capita provision of automobiles, tuxedos, gold teeth, club-memberships, golf-sticks and tennis-rackets than the farmers of

any other state. Seventy years of such attachments to social standing have given them a tight hold thereon, and finally they came to projecting, constructing and owning things, costing many millions, which are usually counted as belonging to commerce or manufacturing industries, but which they have incorporated in their expanded processes of production. In the course of these seventy years of progress in unique and expansive development, they have learned how to borrow money and have established both social and financial credit—which all banking institutions recognize and provide for. Now it is up to California farmers to show the rest of the country how this can be done, and they can do it!

QUERIES AND REPLIES

By the Editor.

Inquirers Must Give Full Name and Address
Answered Questions also on other pages.

A Home-Made Smoke.

To the Edtior: Being an old subscriber and friend of your paper, I ask if you will tell me how to cure smoking tobacco. I have been very successful in raising some Turkish tobacco with leaves about 8 inches long and 3½ inches wide and I have picked and dried some leaves, but don't know what to do next.—J. M. S., Roseville.

As you have already dried the leaves there is nothing to do when you get as far along as that but to fill your pipe, sit down by the kitchen stove, light up and note how long it takes your wife to find the broom or the rolling-pin. If she is slow about it and does not exhibit other sign of excitement, you may conclude you have struck a pretty good, home-brewed smoke and may proceed to enjoy it. If she is rather quick about it—well, you know better than we do whether you can stop in the wood-shed, or whether you had better keep running until you strike the "back lot."

Of course, to cure tobacco properly you must begin long before drying; gather the leaves at the right condition, tie the leaf stems in small bunches called "hands"; hang them over rods in a proper "house," where they will not dry but cure slowly, so that the right fermentation in the tissue may produce a silkiness of texture and develop a flavor and color which are acceptable to cigar and tobacco manufacturers. It is also essential to maintain such a temperature and moisture in the air during curing that the leaves shall neither dry too fast nor too slowly—for the former makes the tobacco worthless as forest leaves (except for bug-killing), and the latter induces mold, which also makes the tobacco worthless. All these things have to be done right according to local conditions. It is a matter of experience and judgment and not of recipe.

Pruning the Apple.

To the Editor: I have fine-looking apple trees 14 years old. They have never been neglected and up to two years ago were heavily pruned and well shaped, but then I had other business to attend to and would not allow any one else to butcher them. I thought it would do no harm to let them rest. They are now full of brush. How shall I prune now so as not to interfere with next year's crop? The trees are full of fruit spurs, but from them have grown brush. Should all this brush be removed, leaving the old fruit spurs, but what about apples bearing fruit on the two-year-old wood?—C. J. J., Sebastopol.

As your previous pruning has doubtless given you well branched trees, your chief pruning now will be to preserve that form by removing entirely the suckers which are running wild through the tree (unless one of them now and then may have gone out where a new branch may be desirable to fill space or replace a weak one). Crossing or crowding laterals should also be reduced. As to the brushiness resulting from too many shoots, it should be relieved by thinning them out—usually removing them at the starting point and not by cutting back. The new growths from the spurs are natural spur-extensions and need not be touched unless you foresee too thick a spur-cluster, and then you can eliminate some of them by shortening the spur—saving the shorter and lower extensions if of good stoutness. The apple fruit buds are formed during the second year's leafage of the shoot to which they are attached, but this does not mean that the shoot has lengthened noticeably. Without seeing the trees, our conviction is that they need clearing out and not cutting back.

White Melilot and Alkali.

To the Editor: In your issue of November 20 you tell an enquirer that white sweet clover will only stand one-tenth as much alkali as the sugar beet. How do you account for the fact that white melilot is especially grown for its alkali resistance on a large acreage near Hynes, the home of the inquirer, by both the Montana Land Co. and the American Beet Sugar Co.? They have successfully grown this crop on land so alkaline that sugar beets were unsuccessful.—R. E. C., Los Angeles.

We hope you are correct in your account of experience with white sweet clover on alkali soil at Hynes, because it will be interesting to many to know that they can grow so useful a plant on alkali. Our comments on the attitude of the plant toward alkali, as compared with the beet, were based upon experiments and analyses made by the University Experiment Station. The amounts, in pounds, of alkali salts per acre, to kill each of the plants are compared as follows:

	White Alkali	Black Alkali	Common Salt
White Melilot.	4,920	480	440
Sugar beet....	52,640	4,000	10.240

It was from these analyses that we took our conclusion that the beet would survive ten times as much alkali as white sweet clover. If you are right in your statements it means that the plant knows what it can stand better than the chemist does, and we have no objection to the plant having its own way about it.

Killing Bermuda Grass.

To the Editor: I have a patch of Bermuda grass on a piece of wet ground and would like to know how to get rid of it. I was wondering if I could smother it out by putting two or three feet of old hay on top of it.—A. A., Escalon.

Smothering Bermuda grass has not worked in experiments of that kind which have been made during the last forty-five years, to our knowledge. We are not sure but covering deeply enough and long enough would kill it, but one will not make much money ranching that way. The only rational ways known to us are to kill the plants with carbon-bisulphide injections, which will not kill the soil and killing the plant by mechanical means. The latter consists in plowing out the plant in the winter—dragging out all possible roots with a harrow and gathering with a hay-rake—and then following during the summer with weed-cutting under ground once a week, so that no shoot is allowed to get to the light. If this is done faithfully, you may kill the grass in one year. It is of no use whatever if you allow a shoot to come to the surface and show a green color.

Blasting and Sub-Soilng.

To the Editor: I have five acres of holes blasted for trees. The hardpan runs in streaks from near the surface to 2½ feet in spots, but I wish to plant vines instead of trees next spring. Would 30-inch subsoiling two ways on the vine rows break this pan up sufficiently to plant vines, providing it is possible to dig out the pan with a shovel where the vine is to be planted, scattered on top, and the holes filled up with fresh ground. Will it do to plant this way with subsoiling between the rows again in one or two years, or is blasting the only course advisable?—A. C. F., Orosi.

With the soil already blasted every 25 or 30 feet, and the sub-soiling you propose to do, and your method of planting, it is our judgment that vines could ask for nothing more below ground. Deep plowing of the surface may be necessary to fit the land for good summer cultivation. If the vines do not make good growth with such preparation, it will be the land's fault and not yours—providing there comes water enough to settle down sufficiently all the land you have upset.

No Pears on Apples.

To the Editor: I have heard that pears cannot be successfully grafted on apple trees, but now I am told that the apple trees can be successfully budded to pears by cutting back the limbs and allowing new shoots to grow. It is quite important to know. The apple trees, while large and thrifty, have proved a failure, and pears do exceptionally well here. Do you know that trees so budded would not succeed?—F. D., Beaumont.

We cannot encourage you to go ahead putting pears on apples, even by the budding process, which has been commended to you. Pear wood will grow on apple wood for a time, but even where several feet of growth have been secured and even fruit has been reported, subsequently growth has stopped and the pear wood has died. This is a very old question in fruit growing and ample experiments have been made, the result of all which have come to our knowledge being that the pear has no durable affinity for the apple, although some pears take durably to the quince and are dwarfed thereby.

CALIFORNIA WEATHER RECORD

The following rainfall and temperature record is furnished the Pacific Rural Press by the United States Department of Agriculture Weather Bureau at San Francisco for the week ending November 29, 1920.

Station—	Rainfall Past Week	Rainfall Seasonal To Date	Rainfall Normal To Date	Temperature Highest	Temperature Lowest
Eureka	.52	12.29	9.36	60	40
Red Bluff	1.58	8.74	5.44	64	38
Sacramento	.11	4.70	3.48	60	38
San Francisco	.18	4.43	3.95	60	49
San Jose	.26	3.69	3.08	64	36
Fresno	.00	1.95	1.98	68	42
San Luis Obispo	.00	2.85	3.46	80	40
Los Angeles	.00	1.72	2.24	78	50
San Diego	.00	.45	1.32	74	47
Winnemucca	.26	2.88	1.91	58	24
Reno	.04	.65	2.08	50	22
Tonopah	.00	.63	2.91	52	26

Snow on ground at Summit, 17.0 inches.

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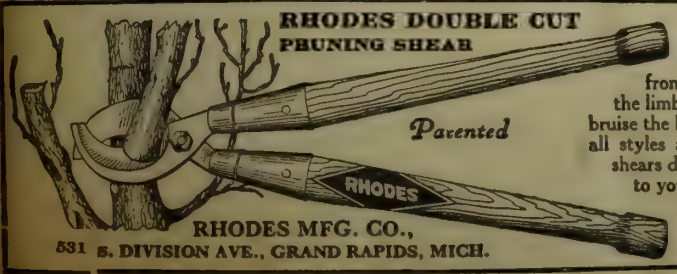

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The Farm Bureau Project to Market Bulk Grains

Written for Pacific Rural Press by R. E. Hodges.

As far back as 1883, ships were loaded with bulk grain in San Francisco and sailed around the stormy Cape Horn. Lacking suitable bulkheads and not having the holds completely filled, when waves tipped the boats their grain cargo shifted to one side with more or less violence. Some cases were known where the boats turned over; and this put a damper on bulk handling for export. It has ever since been a big talking point for opponents of the bulk-handling system for grain. It is a foolish objection, of course, for the grain shipped down the stormy great lakes has always been shipped in bulk in smaller, rockier boats than those on the Pacific. And our trans-Atlantic grain trade originating on the Atlantic seaboard goes in bulk. To prevent the shifting of cargo, it is only necessary to put in enough partitions and fill the bins entirely full. Still, for this and other reasons, chiefly lack of business foresight and execution, California has remained one of the last grain-producing sections in the world to handle grain in sacks.

California Bulk Grain Experience.

Plenty of experience in bulk handling has been gained within the State in the past seven or eight years.

The first attempt was made by the Globe Grain & Mill Co. in the form of hoppers and conveyors to unload wheat from boats which brought it down from Seattle in bulk in 1913. The Government later asked for the boat for war purposes and sacks have been used by the Globe people since then; though they are fixing now to handle in bulk from boats again. All of this wheat they import for blending purposes from the Middle West comes by rail in bulk cars and is, of course, much cheaper to handle.

In 1914 the Sperry Flour Company put in a marine leg at Vallejo to take bulk grain from boats; and this has developed into their immense terminal elevators at Vallejo. Meanwhile, this company put up elevators of great capacity at their Stockton mills and have arranged a marine leg to take bulk grain out of barges. Their Fresno mills also store grain in bulk. The Phoenix Milling Company has put up a bulk elevator at Sacramento. Finishing touches have just been put on the Western Milling Co.'s elevator of 1,200,000 bushel capacity on tidewater at Oakland as noted elsewhere on this page. So much for terminal facilities. We will have plenty more when we need them; and all of our mills will put up elevators as soon as they are assured that grain will come in bulk.

Many Local Elevators Already.

Local interior elevators have also proved their economy by experience. The first one in California of which we have knowledge began bulk operations in 1915 at Tehachapi and is still at it. Since then we recall the establishment of local country elevators at Athlone, Chowchilla, Le Grand, Merced, San Miguel, Sacramento, Pleasanton, and the biggest of all is one completed about 2½ years ago near Hamilton City. Many others have been planned and some may have been built ere this. It is simply a matter of a little capital, a slight addition and change on combined harvesters, grain-tight wagon beds, and probably farm granaries, either in the fields or at headquarters. The big and little elevators and granaries may be either concrete, wood, or metal, the latter probably being preferable, especially for the smaller ones, as they can be constructed with home labor and very little building equipment.

Bulk-grain Terminal Elevator of 1,200,000 Bushels Capacity at Oakland, under contract to lease for use of the California Farm Bureau Exchange.

The foregoing sketch of our lamentable lack of progress toward the bulk system which is so much more economical of labor and sacks, and so much less wasteful of grain, would indicate that our grain marketers lack the characteristic of progress which is so prominent in almost everything else Californian. Australia and Western United States are practically the only grain-sack using sections in the world. But the Northwest is leading California in the change to bulk handling, and the Australian Government is now aiding a $2,500,000 corporation to put up terminal and interior elevators to get rid of the sack evils.

Farm Bureau Revives Bulk Grain Interest.

Australia will have to move swiftly, however, if she beats California to the general bulk-handling system. Though the idea has been dragging here for several years, partly due to the war, the California Farm Bureau Federation is undertaking an enterprise which, if it is adequately supported by the county farm bureau members, will be the biggest thing that ever happened in California grain growing. There is peculiar irony of fate in this, for big grain growers have ever been the greatest objectors to the Farm Bureau movement.

Though the exports of grain from California by sea in 1919 were negligible except for barley, of which 6,134,595 bushels, or 22 per cent as much as the harvest of 1919, the incompleteness of tidewater terminal facilities has been one of the big talking points against bulk handling.

Leasing Contract Signed.

So the proposed corporation is seizing the bull by his horns in first obtaining a contract to lease the terminal elevator at Oakland. The contract was signed November 6 for a five-year term by a committee appointed by the executive committee of the California Farm Bureau Federation pending incorporation of the California Farm Bureau Eelevator Corporation which is to be the holding company. The signers are George H. Sawyer of Stanislaus county, J. A. Teagarden of Placer county, J. W. Schmitz of Madera county, A. E. Lindstrom of Glenn county, and W. H. Heileman of Berkeley, the secretary of the California Farm Bureau Federation. For the Western Milling Co. the lease is signed by Jas. Macdonald, president of the Macdonald Engineering Co. of Illinois, who built the elevator and mill. Mr. Macdonald's company has been building elevators all over the country more than forty years. The Sperry elevator at Vallejo is one of their contracts.

Elevator to Handle Grain Rapidly.

The elevator at Oakland now under control of the Farm Bureau is up-to-date in all equipment, has 111 separate bins whose capacity ranges from 3,000 to 20,000 bushels each and total 1,200,000 bushels or approximately 600,000 sacks. Ten elevator legs can unload bulk grain from boat or car at the rate of 4,000 to 10,000 bushels per hour each. Twenty thousand bushels per hour can be transferred from elevator to ships. Fifty cars of bulk grain per day can be unloaded into the elevator. The cost of the whole plant, including the mill, is about $1,500,000. It is to be used for bulk rice also, and another million bushels capacity may soon be added to acocmmodate the rice mill of 10,000 sacks per day capacity soon to be built.

Fits into National Plans.

The California project is designed to fit in with the national grain marketing project now being worked out by "The Committee of Seventeen," appointed September 9, 1920, by President J. R. Howard of the American Farm Bureau Federation, as authorized at the joint marketing conference of farm organization and co-operative marketing associations in Chicago July 23 and 24.

Three delegates from the California Farm Bureau Federation are enroute to the annual meeting of the American Farm Bureau Federation, which will be held December 6 to 8 at Indianapolis. The chief business of the convention will be to instruct officers of the Federation how to act during the coming year on national agricultural policies including Tariff, Transportation, Taxation, Labor, Financing, Marketing, Collective Bargaining, Tenancy, Merchant Marine, Foreign Markets and National Legislative measures. Groundwork for such determination of policies has been taken in California.

A committee of the California Farm Bureau, in behalf of the proposed California Farm Bureau Elevator Corporation, signed a contract November 6 to lease the Western Milling Company's 1,200,000 bushel elevator on tidewater at Oakland to furnish an exporting outlet for bulk grain, which the Corporation intends to collect in bulk at local interior elevators to be built out of its million-dollar capitalization. The Corporation will operate for benefit of the California Farm Bureau Exchange, a non-stock non-profit corporation to be organized to market the products of its members. The Exchange is to be a federation of county exchanges and has been operating in the San Joaquin Valley several months under the name of the Tri-county Farm Bureau Exchange. Some fifteen county farm bureaus are considering organization of unit exchanges, and it is hoped that all of the 38 county farm bureaus will organize and federate.

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Begin Now to Insure the 1921 Fruit Crop

Written for Pacific Rural Press by W. S. Killingsworth.

The successful production of the 1921 fruit crop depends largely upon the care and attention given to tree and vine during the next two months, regardless of the apparent splendid condition the orchard or vineyard now presents. The assumption is that the practical orchardist is aware of the fact that each year in the course of his operations he will be confronted with a great variety of problems. Many of these problems have been a "nightmare" to the fruit growers of California for years. While not waving a pessimistic flag, we are prone to the belief that we will continue to have them in some form for all time. In making preparations for a coming fruit crop the many problems to be encountered must necessarily be dealt with one at a time, and in dealing with them it is necessary to formulate a plan by which the difficulties each problem presents may be overcome at the proper time. It is the writer's intention to discuss but two of the leading problems at the present time, both of which form largely the fundamental basis upon which the fruit crop of any season proves successful —pruning and spraying. The problems surrounding these two important ranch performances will be told in the order in which they receive attention from the practical and successful orchardist during the course of the season, and the ideas presented will be to a large extent the personal experience of the writer. In this presentation there may be food for thought for the amateur orchardist, while the experienced horticulturist may say that it is "ancient history." Admittedly so, however, a reminder at times stimulates activity.

Problems of the Amateur Orchardist.

The amateur orchardist will be confronted, at the very outset, with the question of when and how to prune his trees. At this point we will add encouragement to the amateur by saying, secure the best advice obtainable and proceed with caution, and all will be well, for observation has taught us that under certain conditions experienced growers are at times at a loss to know how to proceed. Our experience has been that there was nothing gained in pruning trees of any variety until the foliage had dropped, for two reasons: first, under natural conditions when the foliage drops the tree is in a more or less dormant state, and we are averse to pruning until a tree assumes at least a partially dormant form, for where trees are pruned heavily a large percentage of the vigor of the tree is removed, when if in a dormant state, or partially so, that vigor would be retained; second, our objection to pruning before the foliage drops is, that proficiency cannot be attained, the limbs, to some extent, are obscured by heavy foliage and the limbs or twigs which should remain are often cut away and vice versa. Especially is this trifling method noticeable where pruning is done by contract. By pruning as early as it may be deemed permissible, the orchardist has the advantage of cleaning away the brush before the rains begin, for when brush is allowed to remain scattered over the orchard throughout the winter months, it makes it disagreeable and expensive to clean it up after the orchard has become overrun with undergrowth or covercrop, and many times it obstructs spraying performances.

However, where it is inconvenient or impossible to prune in the early fall, there is no objection to pruning in the early spring. As a matter of fact, some orchardists delay pruning their pear trees until after they have blossomed. When first our attention was called to such an unusual procedure we were curious to learn the reason for such, to be told that it was done to see to what extent dry weather and thrips had affected the buds. We carefully watched the outcome and we must admit that we were unable to detect any difference in the looks and subsequent growth of the trees or in the maturity of the fruit.

Chinese Style of Pruning Now Taboo.

In the early days of fruit growing in California, judging from some of the orchards that have come under our observation, there was no established rule of pruning. The orchardists of different sections had different ideas as to pruning the peach tree, for example. In some sections we have noticed that the rule was to prune away all fruit-bearing wood, leaving nothing but the top, and as the top continued to tower into the air the lower fruit wood was taken off. There are peach orchards in California today the fruit of which a picker of average height cannot reach from the lowest limb without mounting a ladder. Such pruning is, of course, entirely wrong. In the first place it is expensive to handle fruit in that way; secondly, the limbs not being protected, as nature so intended, by the foliage, they soon become sunburned, and when these "umbrella" tops take on a crop naturally the weight breaks them down. When the trees were planted we noticed that they were headed back properly, but subsequently carelessly pruned, and upon inquiry we found that it was the Chinese style, as in those days the pruning was done entirely by Chinamen. But we find no such work being carried on now, for practical experience has taught the orchardist to keep his trees down and allow all the fruiting wood to remain, that the tree can carry, from the point of heading back to the top.

Stick to One System of Pruning.

It is conceded by practically all orchardists that the style of pruning adopted for ordinary orchard work does not matter greatly so long as the original plan is adhered to and followed up annually with systematic pruning, as it is by no means a wise plan to change the style of pruning each season. However, good growers produce good fruit with all styles of pruning, but it is a well-known fact that the extent to which pruning is carried does make a great difference in the final outcome, that we have noticed in years past in orchards that were pruned by inexperienced help. There is a tendency on the part of most pruners to prune too little rather than too much, we call to mind cases where it was not the fault of those doing the pruning, but the orchardist himself. The old story, a tree is a machine for the manufacture of fruit and it is going to be made to stand all the traffic will bear. How often have we heard it said, "I don't intend to thin out my trees, I'm going to let them bear all they can and what does not size up sufficient to go East I'll dry." Now, there is a lot of common sense in making a statement of that nature. A tree is like a piece of machinery; it will wear just so long, without attention, but where a tree is properly pruned and the fruit properly thinned, soil and climatic conditions being equal, all of the fruit will size up sufficient to go East; but should the market be in a condition that it would not be advisable to ship the fruit East it may be dried, turning out a fancy grade, or the fruit will be sought by the canners. The tree has not suffered, the fruit has been up to grade and sold at splendid prices and everybody is satisfied all of which is the result of adopting a system and confining ourselves to it.

Admit Light and Air at Top.

Just here we wish to lay special stress on one point in the matter of pruning— whatever style is adopted the tops of the trees should, by all means, be kept sufficiently open to admit light and air which is absolutely essential to the full development of the fruit. For years we followed this rule to find that it worked successfully, especially so in the case of cherries. While advocating this style of pruning we must warn against too much exposure on account of sun-burn. However, where the trees are kept opened up from the beginning the inside limbs will take on foliage just as the outside limbs do, not only foliage but fruit bearing wood, and the fruit produced therefrom will equal in quality the fruit grown on any portion of the tree as its exposure to light and air gives it color and firmness.

The Cherry A Law Unto Itself.

A difference of opinion exists as to the pruning of the cherry tree—that is the number of years it should be pruned after it has been planted. The writer has had much experience in the planting and handling of cherry orchards and it was our practice to prune the trees for five consecutive years, this to include the year of planting when the trees were simply headed back. The second year if the trees took on a good growth putting out three or more branches we selected three of the thrifty, well developed branches as leaders and cut them back to 18 inches, carefully cutting the limb so that the top bud would be on the outside, the third year we left two feet of the new growth and an occasional lateral shoot that would assist in filling in any vacant or one sided spot, the fourth year we left three feet of the new growth, also a number of the lateral shoots, the fifth and last year of pruning we left three feet of the new growth and lateral shoots. Now this finds the tree 10 feet high with stout well developed limbs with laterals all of which are well protected with leaf spurs and an occasional cluster of fruit spurs surmounted on a well developed base competent of carrying a top that will develop no faster than itself. With satisfaction and pride, we have watched the development of such orchards, and whose productions have proven eminently satisfactory. While there is still a great deal that may be said about pruning, we will defer it for the present.

Good Spraying the Orchardists Best Insurance.

As to the matter of spraying we believe that we are safe in saying that it is now universally practiced. This general use of sprays is due to some extent to the rigid enforcement of the standardization laws of this State. Often before the pruning is completed in the fall, spraying for scale and other injurious pests should begin, and systematically continued for the next few months, as there is a lot of things to contend with even after the trees have passed the dormant stage. As a matter of fact there should be but few resting spells for the spray outfit from the first of November until the following June. As in the matter of pruning, there are all kinds of spraying, and unless it is carried on with a system it would be far better had it not been done at all, for poor spraying is the poorest insurance that can be placed upon the fruit trees of any ranch, and the orchardist that thinks that he can get by with such is simply "kidding" himself, and will arrive at a realization of such when it is too late. The first step in the right direction is the ownership of the best spray outfit that the market affords, then use the sprays that are intended for certain scales and insects at the time they are supposed to be in condition as well as position by which they may be easily reached. Follow instructions as closely as possible and the chances are greatly in favor of the orchardist upsetting the plans of the pest and insect armies waiting their time. High pressure is absolutely necessary in combating these evils. it is the driving of the sprays into the buds when fighting the thrips that crushes out this evil. It is the forcing of the sprays beneath the rough bark that calls a halt on the attack of all enemies that use this as a rendezvous. A pressure of not less than 180 pounds should be used at all times. As there is much that can be said on the subject of spraying we will avail ourself of the opportunity in subsequent issues of the Pacific Rural Press.

Peach Leads Short Season Tree Fruits

(Written for Pacific Rural Press.)

There is no denying the fact that the peach is the most popular short-season fruit grown in the United States. This is largely due to its adaptability to uses that it may be put to such as shipment in a fresh state, dried and canned. (In the number of carloads shipped annually, according to figures compiled by the Bureau of Markets of the United States Department of Agriculture.) Considering all fruits, peaches rank fourth in carlots sent to markets in the fresh state, being surpassed only by the long season fruits—apples and oranges. The approximate yearly average number of cars of the three fruits mentioned reaching markets during the past four years are: apples, 67,000; oranges, 35,000; peaches, 25,000. The only close competition of peaches on the markets of the United States are grapes, and from the present extensive plantings that are going on, not only in California, but in every peach-growing section of the United States, the peach will be among the "head-liners." As it is now, the grape showed up this season with 24,065 cars, the greatest by far on record. The watermelon comes to the front with a showing of 29,000 cars and even the canteloupe makes a good showing with 17,000 cars. The pear and strawberry might have honorable mention with their tonnage, the carload shipments amounting to slightly less than half those of peaches. Approximately an average of 7,000 cars of grapefruit and 3,000 cars of plums and prunes combined were shipped annually for the past four years. The combined peach shipments of Georgia and California are as great as those of all other states combined. But for the long haul and the premature picking of the California peach, which naturally greatly interferes with its quality and flavor on arrival at destination, the shipment of peaches would be much greater than at the present time. As soil and climatic conditions in California makes it the most ideal peach producing section on the globe. As a coming product the California peach is without a peer in quality and as for productiveness it has no rival, a fact that was clearly demonstrated in the recent contest in Sutter county, where such fabulous productions have never before been recorded in any peach-producing section of the world, and it is but the beginning of what is yet to take place in California.

ORANGE PICKING PROGRESSING.

In Southern California districts a few of the packing houses are operating, but it will be another week or two before the movement of new crop navels get well under way. Picking for size is essential. The lack of sufficient moisture during the growing season has shown its effects, however, the recent rainfall has had much to do with the sizing up of the fruit. Especially is this the case in Butte county, where the fruit had materially suffered. The crop outlook throughout the state is good. The shipping movement will gain momentum from now on and shipments during December are expected to meet every demand of the trade.

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Here and There in the Fruit Business

Northwestern Apple Crop Heavy.

The U. S. Department of Agriculture reports that early estimates placed the commercial apple crop of the Pacific Northwest at approximately 27,000 cars, but the yield of Jonathans was much lighter than expected. The harvesting season is over and practically all of the Delicious and Jonathans have been shipped. The entire crop, as a whole, is of generally good quality, but the size is somewhat below normal.

Experimenting with Citrus Hybrids.

The citrus experiment station of the University of California located at Riverside have produced about 5,000 citrus seedlings. There has also been a considerable number of citrus hybrids produced. The seedlings are mostly from crosses made by H. B. Frost, research associate. These include the tangerine and the pomelo or grapefruit, the orange and the pomelo, the lemon and the pomelo, and the Valencia orange and the Mediterraenan sweet orange.

Market for American Apples in France.

According to the U. S. Department of Agriculture, Bureau of Markets, there is a good market in France during December, January, February and March for high grade table apples. The requirements of domestic consumption during the autumn months are satisfied by the home-grown stock. The French are particularly anxious to secure cold-storage apples of the finer grades, as their own cold-storage are limited.

British Fix Wholesale Apple Prices.

Other countries are "fixin'" prices. The schedule limiting the wholesale prices of apples in British markets went into effect on Novemzer 15, according to a cablegram from the American agricultural trade commissioner at London. The maximum wholesale price of Canadian and United States barreled apples is $11.48 per barrel, for tight pack, $10.80, and for slack pack, $8.94. The maximum wholesale price of Canadian, United States, and Australian apples in boxes of cases weighing not less than 37 pounds has been fixed at $3.63 per box and $3.42 per box for slack pack. This schedule shows a slight increase over the controled prices of last season.

United Fruit Co. Cuts a Melon.

A melon of large proportion has been cut by the United Fruit Company, who recently declared a stock dividend of $50,000,000, which is a 100 per cent dividend in addition to the regular cash dividends on the capital stock of the concern. There is also a surplus of about $40,000,000, which has been accumulated. The United Fruit Company is the big banana importer and does an immense business between many producing countries and the United States.

Beaumont Increases Fruit Shipments.

For a comparatively new deciduous fruit-producing section, Beaumont, Riverside county, is rapidly coming to the front. Eleven years ago, what is now flourishing orchards were barren hillsides. The Beaumont Fruit Growers' Association and Rivers Bros. have shipped this season the following fruits: cherries, 90 tons; peaches, 197 tons; pears, 623 tons; plums and prunes, 155 tons; and apples, 593 tons. A shortage of water has been a great handicap to the district, however, that will now be overcome, as the district has voted bonds to the amount of $230,000 for the purpose of buying out the water company and develop more water.

Tuolumne Apples Takes Prizes.

At the students' horticultural exhibit held at the University of California recently six plates of apples sent from Tuolumne county took prizes. F. J. Ralph took first prize on King David and Winesap varieties. Mr. Ralph also took second prize on Delicious; Segerstrom and Burden, second with Rome Beauty; A. A. Neale, third with Rome Beauty. Approximately 1,000 plates of apples from many parts of Caliofrnia contested for prizes.

To Retain Experimental Vineyard.

It has been unanimously voted to retain the experimental vineyard at Oakville, Napa county. This station has been conducted for experimental purposes for the past 20 years. The matter of retaining it was taken up by Farm Advisor H. J. Baade, of Napa county, who called a meeting of grape growers to take action in the matter. Bismark Bruck was authorized to appoint committees from Mendocino, Lake, Sonoma and Napa counties and the Sacramento Valley, to assist him in planning ways and means by which money to purchase the land may be raised.

Smyrna Raisin Crop Short.

From the U. S. Market Report, we learn that the 1920 harvest of Sultana Raisins in Smyrna will probably not exceed 23,000 tons, as compared with 30,000 tons last season. About 400 tons of Sultana raisins were forwarded to London and Liverpool during the first week of August, according to the report of the American vice-consul at Smyrna. Prices realized ranged from $24 to $25 per 112 pounds; C. I. F. in boxes of 30 to 36 pounds. The Smyrna fig harvest is expected to yield 16,000 tons, as compared with 12,000 tons last year.

TRACTOR ON LITTLE RANCH.

A tractor replaced the single horse on the five-acre ranch of A. Toomey in Sacramento county last July, because Mr. Toomey needed his three-quarters of an acre of alfalfa for the cow, and he didn't want to buy feed for the horse. Neither did he enjoy harnessing, unharnessing, feeding, watering, currying the horse and taking care of its feet. He has some young almond trees where last year, with their heavy crop, a horse cultivating couldn't get within seven feet of the trees. This season, with the little tractor, he cultivated close up to their trunks. About 1¼ acres are in five-year prune trees, whose roots need irrigation. So he threw up a ridge with the tractor three or four feet on each side of the rows and flooded in July. To save the ridges for another irrigation, the ground between them was cultivated as soon as it was dry enough, using the tractor up one side and down the other, then weaving back and forth between the trees in a way that would have damaged their branches and fruit if a horse had been used. The weaving cultivated between the trees and avoided cross cultivation, which would have knocked down the levees. It took an hour and a quarter to do this cultivating (not working the centers between rows). A horse, doing the same work would have taken the best part of a day, according to Mr. Toomey.

To test the tractor for plowing before he sold the horse, he put it on some dry, hard stubble and plowed it deeper than it had ever been plowed before. When the almonds were ready to hull, about 500 pounds of them were run through the little huller, which was run by belt from the tractor engine. When hay was to be hauled in, the light wagon with a hay rack was hooked behind the tractor by chains. This proved to be a poor control, so a short tongue was put on to hold back the wagon and stop it. Mr. Toomey's son also has five acres, half of which is alfalfa; and this will help keep the little tractor busy.

A carload of alfalfa seed has arrived at Yuba City to be used in planting 1000 acres of alfalfa by the Sutter Basin Company. The seed were selected from samples submitted by growers and dealers all over the state and then sent to the University of California for purity and germination test. The planting will begin the first of next year.

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Timely Work in the Orchard

(Written for Pacific Rural Press by W. S. Killingsworth.)

Busy Times ahead on the Ranches.

The practical up-to-date orchardists are well aware of the fact that for the next few months there will be no "idle bread" eaten on the fruit ranches, as there are many things that must be attended to, and that without delay, in connection with spraying and pruning, both of which have a system and to be successfully carried out, the utmost care and attention must be given all the while this work is going on. It is the amateur orchardist we have in mind; their experience being limited, it will be necessary for them to consult the older ones in the game, and they should feel no hesitancy in doing so. This should be what might be termed a "family affair"—help each other for the good of the cause. When you are in doubt, if your neighbor can't enlighten you, try the Pacific Rural Press. We don't know it all, but we will see to it that you are supplied with the best information obtainable in the matter of spraying and pruning.

Peach Ailments Gaining in the State.

Of the numerous pests and diseases the peach is susceptible to the curl leaf ranks high; however, to some extent it is a "respector of persons," passing up some varieties entirely, while others, the Elberta, for example, the leaves curl so that they almost lift the tree out by the roots. But this trouble can be easily avoided by spraying at the right time with the right material. The spray can be applied either in the fall, soon after the leaves have fallen, or early in the spring, while the buds are still dormant—say, latter part of November or early December—spray with Bordeaux mixture, 5 pounds copper sulphate, 6 pounds stone lime, 50 gallons of water, or lime sulphur 1 gallon, water 9 gallons. This spray will have the same effect on destroying peach blight that it does with curl leaf.

Don't Neglect the Apricot.

Simply because the apricot tree is a vigorous grower, and if at all cared for will do its part in the line of production is no cause for neglecting it in the matter of spray. In many sections of the state where apricots are grown for commercial purposes, the fruit becomes badly affected with shot-hole fungus; in some instances it attacks the fruit to a degree that renders it unfit for any purpose, other than to be dread, and then it is marketed as second grade. Now to avoid this shot-hole trouble, during the latter part of November or early in December spray the trees with Bordeaux mixture, 5 pounds of copper sulphate, 6 pounds of store lime and 50 gallons of water, or lime sulphur, 1 gallon, water 9 gallons.

Open Up the Sources of Drainage.

Many side-hill ranches are eventually seriously damaged by heavy rainfall when no care is exercised in the matter of proper drainage. We have seen yawning gullys wending their way through some of the best hill ranches in the state that might have been prevented with a little care in the beginning. Drainage ditches of small proportion might have been made to conform to the contour of the ground that would have taken care of the excess in rainfall. These ditches, however, would be of no service—as a matter of fact a detrament—should they be allowed to fill up with growing weeds, and the dumping ground for tree and vine prunings. Keep these ditches open and save the soil that will soon be in the creek below.

Keep on the Lookout for This Pest.

The Georgia peach growers suffered a loss of approximately $2,000,000 this season from the development and ravages of the deadly pest known as curculio. Spring and early summer spraying is necessary in checking this pest. While not wholly successful in destroying it entirely the loss has been greatly diminished and crops are assured a fair degree of protection. As yet the curculio pest has not invaded the orchards of California, but that is no sign that they will not, so it stands the orchardist well in hand to be on the constant lookout.

Get Busy on the Ranch.

December is, as a rule, the busiest month on the ranch during the dormant season; therefore, it is a good idea to have all tools, implements, wagons, trucks, motive power—livestock and tractors—in the very best of condition so that there will be no laying off for lack of this or lack of that while the weather is fine and a full day's work may be done with the greatest ease and benefit.

GOVERNMENT TO FILE NEW BILL IN RAISIN CASE.

In commenting on a letter from United States Judge, Bledsoe, president Wylie Giffen issued a statement in which he gave expression to the view that the development was pleasing to the Associated Raisin Company officers and growers cause. We took the position that with but one or two major issues at stake and these a matter of facts, the defense had been materially strengthened. Giffin said, "We are very much pleased with Judge Bledsoe's decision, though a discussion of it is rather for the attorneys than for the laymen, because it is entirely at this time, a legal question, and not a question of the merits of the case. It does, however, in a very marked degree clarify the whole situation as it casts aside nearly all the contentions made by the Government on the ground that in the formation of the organization and the manufacturing of raisins we do not come within the jurisdiction of the National Government, but are within the jurisdiction of the State, so that the only question left according to Judge Bledsoe and our attorneys are the ones that are directly connected with the sale of raisins, which is the only interstate business we do.

DIRECTOR HECKE NAMES COMMITTEE.

Director of Agriculture G. H. Hecke has announced the personnel of the committee of California fruit men who will go to Chicago next January for a conference with railroad operating executives to effect an improvement in the refrigerator car service for 1921. Among the changes this committee will seek will be a rule requiring that refrigerator and other cars containing perishable goods be unloaded within 72 hours after their arrival. Penalty to the railroad and consignee for failure to unload will be fixed. The immediate return of cars to their original shipping-point also will be urged. Charles E. Virden of Sacramento will be chairman. The balance are the committee: G. Harold Powell of Los Angeles; J. L. Nagle, Sacramento; Thomas O'Neil, Los Angeles; C. H. Bentley, San Francisco; E. Y. Foley, Fresno, and A. B. Humphrey, Mayhews.

ALMARIA GRAPE RECEIPTS.

During the recent campaign we heard a great deal said about the passage of a prohibation tariff on lemons, and little if anything was said about a tariff on Almaria grapes that cut quite a swath during the California grape shipping season. During the season that has just closed there were 342,275 barrels of Almaria grapes received in New York City alone, the fancy stock selling from $10 to $14.75 per barrel, extra choice $7.25 to $9.25. Choice $5.50 to $6.75. Now it must be understood that these high prices were paid for this fruit not only on account of the splendid condition and quality on arrival, but of the certainty of the keeping qualities for time to come while in storage. This is brought

about by the careful manner in which this fruit is handled while being packed, and until the California grape growers adopt the same careful way they will have these well preserved high priced grapes to compete with.

SULPHUR

It has been proven and so recommended by the University of California that if you sulphur your grape vines and orchards 6 times they will not be affected by MILDEW or RED SPIDERS.

ANCHOR Brand Velvet Flowers of Sulphur, also EAGLE Brand, and Fleur de Soufre, packed in double sacks, are the fluffiest and PUREST sulphurs that money can buy; the best for vineyards; the best for bleaching purposes, LEAVING NO ASH.

VENTILATED Sublimed Sulphur — Impalpable Powder, 100% pure, in double sacks, for Dry Dusting and making Paste Sulphurs.

For LIME-SULPHUR SOLUTION, use our DIAMOND "S" BRAND REFINED FLOUR SULPHUR. We can furnish you this sulphur at such a low price that it would pay you to mix your own solution and net you a profit equal to the amount paid out for labor in spraying your orchard, even if you pay your men $5 per day for making the solution and applying same.

To create additional available plant food, and prevent smut in grain, drill into the soil 110 pounds per acre of TORO BRAND SPECIALLY PREPARED AGRICULTURAL SULPHUR or our DIAMOND "S" BRAND REFINED POWDERED SULPHUR. This soil treatment has increased various crops up to 500 per cent. Send for Circulars Nos. 6, 7 and 8

Also PREPARED DRY DUSTING MATERIALS, Tobacco Dust, Dusting Sulphur Mixtures, etc.

Carried in stock and mixed to order.

SAN FRANCISCO SULPHUR CO.,
624 California St., San Francisco, Cal.

We are equipped to make immediate shipments. Send for Price-list and Samples.

BARTLETT PEAR ON JAPAN ROOT:

We have a fine lot of yearling Bartlett, as well as Bosc, Anjou, Comice, Flemish Beauty, and Winter Nelis.

These trees are grown on new soil, never before in nursery stock, are well rooted, clean, healthy and hardy. Hundreds of thousands of our trees in all parts of the west are now bearing profitable crops for their discerning owners.

We also carry a complete line of general nursery stock, all of which is guaranteed to please you.

Remember our prices cover freight and packing charges.

WASHINGTON NURSERY CO.
Toppenish, Washington.

Going to Plant?

Can still supply a limited quantity of our bud selected French and Imperial prune on Peach. Bartlett pear on Jap. Broken line other trees.

Better Trees Are Not Grown

Prices most reasonable.

We ship any quantity, anywhere on approval. Return at our expense if not better trees than you usually get.

Write today for prices.

J. F. MILLER & SONS
Healdsburg, California

H. A. HYDE COMPANY
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FRUIT TREES
BERRY PLANTS
SEED POTATOES
Order Early

ACCIDENT PROTECTION FOR FARM LABORERS.

(Written for Pacific Rural Press.)

A farm laborer was gored to death by a bull. Another fell off the tractor seat and was cut up by a double disk. Another got his arm cut off in the hay chopper. One was electrocuted while working around the pump house. An average of nearly 57 agricultural workers have been killed per year in California in the six years—1914-19—as reported by the Industrial Accident Commission. About 113 per year have been injured permanently, about 4,114 per year have received temporary injuries besides many whose cases are never reported to the Commission. Since the advent of power machinery, the number of accidents has greatly increased.

Practically all of these people were depending on their wages for their living, and had not been able to lay up much of savings. A great many had families or other dependents who suffered greatly while their breadwinners were laid up; or perchance, laid way. Any who had denied themselves to save a nest egg had the heart-rending experience of watching their savings diminish steadily toward the end.

One out of every ten employees of all kinds in the State has official business with the Industrial Accident Commission every year, i. e., has been injured. If the farm employees who have been injured were given the benefits of the Workmen's Compensation laws, under which the Industrial Accident Commission operates, probably one out of every four men employed on farms would have business with the Commission each year. Here is certainly a large body of distress unprovided for in this State every year. In most of these cases, if the injured men were able to get the services of attorneys, the farmers who had been employing them when they were hurt would be subject to damage suits. Whether the suits were won or lost, they would have cost the farmers considerable money and time. Farm work has proved much more hazardous than factory or other industrial work, largely because of safeguards required by the Commission in the protected industries.

In practically every industry other than farming, the workmen are by law provided for in case of injury and by the same law their employers are protected against lawsuits. This leads laborers to prefer the other industries, and therefore they leave the farms if they are able, and the farm labor shortage is not only made more acute, but the best workers go into industries where they and their dependents are protected, leaving less desirable workers for the farms.

Farmers Under Compensation Law.

The Workmen's Compensation Law prevents farm laborers from sharing benefits unless their employers voluntarily elect to accept its provisions. One would think that farmers would universally do this for their own protection from lawsuits and to enable them to hold better laborers. It is a fact that 15,601 people or corporations engaged in agricultural pursuits have elected to accept the provisions of the law, as stated by A. J. Pillsbury, chairman of the Commission, from its organization nine years ago until recently. Probably several thousand additional have automatically come under the act by taking out ordinary insurance against injury to their employees. All farmers are already required to come under the Act with regard to all employees other than those engaged in agricultural pursuits.

Nine years of operation has quieted the bitter opposition, in the face of which the law was enacted and enforced during the early years. It is seen to be highly desirable, and better acquaintance with it makes it more popular. There is a strong movement on foot to eliminate from the act at the next Legislature the few words which now exclude agricultural workers from its benefits. Insurance under its provisions will cost farmers something; but the advantages will be worth much more.

Fall and Winter spraying
—(for tired trees)

The Scale Insects, the eggs of
Aphis and Red Spider (Bryobia)
These are controlled with **ZENO.**
The softening of the bark,
The cleansing from Moss and Lichen,
The general conditioning of the
Trees—are affected with **ZENO.**

ZENO

Is an internationally used
Miscible oil spray, and these are reasons why
It has proved the best by years of test.

MANUFACTURED ONLY BY
Eastbay Chemical Company
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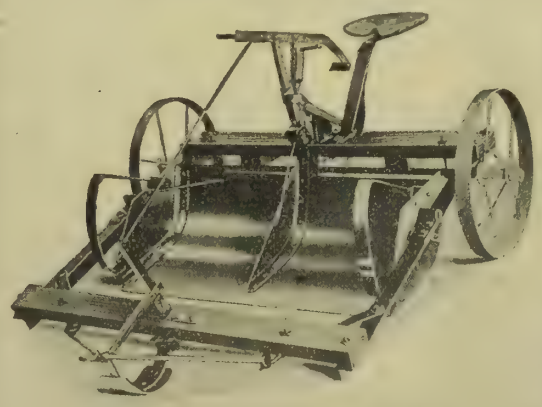
(ZENO MAY BE HAD OF YOUR LOCAL DISTRIBUTOR, FRUIT COMPANY EXCHANGE, OR BY WRITING TO US DIRECT)

The Miskin Scraper
IS THE BEST SCRAPER ON EARTH
And we can prove it. Write for circulars



The above is a cut of the Famous Miskin Scraper, which in operation, easy draft, greater capacity, and better work has many advantages over the common Fresno and wheel scrapers now on the market and is guaranteed to take twice the dirt per trip with the same horsepower.

Made in 2-horse, 3-horse and 4-horse sizes. Can be operated by small tractors from the tractor seat by the tractor driver.

Send for descriptive circulars, with prices, or ask your dealer to send for one on approval. We pay the freight.

MISKIN SCRAPER WORKS, UCON, IDAHO

PURE ANIMAL MATTER AMMONIATES

FOR CALIFORNIA SOILS

for a bigger yield

Gold Bear Fertilizers are scientifically prepared to meet California soil conditions and crop necessities. Made from animal products containing the necessary elements to feed your crops.

Send for our Fertilizer Booklet

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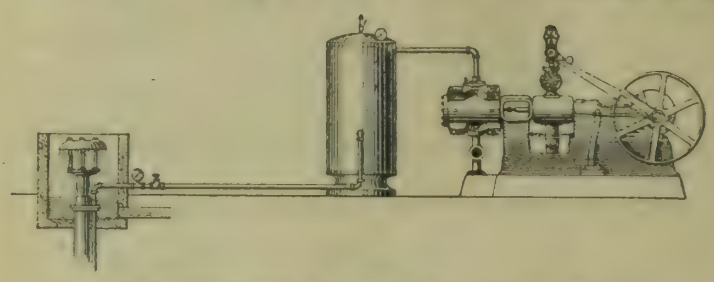
RELIABLE
MARIOUT

BARLEY SEED
HAS
Greatest Yield Record. Our Seed Is
COMPETENTLY TESTED FOR HIGH PURITY.
H. G. STEVENSON, JR.
Winters, California

The Water Question Solved

—BY—

Air Lift System of Pumping



A method of pumping water from wells with Compressed Air. No pits necessary. Nothing but pipe in the wells. Mud, sand or gravel in no way interfere with the action of air lift. Keeps your wells clean. Eliminates hand pumping.

The simple well piping consists of a water discharge pipe and air line. Pipe can be lowered as water level goes down. Also, any number of wells can be pumped by one Air Compressor.

The Air Compressor is simple, automatically oiled, fool-proof and always ready for work, and does not have to be installed near the wells.

Hundreds of Installations In California

Ingersoll-Rand Company of California

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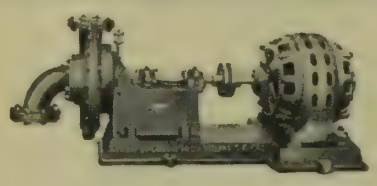

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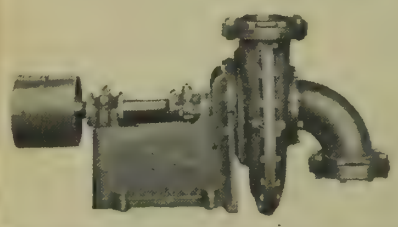
Centrifugal and Deep Well Turbine Pumps

Byron Jackson Iron Works, Inc.

SAN FRANCISCO, CAL.



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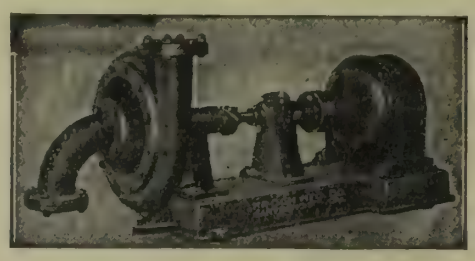

Single Stage Motor Driven Pump

KROGH PUMPS absolutely hydraulically and automatically water balanced. No end thrust whatsoever.
Also DEEP WELL TURBINE PUMPS for bored wells 10-inch diameter and up.

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KROGH PUMP & MACHINERY CO. 149 Beale St., San Francisco, Cal.

FOUR THOUSAND AND MARIOUT SEED BARLEY

Limited surplus of high-class seed of these two heavy producing varieties, grown directly from University Farm Stock.
Car Lots (400 sacks or more) $4.00 per cwt. F. O. B.
Smaller Amounts ..... $4.50 per cwt. F. O. B.
Samples on request.

F. P. Wray, Davis, Calif.

Significant Agricultural Pointers

More Sugar than Last Year.

Beet growers whose contracts are based on the price of raw sugar are disappointedly watching the downward progress of prices. How much of this is due to manipulation is not known, but there is some excuse for it in the world crop situation as sketched in the Weekly Statistical Trade Journal a few days ago. The estimates are given two or three months ahead of the end of the season, but are considered fairly accurate. The world crop of sugar is estimated at 17,085,500 long tons, as compared with 15,310,824 last year, and 15,937,979 the year before. The world's greatest sugar crop was 18,667,399 tons produced in 1913-14. The U. S. Bureau of Crop Estimates figure this year's beet crop in the United States as about 33 per cent greater than last year. The statistical journal credits Cuba with a quarter million tons more of sugar during the grinding season about to commence than last year. The total Asiatic crop is increased by about 200,000 tons, the German crop is about half a million tons greater, the French crop is about 100,000 tons greater; the total European crop being estimated at about a million tons more than last year.

Selling Alfalfa as It Is Used.

Market alfalfa growers are turning loose their crop in just the quantities demanded by consumers; and this is keeping the price stabilized at a figure reasonable for growers and users alike, according to the Sales Department of the Alfalfa Growers of California, Inc. This is rather remarkable in the face of the declines in farm prices of so many grains and feedstuffs. But is it not the ideal way? Instead of paying speculators to buy early, store the hay, and sell it to consumers at a profit to themselves, the producers are doing their own handling and carrying, and are manfully taking what the consuming markets justify at the time their crops are to be consumed. If they need borrowed money to do this, why should not banks lend such money to the producers rather than to speculators, who would perform the same service but would make a wider range between the producers' and consumers' prices than the industry can justify.

Southern Potato Growers Organizing.

A solid organization of potato growers in Southern California is growing out of the rather loosely organized unfederated pooling associations that have been operating in various parts of Southern California with gratifying success in getting highest market prices. Secretary F. N. Bigelow of the State Market Commission was recently asked for a suggested plan of organization and is sending papers to the growers for this purpose. The growers affected produce five to six hundred carloads per crop. Northern potato growers also have asked aid from the State Market Commission recently.

California Cabbage to Chicago.

Americans have used an average of 539,000,000 pounds of cabbage per year in the past four years besides what was consumed at or near points of production and therefore not shipped in carlots. New York received more than 10 per cent of the total carlot shipments of the country. About 41 per cent of the total shipments in 1919 were unloaded at the principal ten eastern markets. Of these ten markets, Chicago received over twice as much from California as all of the other nine markets combined.

Uniform Beet Growers' Contracts.

A uniform standard form of contract for sugar-beet growers all over the State has been urged by the California Farm Bureau Federation during the past year; and the development of a sugarbeet growers' department is part of its program for 1921. Such a department would discuss beet culture, harvesting, seed improvement, contracts, and prices. The competition of Central European beet growers with our own is a proposed subject for investigation by the State and National Farm Bureau Federations.

Big Bean Sale to Navy.

The biggest bean deal since the California Beans Growers' Association, loaded a 7000-ton cargo in San Francisco for Europe last February, has recently been consummated—all but the delivery. The U. S. Navy accepted bids about November 15 for 1,060,000 pounds of 1920 crop of lima beans at $6.75 f. o. b. California, for delivery by the California Lima Bean Growers' Association to the East and 240,000 pounds for delivery in Puget Sound; 1,550,000 pounds of 1920 California small whites at $4.74, to be delivered within 120 days at Mare Island and Puget Sound; 3,730,000 pounds of Michigan small whites, 1920 crop, for Eastern delivery; and 3,000,000 pounds of red kidneys. Several bids to supply 1919 small white beans at a price lower than $4.74 were rejected. As the total bean production in the United States for 1920 is estimated around 382,000,000 pounds, this deal should have some effect on prices by removing several million pounds from the market.

Hay Prices Won't Slump.

While grain and feed prices, established high above pre-war figures, are being subjected to sudden and extreme changes and slumps on account of the scrambling of speculators and dealers to cash in their speculations, and while inflation and profiteering by retailers is being squeezed out, conditions governing the hay market are different, suggests the A. W. Scott Co. of San Francisco, in commenting on the steadiness of hay prices all over the United States. First, the prices of hay have been nearer pre-war figures and nearer the cost of production; second, the great bulk of hay has remained in the hands of farmers, and therefore no scrambling is necessary to get out from under speculative contracts; and third, the farmers' owning of hay has prevented inflation of prices by the retailer which might be squeezed out. Surely this is good evidence that farmers should be financed in retaining ownership of their crops of all kinds!

Agricultural Short Course in South.

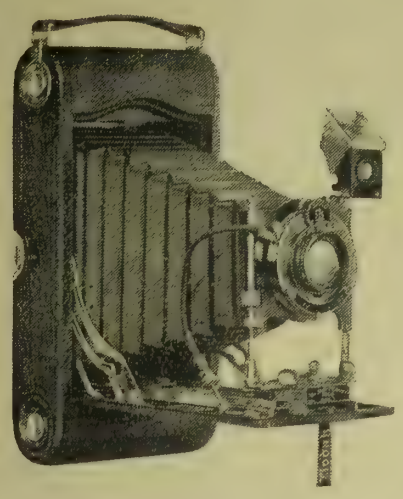
A four-sided agricultural short-course is bringing out real practical information at the Chaffey Junior College of Agriculture near Ontario November 29 to December 10. One section is working on gas engines, tool making, soldering, plows and plowing, etc. Another is getting the latest citrus information. Another is getting general discussions such as soil fertility, fundamental principles of pruning, bud selection, spray materials, etc. Another is getting some specialized discussion of certain current problems with deciduous fruits. Southern California will not always be content without a real college of agriculture.

Rice Loss about 20 Per Cent.

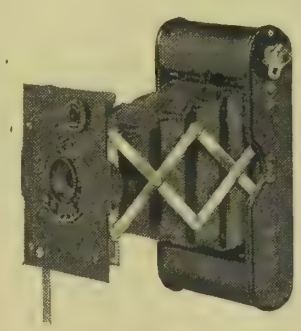
While hysterical reporters were prophesying the loss of as much as 70 per cent of the rice crop by the recent rains, the Pacific Rice Growers' Association has been investigating and now comes out with a statement that the loss will be around 20 per cent. About 1,800,000 bags are already warehoused and most of the unthreshed rice outside of the lowest lands will dry out satisfactorily. Recent north winds have helped.

It is currently reported that a syndicate of 30 Modesto business men, to be known as the Modesto Land and Development Company, have purchased 1,000 acres of land near Livingston, formerly known as the Bloss and Horace Crane ranch. Much of the land in this tract is swamp land, and it is the intention of the syndicate to experiment with the cultivation of rice and other crops.

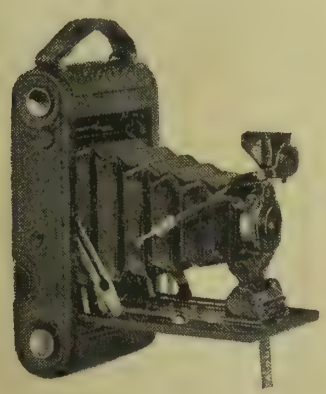
Among the Christmas Gifts



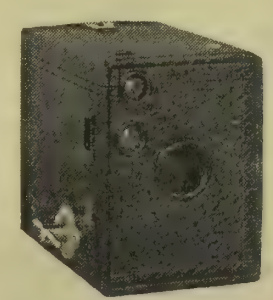
For the grown-ups or the nearly grown-ups, a Kodak for pictures of the post card size, 3¼ x 5½ inches. It is familiarly known to hundreds of thousands of enthusiasts as the "3A". It makes the largest picture available in "pocket photography". The 3A will really go into the side pocket of almost any coat. Frankly, however, it is more conveniently carried in an overcoat pocket—or slung over the shoulder in a case. Excise war tax and all, the Junior model, with a fine Rapid Rectilinear lens, sells at $24.64—and with the Kodak Anastigmat *f*.7.7 lens, at $30.62. There are other more expensive models—all have the Kodak simplicity—and they all make good pictures.



A gift for the one who already has a larger Kodak—the Vest Pocket. You don't carry a Vest Pocket Kodak—you wear it, like a watch. It is always ready to picture the unexpected and the unusual. The price, including the excise war tax, is $9.49.



For the boy or girl in high school—the No. 1 Kodak Junior. There's always room for it in the pocket, and the Kodak story of the school days is one that not only gives fun in the making but in its album form becomes a permanent delight to the whole family. The price of the No. 1 Autographic Kodak Junior is $16.67, including the excise war tax.



For the little folks—a No. 0 Brownie. These little cameras have good lenses and shutters and finders, and use the same film and make the same size pictures as the Vest Pocket Kodak. You will be astonished by the good work they do; you will be even more astonished at the intelligent way in which a youngster of seven or eight will go about picture-making with a No. 0 Brownie. The price, including war tax, is $2.86.

This page gives only a hint of the Kodak and Brownie line—there are Brownies for pictures of every size that Kodaks make, and there are Kodaks with high speed shutters and rapid lenses—there are folding Brownies as well as box Brownies—but they all have one common characteristic—they make good pictures. And all Kodaks (except Stereo and Panoram) and all *folding* Brownies have something else in common—they are Autographic, and when used with Autographic film provide for the instant titling of every negative at the time it is made. And the Autographic costs no more than other film.

EASTMAN KODAK COMPANY, ROCHESTER, N. Y., *The Kodak City.*

Banks Perpetuating "Abandoned Farmer"

(Written for Pacific Rural Press by Fred M. Pickering.)

If David Harum was, at this time, a real character in the flesh, he would have to be either a banker or a farmer—he could not be both and bear the stings and arrows of courageous fortune hunters; neither could he be at peace with himself, because of the war between these two varieties of industry.

As my banking career began forty years ago and my farming career some twenty years subsequently, I feel that in a moderate degree I can grasp some of the differences that have now arisen and threaten to obscure the horizon with reprisals from the Bankers in their own circle of newspapers and from the farmers in theirs.

In the good, as usual, articles by Edward F. Adams, the well-known financial and economic writer of the San Francisco Chronicle, appearing in this (November) month, he speaks of the low condition of cash reserves and of the growing feeling of hostility between the cotton growers of the South and the wheat producers of the Middle West to the Federal Reserve Board, because it does not help growers to get money so they can hold their crops for better prices, and he goes further by saying that he doubts if the farmer would be benefited by being loaned money to hold on with. Of course, there is a "safety first" side; and if the farmer could always play that game, it would be an even break; but the very nature of his occupation often makes him unconsciously a speculator, because no one can forecast market or crop conditions before the farming operations to make a crop are begun. The farmer knows that his market now is not the world, owing to restrictions resulting from the war; and that for many commodities there is no real market demand.

He always knows that practically whoever buys now has to store; and the buyer is not storing to lose; and if the broker or merchant can get money to store crops, the farmer doesn't see why he should not get the same accommodation. If the broker or merchant has no market, he is simply speculating—why deny the farmer the same right, if he wants to take it? It doesn't keep one dollar more out of circulation to give it to one party or the other to be used for storage purposes, and the action of a borrower would have less effect on depletion of cash reserves than a buyer who stores, because the loan value would be less than the sale value, so less cash is required for the loan than for the sale.

Is the farmer, then, to be censured because he rebels when he finds himself in a peculiar position with a product that, in a narrow restricted market has little demand with a sale price that is not a criterion of its real value, as measured in the actual money which he has paid out to raise that product and can't borrow on his crop.

The desire to store, until trade markets can be opened up, comes from no speculative intent—it is only natural. Now comes my friend McCargar and if his talk at Douglas winds up as quoted—he makes the farmer go it alone. He must have known a poor farmer and poor customer that during, say, the last two years, would require financial help to put in a crop. During these times, a farmer should have money in the bank, or, at least, some automobiles which represent his profits—but when he has made his crop this year, he finds the world's markets all out of tune. Instead of normal demand, there is abnormal lack of demand and cotton and wheat growers are not the only class of farmers who see the paucity of prices through the upsetting for the time being, of the natural law of supply and demand.

Bank Rules Antagonize Farmers.

When the farmer is given as a reason, for declining to make him a loan, that the rule of the Reserve Banks or Reserve Boards is this or that and he sees that he can't get his money, he immediately feels antagonistic to the Reserve Bank system because, on account of its rule, is apparently why he is denied. The farmer thought he had a loan bank once. He now sees that institution with suspended momentum riding at anchor and he suspects that no hand, friendly to him, has banked the fires on that bark, so that the system of banking looks out of gear to him and with some good reason.

The farmer's recreations are simple, oftentimes quite old-fashioned. He and his family know the button game, so when he hears of the shrinkage of the cash reserves, he thinks, "Money, money, whose got the money?"—he knows he hasn't, so cash reserve shrinkages don't interest him, when he has little chance to dip his fingers into it.

Some farmers' boys become bankers and some bankers' boys become bankers but few bankers' boys become farmers ,and that is one cause of the trouble. The families are not mixed so that the banker's business is little understood by the farmer and the banker, as a general rule, knows nothing about farming. Curl leaf never attacks the banker's carefully chosen line of "7½ per cent Commercials"; caterpillars never eat up his currency and rust never bothers his specie. Consequently, he knows little about plagues and pests. If the banker thinks because the farmer looks healthy he is in business for his health, the farmer soon finds out that this is not why the banker is in business, so an estrangement has arisen.

A farmer should not forget that the bigger his banker, the bigger farmer he might become, because all riches, the result of farming, except what the farmer eats, goes into the banks. The farming business lacks something to help out in the marketing of products. Until something of this sort develops, to provide, as one of my banker friends says, "helup" for the farmer, unless we want to perpetuate the 1920 crop of "abandoned farmers," I see only two other means in sight. One is to rear an army of farmerettes, and in that way attract more attention from the banking community; the other is the Edge bill, and we, in California, should feel fortunate indeed that our own John S. Drum, President of National Bankers' Association, is advocating the early operation of that bill.

ALCOHOL VS. CARBON.

I hear that carbon in gas engines of all kinds can be entirely removed by burning denatured alcohol instead of gasoline for a short time.—A. H. W., San Luis Obispo county.

We believe that it cannot. Some of the so-called carbon in engines is unburnable and the only way to get rid of it is to scrape it out. But practically all of the real carbon can be burned out without using alcohol. Adjust your carbureter to extreme lean mixture while traveling at 25 to 35 miles per hour. After it has cleaned the real carbon from your engine, avoid more in the future by running on as lean a mixture as will work smoothly.

On November 24th there was in cold storage in Los Angeles, 13,380 sacks of white potatoes, and 54,340 sacks of onions.

The Silent Alamo
—furnishes electric light and power for the country home. Runs without vibration. Write for catalog.

Duro Water Systems
The all-round water system for the household. Furnishes water under pressure at small cost. Send for catalog.

Universal Milking Machines
—enable dairy farmers everywhere to add hours to the day for other duties. Write for catalog.

Pumps
Horizontal pumps, Vertical pumps, Deep-well pumps, Direct-connected Outfits, etc. Write for catalog.

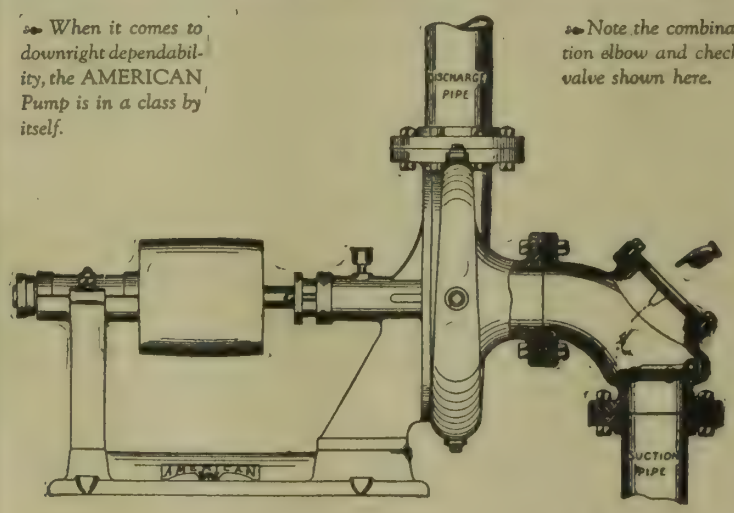
Louden Barn Equipment
Get 25 per cent more milk, save feed, and save labor, by making your cows comfortable with Louden Equipment. Write for catalog.

Gas & Oil Engines
We can furnish you with any kind of an engine in any size you require. Write for catalog.

Name_____
Address_____
Cut out this ad, sign your name, check the catalogs you want, and mail to us.

When it comes to downright dependability, the AMERICAN Pump is in a class by itself.

Note the combination elbow and check valve shown here.



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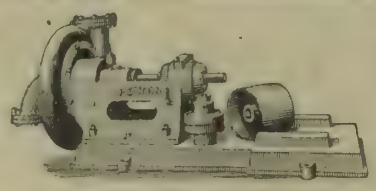
Pelton  Pumps

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THE OLD METHOD farmer figured his crops to produce according to the amount of rainfall. If the yearly rainfall was good, crops were good, while if the rainfall was poor, crops were poor. THE MODERN METHOD farmer considers irrigation the main feature in the production of good crops. The installation of a plant for insured irrigation is the first step of the successful farmer of today, after which come in turn, other modern time and labor-saving farm machinery. These are what have made farming a science instead of a game of chance. The proper plant for eliminating irrigation chance and giving the greatest protection, is the PELTON. See your PELTON dealer, or write us for facts on PELTON pumps.

THE PELTON WATER WHEEL COMPANY

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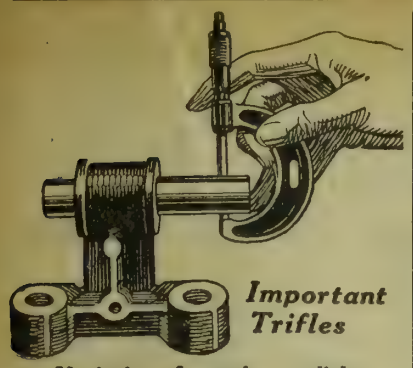

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DUST PROOF-ALL GEARS ENCLOSED

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Getting Rid of Old Alfalfa.

I am putting in a vineyard on alfalfa ground, and am looking for an implement with which I can keep the green growth cut off under the surface to enable me to keep a good mulch and kill the alfalfa. Would a tool with knives that run just under the surface fill the bill? Is there a tool on the market called an "alfalfa crowner," or is there any benefit from cutting off the alfalfa crowns and raking them up before plowing?—F. A. Y., Madera county.

So far as we can find out, there is no alfalfa "crowner" on the market except as a well-sharpened gang plow with plenty of power and adjusted to cut safely below the crowns. The roots are so tough that even a heavy tractor weed-cutter would probably not work, especially if you have a fairly good stand. But the idea is splendid. Having raked the crowns together and killed them by decay or otherwise, you would have very little trouble with new alfalfa growth in your field. The shallow plowing involved in crowning would also be the best possible preparation of surface soil to be turned under by deep plowing as soon as the tops are cleared away. It enables you to plow deeper and cut the roots where they are of smaller diameter. This is good preparation for the vineyard. For the later cultivation and mulching, there are many underground knife implements on the market as you suggest. One effect of these is the tendency to form a plowpan at the level on which they slide while in operation. Vary the depth at which you use them to avoid this objection. Where anything as tough as alfalfa roots is to be encountered by the knives, those which angle backward will either cut or release such obstructions more readily than knives extending squarely crosswise of the line of draft.

State Grain Inspection.

Does all grain shipped out of the State have to be inspected and graded by Government officers? If that is a good thing, why should we not have State inspection of grains shipped within the State?—J. J. M., Santa Clara county.

Federal Grain Supervisor Jas. F. Mackenzie answers that grain does not have to be inspected unless it is sold, offered, or consigned for sale by grade. If represented as being of any grade, it must be an official U. S. standard grade certified as such by a licensed U. S. inspector. The inspection may be at point of shipment, en route, or at destination.

"The Department of Agriculture has always favored inspection of grain, either by a state or other reliable corporation, such as our own Chamber of Commerce, and I believe is willing to grant to inspectors a license if it is proved that they are thoroughly capable of performing the work. Personally, I do not think the state inspection is so necessary now as it used to be as I believe it is within the bounds of possibility owing to the pressure being brought upon the Government by eastern states that intrastate shipments will also come under Federal Inspection and Supervision.

"I have always favored state inspection when politics was kept out of it. The states of Washington and Oregon work very harmoniously with the Government inspectors and I see no reason why it could not be done in this state."

Four-Horse Drag Leveler.

A subscriber from Kern county wanted to know how to construct a good drag. The idea I use might help him. My father used it for years with great success. For four horses I make it 6x14 feet. The sidepieces or runners are made of 2x6's, fourteen feet long. The piece across the front is a 2x6 six feet long set one foot from end of runners and ½ inch up from bottom. Another piece of the same size is set at the back end on a 45 degree angle ½ inch up from the bottom of runners. Make a frame of 2x4's two feet wide and five feet eleven inches long with a 2x6 (shod with a blade of steel) as the front one of the five foot eleven inch sides. This frame is pivoted across the center of the drag between its runners. A 2x8 nailed across the runners over the center of the frame provides a place to stand on. To cut off a mound, step on front of frame. To dump, step on the rear. With this, you drive with both hands and do the rest with your feet.—Elmer M. Gorsline, Arroyo Grande.

The Bean Giant at work in 600-acre Baker-Langdon Orchards at Walla Walla, Washington.

The "Bean" Giant
for Large Capacity and High Pressure

IN large orchards where they have to cover the ground quickly—where High Pressure and Large Capacity are absolutely necessary—the Bean is the universal choice.

The Bean Giant shown above supplies several lines of hose, delivers from 5½ to 10 gallons a minute, and drives the material onto the trees at tremendous pressure in the form of a dense, penetrating, saturating mist which reaches every crack and crevice.

Bean Large Capacity and High Pressure are the result of these features—

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—These advantages together with BEAN SMOOTH PORCELAIN CYLINDERS and BEAN ECCENTRICS (used instead of cranks) so reduce friction and save power that a Bean Sprayer will throw more liquid than any other outfit with the same size engine.

It is a well established fact that you can throw as much liquid with a Bean two-cylinder outfit as with most three-cylinder machines.

Send the Coupon for New Bean Catalog—It illustrates and describes the entire Bean line of Hand and Power Sprayers, and explains in detail the many distinctive Bean advantages. Write for your copy—now.

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In the city, the homemaker enjoys the two greatest helps—electric lights and labor-saving devices. DELCO-LIGHT delivers them to rural homes no matter where situated. Every home owning this electric light and power unit boasts of the helpful presence of a happy housekeeper—drudgery is banished.

The coal oil lamp, the washboard, the outside pump, etc., are rightly called the "curses of farm life." The Department of Agriculture says, "electric light and labor-saving devices prevent waste of woman-power and save the energy of the Nation's rural homemakers."

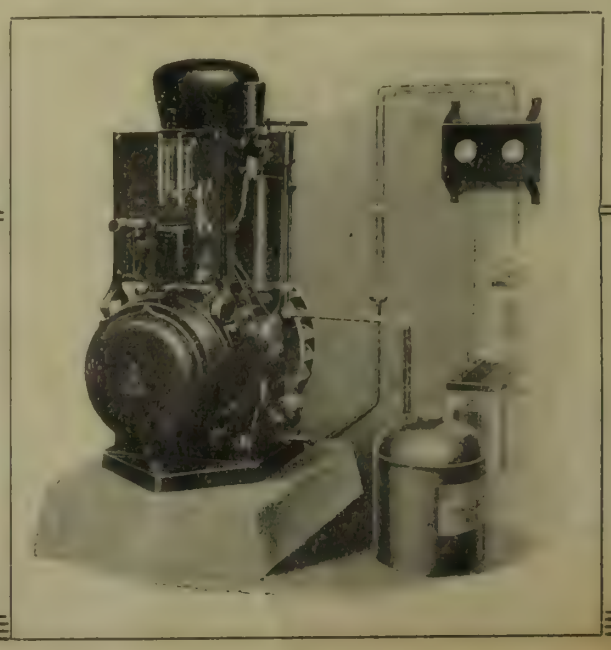
Are you wasting woman-power on YOUR farm? Are your profits less than they should be? What help are you giving to YOUR homemaker? With hardships banished by DELCO-LIGHT, she can do yet bigger things. Or are you "penny wise and pound foolish?"

DELCO-LIGHT provides in abundance but at small cost the help most needed in every home. Try in your home what has been proved successful in more than 125,000 rural homes. These homes, equipped with DELCO-LIGHT and power are saving money and finding happiness and health hitherto lost through waste in woman-power.

The cost of DELCO-LIGHT does not have to be reckoned with. That removes the last excuse for not putting this fool-proof plant in your home at once. It actually pays for itsef. It operates best on kerosene, the cheapest fuel in the market to-day.

The new price for the DELCO-LIGHT plant suitable for the average farm is $495. Call the DELCO-LIGHT dealer nearest you. He will install a plant immedately on your own choice of terms—and on a money-back guarantee. Make this your happiest Christmas by bringing the blessing of DELCO-LIGHT into your home.

DELCO-LIGHT was first to give general and practical help in lightening the burdens of rural homemakers—more than five years ago. To-day, DELCO-LIGHT continues its unrivalled supremacy in the power and light field where it successfully banishes the farm's worst foes—drudgery and waste.



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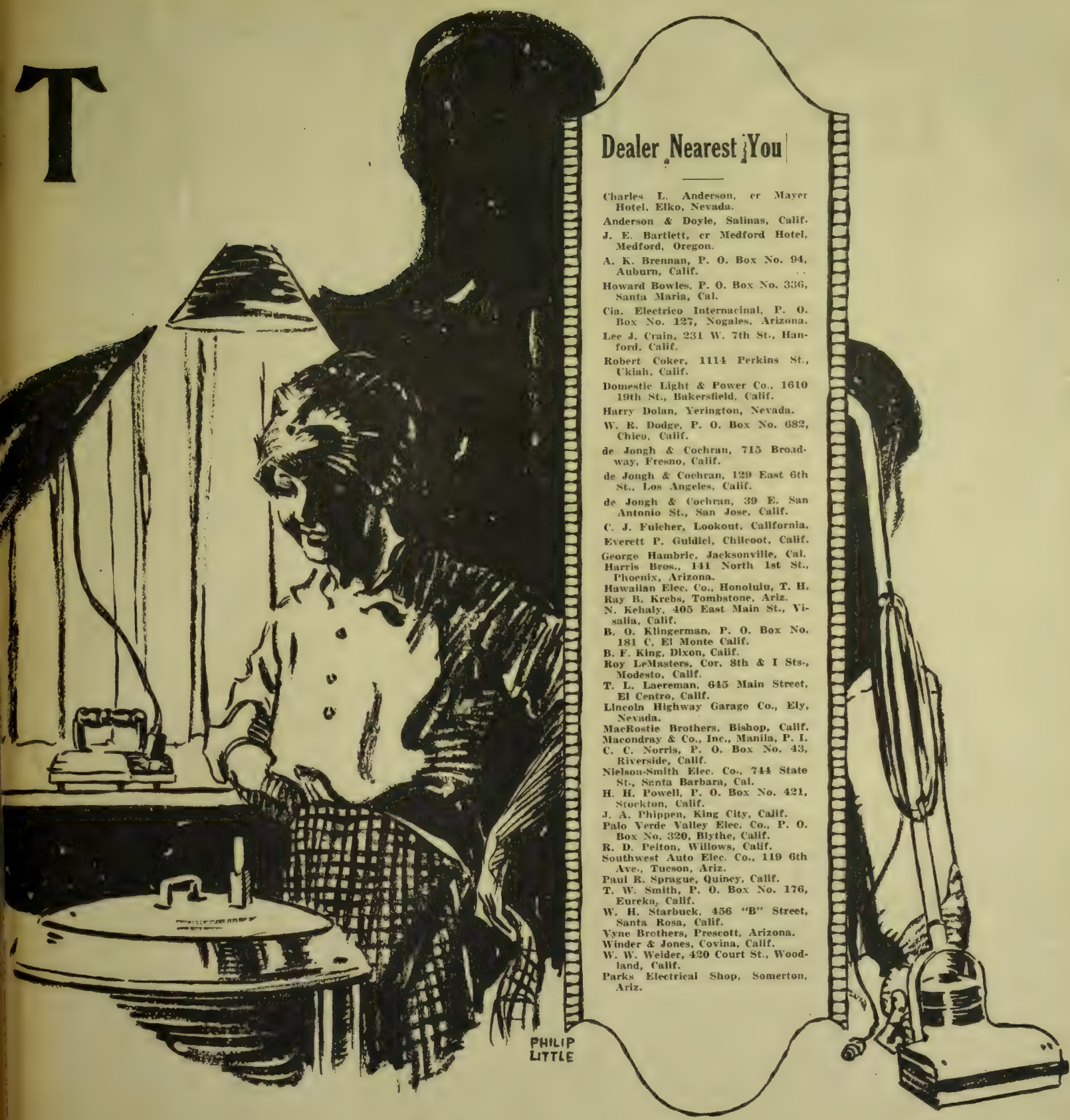

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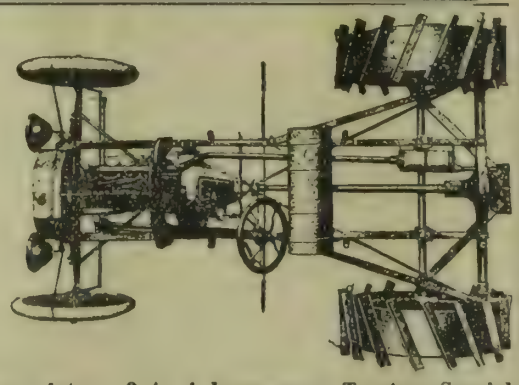

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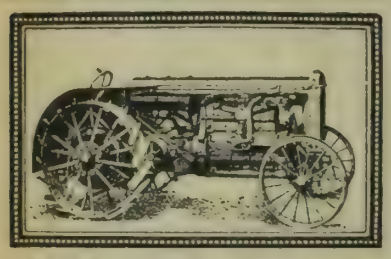

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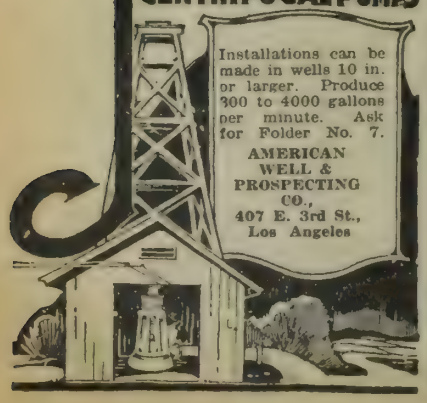

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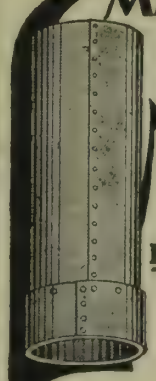

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MADEWELL

Mechanical Power on the Farm

Prepared by C. W. Stratford, Consulting Engineer Associated Oil Co., at request of the California Tractor and Implement Association, to increase public knowledge of the practical points of Power on the Farm.

NATURE OF LUBRICANTS.

It is well to bear in mind that automotive engines are essentially mechanical breathing devices, air and atomized fuel being drawn into their metal lungs to furnish the engine with life. It is impractical to furnish all engines with air free from dust, and in consequence they suffer in proportion to the amount inhaled. Road or field dust becomes mixed with the oil film and finds its way into the crank case. It only requires a small amount to do great damage. Contamination of the oil with dust is of such serious import in tractor lubrication, that it has been found necessary to equip such engines with air scrubbers or positive dust separators.

Carbon in Oil.

The only serious source of carbon in the crank case oil is from the lower surfaces of the piston heads. If the cooling system of an engine is not properly designed, or the piston heads are too thin or of improper section for sufficient heat conduction, the oil thrown against the bottom of the piston heads is decomposed and accumulates on these surfaces as hard carbon or carbonaceous matter. This carbon has a negligible abrasive effect on bearing surfaces, but on the other hand has no lubricating properties. The only danger from its accumulation in the crank case oil is that of the likelihood of its completely plugging the oil screen over the pump inlet which would prevent the entrance of oil to the pump and so deprive the bearings of the needed oil.

If mechanical defects exist in any engine, not even the best oil can be counted upon to remedy them. The best and most appropriate oil can ameliorate unsatisfactory conditions but not cure them. The best-fitting pitsons in perfectly round, and cylindrical cylinders properly lubricated cannot prevent the passage of some gas or fluid past them. Since this is true, how much more leakage must be expected from scored, oval or conical cylinders equipped with loose pistons or defective rings. The proper mechanical conditions of the pistons, rings, and cylinders is of the greatest importance to engine operators.

In the early days of automotive engines, troublesome carbon deposits were all ascribed to the use of oil of improper grade or inferior qualities. The development of these engines and their continued use have, however, clearly shown that carbon deposits are almost altogether due to defective mechanical conditions of the cylinder and its elements.

Transmission Lubricants.

Besides motor oils, the automotive engine user also has need for two other general types of lubricants; namely, heavy transmission oils and different grades of greases. Transmission oils consist of heavy residue from the distillation of petroleum. In this regard, a sharp distinction should here be drawn between a petroleum residuum which has lubricating properties and one that (though fluid or thick) possesses practically no lubricating properties. The latter material referred to is liquid asphalt. Poor gear oils are sometimes manufactured by blending a very light unrefined distillate with solid asphalt. The experienced user, however, should have little difficulty in distinguishing this type of so-called lubricant. The easiest way of testing same is by throwing a film on the walls of a bottle and allowing same to drain. Transmission oils possessing good lubricating properties drain off the glass, leaving a clear film, with no trace of asphalt, whereas a blend of asphalt with light distillate always shows a specked or muddy film. Fluid transmission oils should be used wherever it is possible to retain them in the gear housing in preference to any type of grease, fluid or semi-fluid.

Greases Need More Study.

Gear compounds should always be used in leaky gear cases where the operating temperature of the gearing is so high as to require a more viscous lubricant than transmission oils. Gear compounds are classified as greases and the best grades are manufactured by blending heavy liquid residual oil with fibre grease.

Because of the relatively lesser importance of greases for lubrication compared to oils, very little information has been given out regarding their constituents or methods of manufacture. The lubricating properties of all grades of greases—thickened oils—from fluid to solid are entirely dependent upon the lubricating oil contained in them and the small amount of unsaponified fats. Upon this statement, a question may immediately occur to the reader as to the reason for manufacturing and using greases at all. This is because no commercial hydrocarbon or other oil is sufficiently thick at operating temperatures to meet all requirements of certain types of lubrication. Oils would also be more difficult to apply and retain where needed over long periods of time.

In general, all greases are made up of a soap portion which has the remarkable quality of acting as a sponge for the absorption of hydrocarbon oils, just as a sponge draws up water. After the soap "sponge" has absorbed the hydrocarbon oil, it loses all appearance of a soap and entirely hides the presence of the oil, both constituents then taking on the familiar appearance of grease. The characteristics of greases are dependent upon the type of soap sponge employed, as well as upon the character of the hydrocarbon oil absorbed. Soap sponges for greases are made by the saponification of animal and vegetable fats with lime, soda, potassium, or lead. Cup greases are made with a lime soap. Fibre greases are made with a soda or potassium soap. Except in rare instances, commercial cup greases all contain some moisture; and when heated to about the boiling point of water, separation occurs between the soap sponge and the oil which results in the definite segregation of the constituents. Because of this peculiarity of separation, cup greases should never be used for the lubrication of transmissions. Fibre greases, properly manufactured, contain only traces of moisture at most and do not separate upon heating and cooling. Semi-fluid oils consist of soft semi-fluid fibre grease.

Since the lubricating properties of any type of grease, be it gear compound, cup or fibre, depend fundamentally upon the lubricating properties of the hydrocarbon oils contained in them, any judgment of the quality of such greases must be based upon the properties of the hydrocarbon oils. With these facts in mind, it is obvious that no grease can be judged by its color, odor, or consistency. Greases for any type of lubrication are often manufactured from non-viscous oils. It is even possible to manufacture any hardness of grease by blending a soap sponge with kerosene. In other words, a soap sponge is no respector of persons or materials. It has an equal appetite for many different fluids sucking up with avidity kerosene, alcohol (canned heat), non-

viscous and non-lubricating hydrocarbon oils or hydrocarbon oils possessing the highest lubricating properties.

Economy Must Be Practiced.

The foregoing remarks on the general subject of engine lubrication are applicable to all types of tractor, truck, automobile, aviation, motorcycle, marine, or stationary internal combustion engines. A relatively small amount of thought and study given to the subject of proper lubrication by engine operators, would be fruitful of higher operating efficiency and lower maintenance cost. Viewed from an economic angle, the tremendous increase in the consumption of both lubricants and fuels, by the rapidly growing total number of automotive engines for all uses, makes the efficiency and economy of their operation a matter of utmost importance. Useless or avoidable waste of petroleum products should no longer be tolerated by the user or the producer. As a matter of fact, the point has now almost been reached where the production of petroleum will be the dominant factor in the limitation of the number of automotive engines that may be manufactured and used. A closer and more active co-operation between oil refiners or marketers and automotive engine manufacturers and users is strongly recommended as the best and most effective means of attaining efficiency and economy.

TRACTORS ON HILLSIDE ORCHARD.

When the Associated Almond Co. of San Luis Obispo county planted 5,500 acres of rolling hill land to almonds and prunes last season and bought about 1,000 acres more, they had to figure on getting a lot of heavy plowing, ridging, subsoiling, etc., done quickly with scarce help. Horses for such a job would be impracticable; but it was also a question whether tractors would do the work on those hillsides, many of which are plenty steep.

The tractor men were game and they held a real tractor demonstration in the orchard. Four-track type machines and ten wheel types competed for the honor and profit of a big order. The competition consisted of contour work and also pulling the implements diagonally up the hillsides along the rows of trees. One tractor kept its course and did its work, but was considered too small to waste a man's time on. Another held its course beautifully diagonally up the hill and displayed plenty of reserve power above what its salesmen claimed. The track-type machines were eliminated, partly because some could not hold their course with a load on the hillside, and partly because it was considered evident that track upkeep costs on the hills would be too heavy.

Most of the machines in trying to pull a full load diagonally up the hill lifted their front ends and, most of the weight being on the drivers on the lower sides, headed persistently down hill as if they knew which way was easy going. A 15-25 wheel-type machine pulled a seven-foot double disk without any effort. In that country two-horsepower on the drawbar per foot of double disk is considered necessary. A plowpan exists here as the result of three or four decades of grain farming; and it has been concluded that the biggest part of the heavy work needed here is subsoiling. So the 15-25 tractor was hitched to a two-standard subsoiler; and according to J. H. Bathrick, an engineer not financially interested in any of the tractors, this one pulled the subsoilers 17 to 18 inches deep on contours without showing distress.

In order to find out what would be its maximum load while still keeping the front wheels on the ground so it could be steered properly, a Stockton gang plow turning seventy inches was hooked on. The machine worked satisfactorily with this load, and Manager J. H. Moore of the Company signed an order for eight tractors like it.

International 8-16
The Adaptable Farm Power

ON sun-baked slopes, in rain-soaked valleys, on rolling uplands and level plains—everywhere you will find **International 8-16 Kerosene Tractors** working efficiently, converting cheap kerosene into valuable farm power.

Plowing, disking, seeding, cultivating orchards, hauling heavy loads on road and farm, pulling stumps, dragging roads, drawing mowers, hay loaders, grain harvesting machines; threshing grain, baling hay, cutting ensilage, sawing wood—on all heavy farm tasks where dependable power is required either at the drawbar or belt pulley **International 8-16 Kerosene Tractors** are rendering satisfactory, year-'round service.

The **International 8-16,** because of its light weight, snug compactness, ease of control, generous reserve power above its rating for emergency pulls, three speeds forward, economical operation and general fitness for diversified service, is highly popular with farmers in every branch of agriculture.

Fifteen years of tractor building experience and over three-quarters of a century of general farm machine success, backed by a broad-as-agriculture reputation for fair dealing, good quality and dependable after-sale service—these factors are your assurance of satisfaction when you buy an **International 8-16 Kerosene Tractor.**

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(INCORPORATED)
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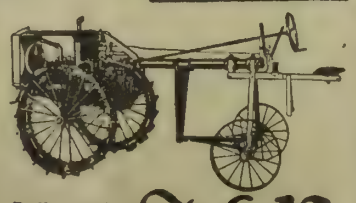
Allis-Chalmers Farm Tractors



The **6-12**

Pulls two 12-inch plows, a two-row cultivator with 26½ inch clearance, mower, rake, binder or any standard four-horse implement. Delivers 12 H.P. at the belt—a one man tractor with any implement.

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52 Beale St. San Francisco, California

Try This One-Man Stump Puller 30 Days FREE

SEND NO MONEY!

If you have useless stump land, I want to PROVE to you on your own stumps—*30 days before you pay me a penny*—that ONE MAN with my famous Kirstin Stump Puller can pull big, little, green, rotten, low-cut, tap-rooted stumps, hedges, trees or brush, I want to convince you that this is the easiest, quickest and cheapest way to pull stumps.

One Man Alone Handles Biggest Stumps!

Thousands of Kirstins now in use!

After 30 days trial—if satisfied, keep puller. If not pleased, send it back at my expense. *You don't risk a penny.* Four easy ways to pay.

Read These Letters!

I pulled one pine stump 3 ft. across top. My One-Man Kirstin pulls bigger stumps than I ever expected.
Mr. J. Erkkila, Calumet, Mich.

My Kirstin pulls stumps up to 2 ft. blind maple 8 to 16 inches. Pulled tree 150 ft. high and 22 inches at base, in 15 minutes.
A. H. Jaffery, Goble, Oregon.

My Kirstin pulled stumps we thought it could not pull.
Mr. E. A. Buckley, Bay Springs, Miss.

Quick Shipment From
Escanaba, Mich.
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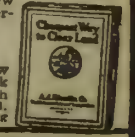
Kirstin One-Man Stump Puller Single, Double, Triple Power!

Weighs less—costs less—yet has greater *speed, strength, power* and *lasts longer!* Clears one acre from one anchor! Easily moved around field. A few *pounds* pull or push on handle exerts *tons* on stump—due to wonderful leverage principle. 3-year guarantee against breakage!

Get My Big New Book NOW!

Tells how one man pulls stubborn stumps in few minutes at low cost. Explains all about different speeds. Also patented quick "take up" for slack cable. Describes Kirstin one man Clutch Model; Kirstin One Man Drum Model; and Kirstin Horse Power Model. Get the book and Special Agents' Offer. Shipment from nearest distributing point saves time and freight. Write today.



A. J. KIRSTIN, Gen. Mgr., A. J. KIRSTIN CO.
249 E. Morrison St., Portland, Ore.

World's Largest Makers of Stump Pullers!

Sidelights on Portland International

(Written for Pacific Rural Press.)

We caught J. E. Thorp, the Jersey breeder, in his barnyard, just after his return from the Portland show, and listened while he talked.

He said the show was worth many times what it cost him to attend in the things he learned about the Jersey game. He came back more enthusiastic over Jerseys than he ever was before. He must have stretched in that climate for those who know him didn't suppose that one skin could contain more enthusiasm than he has always packed. Asked for the things which impressed him most, he named the following:

First, the size of the thing. It was estimated that there were 3,500 animals entered—all under one roof, except that the roof wasn't big enough and had to be extended with a hugh tent on each end.

Second, he was proud of the showing made by what California stock was there. The University steer, the Anita Baldwin Holsteins, the Rowe and Weaver Milking Shorthorns, and the McFarland Ayrshires were specially mentioned.

Third, the ability of the judges won his admiration. No show he has ever attended seemed to him to have secured judges of such high rating as this show. In some of the Jersey classes there was as high as 42 entries, and in a Get of Sire class the judge had to pick the best out of 104 head. He did it so efficiently, explaining why he did what he did while the clerks were making out the slips, that there was positively no comeback. Professor J. I. Thompson, one of the swine judges, was on his list of 100 per cent efficient men.

Still another impression embodies both a boost and a kick. The arrangement for feeding the men caring for stock was fine, only a permanent building rather than a tent, would have added to the comfort. Meals were served cafeteria style. You paid 50 cents to get in and then were entitled to eat as much or as little as you desired. The service was rapid and the food excellent. The cafeteria was run by the management and was supposed to be just self-supporting—no outside party getting a profit from the men who were making the show. But on the other hand, there were no sleeping quarters except with the stock, and especially, as it rained most of the time, the men actually suffered. Thorpe wonders when managers of fairs will wake up to the fact that the men are just as human as their stock.

The educational value of an exposition like this is beyond compute, Thorp thinks, and when the first peep is heard for a similar one in San Francisco or Oakland, you will find him boosting for it with all his might.

A CALF CLUB GROWING PUREBRED JERSEY CALVES.

(Written for Pacific Rural Press by Guy H. Miller.)

A calf club has been organized by the Stanislaus Jersey Association, assisted by Prof. O. P. Paulstine, Agricultural Instructor in the Modesto High School. There are fifteen members in this club, twelve boys and three girls. Their names follow: Marguerite Conant, Jewel Campbell, Barbara Campbell, Dwight Hackett, Vernon Hayworth, Ervin Hayworth, Cecil Lambert, Clifford Lauterman, Herbert Lauterman, Elmo High, and Jordan Campbell, all of Modesto; Jesse Henry and Max Henry of Hughson, Clifford Daniel of Denair and S. Leigh Howard of Merced.

For this club the committee of local Jersey Breeders selected fifteen purebred Jersey heifer calves from the herds of the following breeders: J. J. Cornwell of Orland; J. H. Sawyer of Galt; A. A. Jenkins of Tulare; J. E. Wherrel and Geo. W. Thomas & Sons of Riverside; J. A. Goodall of Turlock; W. J. Hackett of Ceres; D. F. Conant, C. D. Hayworth and Guy H. Miller of Modesto.

The California National Bank, the Modesto Bank and the Sacramento-San Joaquin Bank, all of Modesto, financed the club, furnishing the money to purchase the calves and took the individual notes of the members as payment. The calves were collected in Modesto on November 13th, and were distributed to the boys and girls composing the club by lot. After the drawing a picture of the club members, each holding their calf, was taken.

The calves are to be exhibited at the Stanislaus county fair at Modesto next September and prizes will be awarded to those that have made the best showing in caring for their calves and in keeping records as to cost and amount of feed consumed.

This is thought to be the first Jersey calf club in California in which the members are all raising purebred heifer calves. The animals are all of excellent individuality, 6 to 11 months old and best of breeding. Truly a good beginning.

A RED HOG PARADISE.

It was a great day for the Duroc-Jersey hogs when Fred E. Lewis, owner of the Diamond Bar Ranch at Spadra, California, decided that this was the breed he wanted to raise in conjunction with his Arabian horses and Hereford cattle on his 8,000-acre ranch.

Having chosen the hog he believed best fitted for his requirements, Mr. Lewis began assembling the foundation herd, which today contains some of the greatest individuals in the world. At its head is the Ace of Pathfinders, the best son of Pathfinder, who stood second only to Grand Champion of the 1919 National Swine Show, and who headed the world's champion aged herd and first-prize Get of Sire in the same show. He is a big, vigorous fellow of splendid conformation and is a great breeding boar.

Assisting the Ace is Mammoth Sensation Jr., the largest two-year-old boar of the breed. He is by Mammoth Sensation and is an exceptionally rugged individual with high-arched back, tremendous bone and short pasterns.

Last winter the Diamond Bar Ranch purchased the three sows which, with the Ace, made up the world's champion herd. The most outstanding of these was the world's champion sow, Queen of Pathfinders, the dam of the Pathmaster, who is considered one of the greatest Duroc boars. With her came Model Maud, also by Pathfinder, who was the first prize senior yearling sow at the 1919 National, and Lucy Pathfinder. Besides these sows there are twelve other excellent Pathfinder sows in the herd. Other sows of the herd are by such sires as Orion Sensation, Great Sensation, Great Orion Sensation, Great Wonder I Am, and other famous boars.

The housing conditions at the Diamond Bar Ranch are ideal. Accommodations are ready for 250 sows to farrow at a time. Although the climate of California is very mild, it is found that the pigs do better when kept indoors at night.

Every one of the 1200 hogs on the ranch is purebred and all of the older ones are registered. It is the intention of the owner to maintain a herd of about 40 of the top sows as the basis of the herd for breeding stock. The other 100 sows will be used to raise pork hogs which will not be registered. The plant is large enough to accommodate 5,000 hogs and eventually that number will be kept.

CENTRAL CALIF. WOOL GROWERS MEET AT STOCKTON.

(Written for Pacific Rural Press.)

The Cenral California Wool Growers' Association, organized at Livermore, Calif., about a year ago, met in the Chamber of Commerce at Stockton, Saturday, November 27, for the purpose of enlarging its membership, and transaction of other business. About 80 sheepmen were present and joined the association with future headquarters at Stockton.

A maximum price for sheepherding was fixed at $70 a month. This wage as the limit for first-class men. The maximum price for shearing was fixed at 10c a head and board. The owner of the machinery was to be paid extra for his time and use of machines. Renting of stubble or pasture will be brought up for discussion at a later date, as the feed question was getting to be a serious matter. The association is talking 10c a head per month for pasture in the future.

Officers elected for the ensuing term were P. J. Connolly of Stockton, president; W. E. Bristol, secretary, and C. G. Owens of Livermore, treasurer.

An assessment of one cent a head on 500 sheep or less, and one-half cent over 500 head was levied against each member, who gladly wrote checks for same. This is a yearly tax with the minimum fixed at five dollars.

A large delegation came from Livermore, where the association was first organized. The need for a larger membership being evident, headquarters were moved to Stockton and sheepmen in the surrounding country invited to join. They hope to co-operate in all matters where collective action will be to their advantage.

The sheepmen in this locality hope to exist and had to come to some understanding as an organized body so as to protect the industry for a future livelihood.

A report from Mendocino county tells about crows killing new-born lambs. Where crows are numerous this sometimes happens and when they have acquired the habit cause considerable loss.

TAKE GOOD CARE OF THE UDDER

In a considerable number of cows the udder is the part of the body involved in bringing in satisfactory financial returns to the owner.

The size and condition of this organ is of extreme importance in this connection. Unlike her early ancestors the udder of the ordinary cow today considerably exceeds its projecting boundaries and consequently is much more liable to mechanical injuries and subsequent invasion of disease producing organism.

A practical dairyman should devote as much attention to the care of the udder as a mechanic would to a delicate and complex piece of valuable machinery.

To do this we must understand to a considerable degree the nature of the factors that are apt to do harm. The more we study and observe the various causes that are harmful to the udder the more we are convinced that the introduction of bacteria into the tissues of this organ are the most serious source of michief. It is known that there are many bacteria capable of producing abnormal conditions of the udder hence it is not necessary at this time to discuss each organism separately.

Since we know that bacteria are the cause of serious udder diseases the routes of their entrance to the tissues must be understood in order to take the proper precautions to prevent their causing any injury.

These various harmful bacteria may gain entrance to the udder by one of three definite routes.

1. Through mechanical injuries,
2. Through the introduction of bacteria,
3. Via the circulating blood.

With regard to mechanical injuries no inconsiderable number of these

HILLCREST STOCK FARM

Shorthorn Cattle

Won at Sacramento Both Championships

7 Firsts and 5 Second Prizes

Shropshire and Merino Sheep

RAMS AND BULLS FOR SALE

Single or in Carload Lots

T. S. GLIDE, Prop. DAVIS, CALIFORNIA

GLOBE "A1" FEEDS

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FEED FOR SWINE, STOCK AND POULTRY

ASK YOUR DEALER

Fine Dairy Ranch

160 ACRES: Entire acreage under cultivation and irrigation. 77 acres in very fine stand alfalfa, balance other crops. Two pumping plants with a total horse-power of 35 pumping 160 miner's inches of water. Both plants run by electricity.

Small domestic pump and well operated by one-half H. P. motor.

EQUIPMENT:

Ten-room ranch house, large screened porch. Running hot and cold water in each bed-room upstairs, house wired for electric lights, heating and cooking.

Four-room cottage, electric lights, hot and cold water.

Bunk house, 16x96. Four rooms for men, wash room and store room, dining room and kitchen with running hot and cold water and wired for electric stove, cook's room and two rooms used for ranch office.

Garage, concrete pit, room for three cars.

Wagon and emplement shed, 20x120.

Completely equipped blacksmith shop.

Horse and hay barn 24x100. Solid fence horse corral.

Cement floor dairy barn, with room for 30 cows.

Two tank houses and tanks. One of concrete for milk house.

Chicken houses and yards.

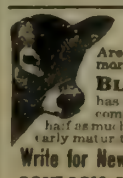
Small family orchard, large shade trees, lawn, swimming pool, small vineyard.

IMPROVEMENTS:

RANCH IS ABSOLUTELY AND COMPLETELY EQUIPPED in every particular. EVERY farm tool and hand tool necessary in operating the ranch. Two 3-ton wagons with racks, 1 iron wagon with rack; 3 walking plows; 1 3-gang sulky plow; 1 single disk; 1 double disk; 1 four-section harrow; 1 two-section harrow; 1 9½ ft. Forkner Springtooth cultivator with traction hitch; 2 walking cultivators; 1 riding cultivator; 1 single row planter; 1 Planet Jr. cultivator; 1 4-horse combination drill with press wheel attachment; 1 broadcaster; 1 2-horse Fresno; 2 5-foot McCormick mowers; 1 cane hay rake; 1 John Deere buck rake; 1 1-H. P. spraying outfit; 1 Fordson Tractor with pulley; 1 Sandwich power hay press; 1 Stover feed mill. One team mares, harness; 2 young Jersey cows; 3 brood sows and flocks of chickens.

This ranch is one of the real show places in California. Everything is modern and up-to-date. Is 7 miles from Lancaster, California, and will be located on the new State Highway running from Lancaster to Bailey's Lake. The 77 acres of alfalfa will cut and bale 600 tons per season. Price: $32,000. Terms $18,000 cash; balance on easy terms.

G. H. FULLER, Lancaster, Calif.



CALF PROFITS

Are you getting them? Calf profits mean more to you now than ever before.

BLATCHFORD'S CALF MEAL has been known since the year 1900 as the complete milk-substitute. Costs less than half as much as milk—prevents scouring—promotes early maturity. Sold by dealers, or direct from us.

Write for New Data *See actual figures showing how to increase your calf profits.*

COULSON CO - - - Petaluma, Cal.

accidents may be traced to injudicious handling of milk tubes, barbed wire fences, loose pieces of wire lying around, and pieces of brush and jagged ends of lumber or other sharp material permitted to accumulate in places to which the cow has access. When milk cows are confined in inclosures they should have sufficient room to guard against the udders of reclining animals being stepped on by those moving about.

In milking the udder the hands of the milker or mechanical appliances to the teat should be scrupulously clean.

The last drop of milk should be drawn when milking for two reasons, one being that the last milk drawn is the richest, and the other so that there is no milk remaining by means of the thumb and finger is bad practice because of the danger of injury to the mucous lining of the teat canal and the possible entry of infection into the injured tissue.

Infection via the circulating blood has its source in other areas of infection within the body. The notable infection of this type is tuberculosis. It is always possible for tuberculosis germs anywhere in an infected animal to find their way into the blood stream and invade the udder.—S. O. T. State Dep't. of Agriculture.

A DAIRYMAN'S HOLSTEINS.

Dean Beeman, of Woodland, is a dairyman. But he is the kind of a dairyman who does not believe in milking poor cows. Hence, he is a Holstein breeder in order to be a good dairyman. Among the really good, small Holstein herds of the State, his must be reckoned. Here are a few reasons why:

It is a perfectly clean herd. There has never been a T. B. reactor on the ranch. This is doubtless due to the fact that he raises his own stock, never buying on the outside except an occasional bull.

In this herd is a family of five, grand dam, dam and three granddaughters, all splendid animals, all bred on the place and the heifers finer type and heavier producers than their mother and grandmother.

It is a herd of remarkably good and regular development of udder.

He has gone in for production first. One of his cows won the State Fair butter fat contest this year, making 9.68 pounds of fat in 3 days and two young things, full sisters now on semi-official test are going at a clip that promises a surprise.

Finally he has a beautiful heifer whose twin was a bull. Will she breed? Maybe not but, anyway, she is heavy with calf and due to freshen in a few weeks.

TUBERCULOSIS INVADES A PUREBRED HERD.

An interesting communication has been received from Doctor E. M. Keef, Inspector of the Division of Animal Industry.

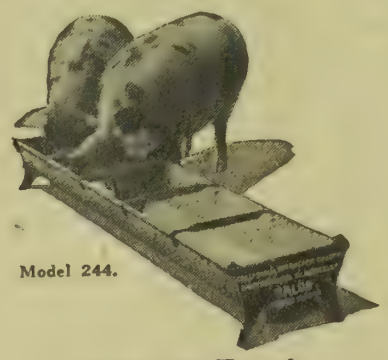
He informs us that a certain dairy located at San Leandro had a string of thirty purebred cattle. This herd was tested three times and no reactors were found. Until after the third test none of the purebred animals had ever been permitted to graze with other cattle. About eight months ago they were turned into a pasture with a large number of other cattle, which had been exposed to tuberculosis and as a result, four of the purebreds reacted to the fourth tuberculin test which was applied recently.

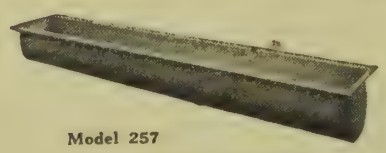
The owner is now considering the advisability of dividing his pastures into smaller acreages, each to accommodate about thirty cattle. This procedure is intended to prevent extensive exposure to the disease which may possibly occur in any of the small herds so pastured.

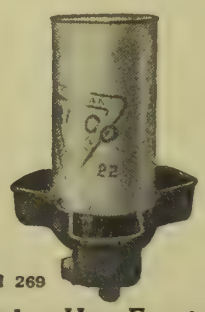
This incident demonstrates that extreme precaution must be taken to protect healthy animals from the ravages of tuberculosis in an area that has been exposed to the germs of the disease.

Calco—modern farm products

Model 258
Calco Self-Feeder for Hogs


Model 244.
Calco Hog Trough


Model 257
Calco Sheep Trough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Calco Hog Fountain

Calco Products are of all metal construction—made of Armco American Ingot Iron and Cast Iron. Every piece is rigidly made, strong, durable, sanitary—built to give long service.

Calco Self-Feeders for Hogs are made in capacities of 2½ to 14¼ bushels. Give automatic supply of clean fresh grain, no waste, long service.

Calco Hog Troughs—for healthy hogs—are made in sizes from 24 to 120 inches in length. Armco American Ingot Iron and Cast Iron construction throughout. Safe. Clean. Durable.

Calco Sheep Troughs—made for sheep. These troughs with capacities from 51 to 131 gallons, ready to go on supporting frame.

Calco Stock Watering Troughs are made for cattle and horses. Built ready to go on supporting frame. Capacities from 18 to 153 gallons. Right prices.

Calco Automatic Hog Watering Fountains give constant supply of fresh water. Clean, durable and give long service.

These products are profit producing, long service, all metal farm necessities.

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and you work the horse same time. **Does not blister** or remove the hair. $2.50 per bottle, delivered. Will tell you more if you write. **Book 4 R free. ABSORBINE, JR.,** the antiseptic liniment for mankind, reduces Varicose Veins, Ruptured Muscles or Ligaments, Enlarged Glands, Wens, Cysts. Allays pain quickly. Price $1.25 a bottle at druggists or delivered.

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More is required of Horses than ever before hence the need of more size, weight and power. Large geldings never were higher. Shire Geldings usually top the market. Use Shires to raise larger and better horses.

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Everything needed in good Hereford cattle. We offer a superior lot of young cows with Harris Standard 2d calves at foot and others bred to our herd bulls to calve in spring. Young bulls of herd header quality at reasonable prices. A choice lot of open heifers and good rugged range bulls. Will sell in carlots or to suit buyer.

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Otis Cordell, Herdsman.

OVER TWO MILLION CALVES

Protected against Blackleg for LIFE with ONE treatment vouch for Purity Blackleg Aggressin (Germ-Free Vaccine made by the Kansas Process). Absolutely safe to use. Cannot transmit disease. Brand castrate, etc., when you vaccinate. OTHER PURITY PRODUCTS—Anti-Abortions Vaccine for Cattle; Hemorrhagic Septicemia Vaccine for Cattle and Sheep; Anti-Hog Cholera Serum, and High Count Mixed Infection Vaccine for Swine. For service that counts, write, phone, or wire.

PURITY SERUM CO., J. L. Thatcher, Mgr., Riverside, California

JAVA COCOANUT CAKE MEAL.
Made where the cocoanuts grow.
Sun-dried—not smoky or rancid.
Carried in modern ventilated steamers. Shipped in solid cakes.
Inspected and ground in San Francisco

Has your past experience in feeding cocoanut cake meal been satisfactory?

We particularly request a trial of our meal by those who in the past have been disappointed.

Your feed dealer may not have our brand in stock but can obtain a large or small lot promptly.

Trade INSULINDE Mark

Look for it on the sacks

Java Cocoanut Oil Co., Ltd.
Dept. 10
16 California St., San Francisco
Largest manufacturers cocoanut products in the world.

Llano Vista Ranch Grand Champion Hampshires

JUDITH—No. 126448
Sire: Calif. Lad, 45021. Dam: Mabel, 113078.

This pioneer herd has brought to light the winning blood lines in our big shows and is responsible for the growing interest in the breed. We have furnished foundation stock for many new herds throughout the State. Bred sows, service boars and pigs for sale.

F. A. LANGDON, Mgr.
Perris, Calif.

Duroc-Jerseys Are Prolific and Profitable

They raise *big* families. Hardy, easy-feeding, quick maturing. That is why Duroc-Jerseys today outnumber any other breed in the United States. Out of *all* the hogs marketed in 1918, 51 per cent were Duroc-Jerseys.

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HAVE YOU SEEN THE
Grand Champion Duroc State Fair 1920
HERD SIRE
CHOICE WONDER III { Mahaska Wonder { Great Wonder / Grand Lady 20th ; Grand Lady 72nd { Grand Model / Rose
Write for yours from the most select herd in California.
Littermate (gilt) topped Ed Kern's Last Sale at $5600
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Young boars ready for service; also fall gilts by WINSOR'S GIANT ORION and GREAT SENSATION 3RD. Priced to move.
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Send for Sensible Folder on Feeding Hogs
WESTERN MEAT COMPANY
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Weaned pigs, both sexes, from sows that farrow large litters and raise them. Priced reasonable — they are money-makers.
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CHEAP BEANS
FOR HOG, SHEEP and POULTRY FEED
In ton lots and over.
Write BRAY BROTHERS
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POLANDALE FARM gives you a number for the asking if you are a grower of Poland Chinas. Write today and get it. We mean what we say. You may draw them from our 500 head of purebred Poland Chinas.
H. L. McKELVIE & SONS, Fairfield, Nebraska

Livestock and Dairy Notes

The Dairy.

On eleven acres of his Modesto ranch, Lorin Hadley made 28 tons of corn silage to the acre this year.

W. J. Higdon's white bull, the junior champion at the state fair, won first in his class at the Pacific International at Portland.

F. S. Borror & Sons, Holstein breeders of Tipton, now have sixty head in their herd with 14 on annual test. The herd is headed by a good son of Gelsche Walker.

In the Frank Guerin herd at Visalia a two year old heifer has just made a record of 18 pounds and a junior three year old, 20 pounds. Both are daughters of the Sir Veeman bull.

All those interested in good Holsteins should not forget the Holmes-DeWolfe sale at Modesto, December 15th. They will offer 40 females of excellent type and many of them with records better than usual. Five bulls are included that should attract the attention of any one needing herd headers. Cols. Gue of Yakima and Clark of Modesto will cry the sale.

The City Council of Modesto recently voted to erect a double airplane hangar on the fair grounds at Modesto, and have offered the use of the place to the Stanislaus County Holstein Breeders' Association in which to hold the Holmes-DeWolfe sale on the 15th of December.

The Stanislaus County Holstein Breeders' Association holds its annual meeting Saturday, December 4th. The members are enthusiastic over the results of their first year's work. Beginning without funds and only 18 members they are finishing the year with 46 members and nearly two thousand dollars in the treasury.

Ralph Smith, an old dairyman at Tipton, who knows a Holstein when he sees one, and is exceptionally well versed in pedigrees, lays no claim to being a breeder though he has many registered animals and will replace all his grades with purebreds. He is going in for purebreds because he says a long experience has taught him that they are more profitable from the commercial dairy standpoint than are grades.

W. H. Bukey is among the Jersey breeders of Tulare. He came from Arizona last January with some 20 head of young Jeresys. They are Raleigh females bred to Royal Majesty and Fontaine Chief bulls. They are an even lot with good lines and remarkably fine udders. His Bessie Lemona walked off with the grand championship at Tulare this fall, having done the same thing at the Arizona state fair last year.

Eastern newspaper reports credit a $100,000 Holstein bull with breaking a bank in Dixon, Ill. Two men, one of them the cashier of the said bank bought Rag Apple Korndyke VIII paying $50,000 down. The promoters of the deal claimed much for what the heifers sired by the bull would produce but they proved a disappointment and the bull a failure. A "closed sign" appeared on the bank shortly after.

As we go to press the last Ayrshire Quarterly for 1920 comes to hand and to say the least it is fully as attractive as the Scotch "coo" the interest of which it so ably promotes. It is well worthy of imitation in every way.

H. J. Stammerjohan, Holstein breeder of Turlock, believes the calf club has done more than anything ever devised to stimulate interest in purebreds. In proof whereof he says 12 dairymen who a year ago never dreamed of owning a purebred, have asked him to help find purebred calves for their boys. A number of them are Portuguese indicating that the fever is not confined to any one breed of dairyman.

J. E. Thorp, the Lockeford Jersey breeder, has an exceptionally fine crop of heifer calves. His ideal is production with true Jersey type, and these calves indicate that there will be plenty of type anyway. In coloring and conformation they would be a hard lot to beat and they are all out of good producing dams. This is not an ad for you couldn't pry Jim loose from those calves with a crow-bar.

The big Garcia sale of high-grade Holsteins scheduled for December 6th has been postponed indefinitely on account of impassable roads to ranch.

Danish butter, it is said will soon be coming to this country at the rate of 500,000 pounds a month.

The U. S. Department of Agriculture summary of the holdings of creamery butter in San Francisco cold storage warehouses show over 7 per cent less October 1st this year than last. Cheese about 32 per cent less.

Horses.

N. W. Thompson the draft horse man at Patterson shipped six draft stallions to Texas very recently. Mr. Thompson says the demand for draft horses is excellent in Texas and New Mexico.

Hamilton Bassett the western representative of The Horse Association of America is taking in all the big shows this fall. He writes from the Pacific International at Portland that that show passed all expectations, even of the most sanguine in the numbers and quality of exhibitors. Mr. Bassett is much encouraged with the outlook in the horse business and is certain that in the near future the demand will far exceed the supply. Mr. Bassett is now at Chicago attending the International and will not return to California until after the Denver show.

Beef Cattle.

Some of the cattlemen in the vicinity of Cool, Eldorado county have been losing some stock with impaction of the digestion tract. Moulton Warner has lost one. This was a calf with its dam when first noticed as ailing. After weaning the bloating and indigestion increased and at first seemed to yield to treatment but afterwards died. An autopsy revealed an impaction of one of the stomachs with fibrous dry material.

The California Cattlemen's Association will hold their annual meeting at the Palace Hotel on December 11th, at 10 a. m. From the fall of the gavel in the morning until the final address at night the program is filled with speakers who cannot fail to repay any one interested in the cattle business. Among the notables who have signified their intention of being present are Gov. Wm. D. Stevens, Mayor Jas. Rolph, Jr., President Barrows, Prof. W. C. Camp, District Forester Redington, Prof. P. B. Kennedy and many others. Every cattleman in California should be present not only to hear those listed but to hear what was done at the Salt Lake Conference of cattlemen from the 12 westernmost states. Do not miss this.

Sheep.

Officials of the Western Pacific report very heavy shipments of sheep out of northwestern Nevada and southern Oregon. More than 80,000 sheep have left the vicinity of Lakeview, Oregon during the past few weeks. Most of this stock went to the Omaha markets.

Swine.

Market hog prices all over the United States have taken a tumble during the last month and are now at the lowest level since 1916.

Four carloads of market hogs were sold at the last Farm Bureau hog auction at Durham. They were bid in at $13.25 by George E. Krentzer a member of the marketing committee who expects to return the consignors that amount from the sales in San Francisco.

Miscellaneous.

The prize for the finest cattle herd at the Pacific International was taken by a Washington breeder; Oregon placed second and California third. This award was offered to the best herd from all the cattle on exhibition, regardless of breed.

LIVESTOCK DIRECTORY.

Rate, 4c. per word. Cash must accompany all orders.

SWINE.

Duroc-Jerseys.

FOR SALE — 3 Duroc-Jersey Junior yearling boars out of Ireland Joe Orion from a daughter of Cherry Volunteer 2nd; weight between 4 and 5 hundred, born September 22, 1919. Splendid type big-bone, high back. These boars will please you and are priced right. One was grand champion at Ventura county fair. Your pick, $125 F. O. B. Oxnard. They won't last long. Berylwood Stock Farm, Hueneme, Ventura Co., Cal.

DUROCS—BIG-TYPE—HIGHEST QUALITY—popular blood lines. Herd headed by Johnson's Defender, Jr., and Western Pathfinder. Bred sows and gilts and young boars for sale at moderate prices. Greenwood Farm, Witherow & Stafford, Live Oak, Cal.

BRED SOWS AND GILTS and young stock. Pathfinder and Great Wonder I Am breeding. Monthly payments, if you wish. Derryfield Farm, Capital National Bank Bldg., Sacramento.

BOYANNA BIG-TYPE DUROCS—Breeding stock; priced right for sale. Inquiries invited. Satisfaction guaranteed. J. Boyd Harrold, Dixon, Cal

BIG-TYPE DUROCS—Herd headed by California Orion King. Am offering excellent young boars at right prices. Inquiries invited. Harvey M. Berglund, Dixon, Calif.

GOOD SPRING AND FALL GILTS—Strong in Pathfinder blood, sired by Pathfinder Wonder. Hamlin Farm, Box 697, Sacramento.

WINSOR RANCH DUROCS—Young boars and some top gilts bred to WINSOR'S GIANT ORION—Morris C. Allen, Mgr., Bonita, Cal.

REGISTERED DUROCS — Choice gilts and weanlings, either sex. Breeding and satisfaction guaranteed. H. E. Boudier, Napa.

BIG-TYPE DUROCS — Gilts and boars of Great Orion Sensation breeding. Falfadale Farm, Perris, Cal.

FOR THE BEST in Durocs, write June Acres Stock Farm, Davis, Cal.

Poland-Chinas.

AN OCTOBER YEARLING BOAR out of the 1920 Grand Champion Sow. Two March Boars, one by Long Big Bone Jr., out of the 1919 Reserve Grand Champion Sow. He headed the 3rd prize litter Sacramento this year. One by The Westerner, out of the 3rd prize Junior Yearling Sow this year. These are tops, priced low, to move them. Alex D. McCarty, Route C, Box 338, Modesto, Cal.

POLAND CHINAS—Some promising young boars; also 2 yearling boars, 300 lbs. Big-bone type, excellent breeding and 2 bred sows, farrow in November. Pedigree on application. Edward A. Hall, Rt. 1, Box 39, Watsonville, Cal.

ELDERSLEY AND SHADY BROOK Farms big-type Poland-Chinas that make money for the Feeder, the Farmer and the Breeder. Prices reasonable. J. H. Ware, Brown's Valley, Calif.

TOHOQUA POLAND-CHINAS—A good tried boar and some choice young breeding stock for sale. Ferguson & McKaig, Orland, Cal.

WAUKEEN HERD POLAND-CHINAS — Home of King's Big Bone Leader. A few service boars for sale. Les McCracken, Ripon.

LAKESIDE STOCK FARM—Large, smooth and big-boned Poland-Chinas. Geo. V. Beckman & Sons, Lodi, California.

BIG-TYPE POLAND CHINAS—Stock of all ages for sale. Houck & Lewis, Winton, Calif.

POLAND-CHINAS—Strictly large type. J. F. Lehman, Lodi, Cal.

REGISTERED POLAND-CHINA SWINE — Prize-winners. Finest stock in the State. Bassett Bros., Hanford, California.

REG. BIG-TYPE POLAND-CHINAS—Service boars; weanling pigs. J. H. Cook, R. 4, Chico.

LIBERTY HERD—Service boars. January weanlings. J. W. Raymer, Soledad.

Berkshires.

ANCHORAGE FARM BERKSHIRES
Orland, Calif.
HERD BOARS—STAR LEADER, Junior and Reserve Grand Champion of the World. The Grand Champion carload of barrows, over all breeds, at the San Francisco Live Stock Show, was sired by a son of Star Leader, NATOMAS BARON DUKE, grand champion of California. For sale, bred gilts, open gilts, young boars and weanling pigs. Write for booklet, prices and list of sows.

BRED GILTS.
Sired by Mayfield Rookwood 2d, a Grand Champion Boar, out of 600-700 lb. sows, and actually bred to "ACHIEVER," our English Blood Boar, the Sire that puts more bone and pork-making qualities into his pigs.
Priced reasonably and absolutely guaranteed.
Castleview Ranch, Santa Rosa, Calif.

The only herd of English Berkshires in the West. Bigger, better, stronger litters. More pounds of meat for less feed. Weanling pig, $35. Satisfaction guaranteed or money refunded at once. Sandercock Land Co., 703 Market St., S. F. In charge Natomas Land Sales.

GRAPE WILD FARMS—Berkshires—Guernseys. Big-type Berkshire Boars of serviceable age, sired by Big Leader—greatest son of Grand Leader 2nd. Panama-Pacific Grand Champion. A. B. Humphrey, Prop., Escalon.

QUALITY BERKSHIRES — Young stock, both sexes. Geo. P. Upham, Martinez.

REAL GOOD BERKSHIRES — Cholera immune. Frank B. Anderson, Sacramento, Cal.

BERKSHIRE BOARS—Real herd sires. We are offering these at sacrifice prices to move them quickly. Write for description and price. R. J. Merrill & Son, Morgan Hill, Cal.

Hampshires.

NO, YOU DON'T SEE many Hampshire hogs advertised. Look through this paper. Once in a while a breeder of Hampshires runs an ad for a few issues, then quits. Other breeds seem to be advertised continually. Count them up in this issue. Why is it? Well, I guess it is because a few ads quickly sells out the Hampshires. We have a few weanling pigs—three more litters coming next month. A few open and breds gilts from the best Hampshire blood lines in California, direct lineage from Gen. Tipton, Mose Messenger and Pat Maloy—sires of International renown. Write us. We like to tell about them. Rio Hondo Rancho, Route 1, Compton, Cal.

FOR SALE—10 Registered Hampshire hogs. These hogs are from some of the best blood in California. $75.00 buys 250-lb. bred sow; also exceptional boar for $75.00, and others that are the pick of litters for $50.00. Eagle Ranch, Atascadero, Calif.

Miscellaneous Swine.

WHAT DO YOU KNOW about hogs? Probably more than we do, but if you will give us your address on a postal we will be glad to send you a little book—"Hampshire History," which tells you all about this breed in America since the year 1830. Rio Hondo Rancho, Compton, Cal.

CHESTER WHITE HOGS—One boar and two sows to pig about Dec. 5th. These are A-1 registered stock and priced right for quick sale. Alex. Falconer, Lincoln, Calif.

FOR SALE—Car of good stock hogs. All sizes. Most of them are purebred Durocs. L. R. Adams, Island Mountain, Trinity County, Cal.

YORKSHIRE SWINE — Registered Boars, Sows. Young stock. Mahajo Farm, P. O. Box 597, Sacramento, Calif.

DAIRY CATTLE

Holsteins.

HOLSTEINS

THE LEWIS COMPANY

Registered Holstein Cattle
Bulls, Heifers and Calves
of Ormsby breeding
Tuberculin tested
Lewis Building, San Jose

ASEVEDO BROS. CO.
Patterson, Cal.
Breeders of
REGISTERED HOLSTEINS
For Sale
Young bull, sired by King Abbekirk Johanna 24th, and out of a dam making 24 lbs. as a 4-year-old

CREAMCUP HERD — Registered Holsteins. Pontiac bull calves. M. Holdridge, Rt. A, Box 437, San Jose.

REGISTERED HOLSTEIN-FRIESIANS — Both sexes choice stock; tuberculin tested. Sunnybrook Ranch, H. H. Sisson, Mgr., Willits.

REG. HOLSTEINS, both sexes. World's record backing. Kounias Reg. Stock Farms, Modesto, Cal.

REG. HOLSTEINS—A. W. Morris & Sons Corp., Importers and Breeders, Woodland, Cal.

F. H. STENZEL, SAN LORENZO—Breeder of Registered Holsteins. High test producers.

REGISTERED HOLSTEINS — Best blood lines of the breed. R. L. Holmes, Modesto, Cal.

CHOICE HOLSTEIN bulls for sale. No females. Millbrae Dairy, Millbrae, California.

GOTSHALL & MAGRUDER — Breeders of registered Holstein-Friesians. Ripon, Calif.

SIX BROTHERS DAIRY—Registered Holsteins and Duroc Jerseys. Turlock, Calif.

EL DORADO HERD OF REG. HOLSTEINS—Alex. Whaley, Tulare, California.

Milking Shorthorns.

REGISTERED MILK AND BEEF SHORThorns, bulls and heifers for sale; catalogue free. Thomas Harrison, Santa Rosa Stock Farm, Santa Rosa, California.

INNISFAIL HERD MILKING SHORThorns—Young stock for sale; both sexes. Owned by Alexander & Kellogg. Leased by J. D. Rowe & Son, Davis, Cal.

WILLOW BROOK HERD—Milking Shorthorns. A few registered bulls and heifers for sale. W. T. Roberts, Penn Grove.

BREEDERS OF REGISTERED SHORThorns—Milk strain; choice young stock for sale. John Lynch Ranch, Box 321, Petaluma.

Jerseys.

SERVICE JERSEY BULL, bull calves Financial King blood, Chester White boars, prize winners. Best blood, type, production. N. H. Locke Co., Lockeford, Cal

FOR SALE—Purebred Jersey bull, 16 mos. old. Prize winner at two fairs this fall. $250.00, if taken now. W. H. Alfred, Loleta, Humboldt Co., Calif.

TWO JERSEY BULLS from cows testing over 500 pounds fat. E. W. Doane, Merced.

REGISTERED JERSEY HEIFER—One year old. Price, $85.00. L. Nielsen, Sunnyvale.

SUNSHINE FARM JERSEYS—"Production counts." E. E. Greenough, Merced, Cal.

PUREBRED JERSEYS from Register-of-Merit dams. Purvine & Son, Petaluma.

REGISTERED JERSEYS—E. F. Smith, Route 1, Box 424, Hayward, Cal.

Ayrshires.

EL DORADO RANCH AYRSHIRES—Young service bulls, nicely marked from high-producing strains. All registered and tuberculin tested. Prices reasonable. El Dorado Ranch, Grafton P. O., Yolo Co., Ry. Station Knights Landing.

PENOBSCOT FARM AYRSHIRES—Long-lived, hardy, good "rustlers." High butterfat producers. Registered. Choice individuals; all ages; reasonable prices. Cool, El Dorado Co., 9 miles from Auburn, Cal.

STEYBRAE AYRSHIRES — Registered; all ages. E. B. McFarland, 414 Claus Spreckels Building, San Francisco.

NORABEL FARM AYRSHIRES — Le Baron Estate Co., Valley Ford, Cal.

The Holmes-DeWolfe Guarantee Sale

DEC. 15, 1920

R. L. Holmes and H. A. DeWolfe

of Modesto — of Ripon

Will sell 45 head of registered Holsteins consisting of 40 females and 5 bulls.

This is an especially good lot of cattle, the majority of which are of breeding age.

The younger stock are selected for their exceptionally good breeding.

Four Granddaughters of world-record cows are listed. A granddaughter of Duchess Skylark Ormsby, a granddaughter of Tilly Alcartra, and two granddaughters of Adirondac Wietske Dairy Maid. Few sales have granddaughters of three such noted cows. The cows and heifers are an especially good lot, selected with reference to good udders, excellent type, quality and breeding. They are good enough to go into the best herds, or as foundations for new herds.

A FEW OF THE MANY GOOD ONES ENTERED:

- A three-year-old daughter of the 30-lb. cow, MAY KORNDYKE, sired by KING KORNDYKE SADIE VALE 22ND.
- A 24-lb. three-year-old daughter of KARL BOS, whose dam is a sister of Laurameka, who made 1326 lbs. in a year.
- Two 2-year-old daughters of SIR VEEMAN KORNDYKE PONTIAC. Bred to a son of Sir Skylark Ormsby Hengerveld.
- A granddaughter of COLANTHA JOHANNA LAD, who made 24 lbs. of butter and 602 lbs. of milk, giving 109 pounds her best day.
- A sister of BELLE FASKIE DE KOL WITKOP, the highest money-winning cow of the breed in 1919.
- Two splendid cows bred to SIR PIETERTJE KORNDYKE ORMSBY, a son of Sir Pietertje Ormsby Mercedes. Such breeding is not listed in many sales in the West. Moreover, both of these cows are soon due, one the first of January.
- A daughter of the 41-lb. bull, SIR JOHANNA DE KOL RAG APPLE, bred to the 35-lb. bull, Segis Pontiac Abbekerk, and a daughter of Sir Aaggie DeKol Acme, bred to the same bull, and many others bred to Sir Skylark Ormsby Korndyke and Segis Pontiac Abbekerk.
- The former bull is listed in the sale, as is also his two-year-old brother, two very good young bulls just ready for service, and a beautiful bull calf.

Every animal tuberculin tested and sold subject to a 60-day retest.

TERMS OF SALE—One-third cash, one-third in six months, and the balance in one year to responsible parties.

Sale under the management of the

STANISLAUS COUNTY HOLSTEIN BREEDERS' ASSOCIATION

Auctioneers, GEO. A. GUE and C. N. CLARK.

Watch for further information in later issues.

Guernseys.

PUREBRED GUERNSEY HEIFERS—Heifer calves and bull calves for sale at reasonable prices and on terms, if necessary. The mothers are wonderfully bred, and with high milk and butterfat yields. The sires have made Guernsey history. Also a few purebred Holstein cows, heifers and a herd sire for sale. Prices and terms on application. If you desire to start with purebreds, now is your opportunity. S. J. Strauss, P. O. Box 62, Modesto, Cal.

FOR SALE — Imp. Guernsey Bull; also a few purebred cows, heifers and young bulls, old enough for service. Reasonable price if taken at once. J. H. Bowles, Box 644, Merced, Calif.

BEEF CATTLE.

STRATHMORE STOCK FARM—Registered and purebred Shorthorn bulls, suitable for range or registered herd sires, some ready for service. Turney Bros., Strathmore, Tulare Co., Cal.

SHORTHORNS—The foremost beef breed—Have a limited number of stock for sale, both sexes. If you wish to start a small herd I can probably supply your needs. T. T. Miller, Hollister, Cal.

RANCHO SAN JULIAN SHORTHORNS—Purebred range bulls, unregistered, for sale. Estate Thos. B. Dibblee, Santa Barbara, or Lompoc, Calif. John Troup, Supt.

ALAMO HERD REGISTERED HEREFORDS (founded by Governor Sparks). Herd and range bulls. Reasonable prices. W. D. Duke, Gazelle, Siskiyou county, California.

THE NEVADA HEREFORD RANCH—Jno. H. Cazier & Son Co., Prop., Wells, Nevada. Reg. Hereford cattle. Breeding stock for sale.

CARRUTHERS FARMS, Live Oak, California. Shorthorn cattle and Berkshire swine of quality and select breeding.

WANTED.—Fifty head of grade Angus heifers. State price, ages and all particulars. Peter Gastorf, Atascadero, Cal.

WM. BRIGGS & SON, Dixon, Cal. Breeders of Hereford cattle and Rambouillet sheep.

SIMON NEWMAN CO., breeders of Registered Herefords, Newman, California.

HEREFORDS — Mission Hereford Farm, J. A. Bunting, Prop., Mission, San Jose, Cal.

REGISTERED HEREFORDS—H. H. Gable, Diamond G Ranch, Esparto, California.

GEORGE WATTERSON — Breeder Registered Herefords. Bishop, California.

REGISTERED SHORTHORNS — Fair Oaks Ranch, Willits, Calif.

SHEEP AND GOATS.

FOR SALE—100 Idaho imported registered Hampshire ewes, three and four years old, bred to lamb in January and February; also 50 last spring lambs. Can be seen at Palo Alto. Reason for selling—coyotes. Chance to get into registered sheep at rock bottom, as no reasonable offer refused. Address 515 American National Bank Bldg., San Francisco.

FOR SALE—1800 head of ewes—850 yearling ewes, mostly Merinos, 500 well-bred Shropshires, 3 to 5 years, balance Merino ewes, 3 to 5 years to lamb immediately. Price $7.00 a head. We have other sheep for sale; any number and lots to suit. E. F. Callaghan, 421 Yosemite Bldg., Stockton, Cal. Phone 208.

F. A. MECHAM ESTATE, Petaluma, Cal.—Breeders and importers of Shropshire, Rambouillets and American Merinos, both sexes. Also Red Polled cattle. Take electric car at Petaluma or Santa Rosa for Live Oak Ranch.

FOR SALE—Rambouillet rams and ewes—purebred; the very highest grade of large smooth body; heavy shearers; the wool and mutton type. Immediate delivery of individual or carload lots. You can find none better or of higher grade. Address Glenn, Cal. Location, 8 miles south Hamilton City, 1 mile west Ordbend. Windell Orchards Co.

DORSETS—ROMNEYS—Dorset ram lambs for sale. John E. Marble, South Pasadena.

HARVEY S. VAN VLEAR, Lodi, Breeder and importer of registered Hampshire sheep.

CALLA GROVE FARM, MANTECA, CAL.—Breeders and importers of Hampshire sheep.

KAUPKE BROS., WOODLAND, CALIF.—Breeders and importers of Hampshire sheep

CARL LINDHEIMER, Woodland, Cal.—Rambouillet Ram lambs for light use.

BULLARD BROS., Woodland, Calif.—Breeders and importers of Rambouillet sheep.

MISCELLANEOUS.

BUTTE CITY RANCH
SHORTHORN CATTLE, SHROPSHIRE Sheep, Berkshire Hogs, Shetland Ponies, Bronze Turkeys, White Plymouth Rocks. Stock for sale at all times. W. B. Dwyer and W. S. Guilford, Box P, Butte City, Glenn county, California.

FOR SALE OR TRADE—Percheron stallion reg. (weight 2000). Will exchange for work horses or cattle. Address Ralph L. Clark, R. F. D. 2, Box 74, Lodi, Cal. Phone 24F4.

REGISTERED BROWN SWISS, carrying best blood of the breed. M. J. Pedrotti, San Rafael, Calif.

OPPORTUNITY FOR THE BUYER!

80 Registered Holsteins 80

At Public Auction Thursday, Dec. 16

State Fair Grounds Sacramento, Calif.

Including some of the most highly bred, highest record females offered in the state this year, among them

A 1038-POUND YEARLY RECORD GRANDDAUGHTER OF KING OF THE PONTIACS, four of her daughters, and her yearly record half-sister and three of her daughters.

A 32-POUND GRANDDAUGHTER OF COLANTHA JOHANNA LAD!

A 27-POUND 3-YEAR-OLD GRANDDAUGHTER OF PRINCE GELSCHE WALKER!

A LARGE NUMBER OF FEMALES WITH RECORDS UP TO OVER 25 POUNDS BUTTER IN 7 DAYS AND UP TO OVER 600 POUNDS IN ONE YEAR.

DAUGHTERS OF SOME OF CALIFORNIA'S GREATEST SIRES!

And many of these females are bred to bulls whose daughters are seldom offered for sale, including KING SEGIS ALCARTRA PRILLY, SIR AAGGIE DE KOL ACME, SIR AAGGIE MEAD, SIR PIETERTJE ORMSBY CANARY, KING KORNDYKE PONTIAC, and SIR AAGGIE HISKE WALKER.

Every animal positively guaranteed to be a breeder;
No Tuberculin Test Certificates furnished.

CONTRIBUTORS TO SALE:
TOYON FARM ASS'N, San Francisco. BRIDGFORD HOLSTEIN CO., Patterson.
FRED W. KIESEL, Sacramento. E. D. BARRY, JR., Daggett.
R. F. FISHER, Carlotta. J. McKINDLEY, Acampo.
ANDERSON & FOGARTY, Sacramento

REMEMBER—That the sale list includes the complete dispersal of the R. F. FISHER and J. McKINDLEY herds.

SALE STARTS PROMPTLY AT 10 A. M.

Auctioneers:
COL. BEN A RHOADES, Los Angeles
COL. JOHN A. DAVIS, Manteca

Management
Calif. Breeders' Sales and Pedigree Co.,
C. L. Hughes, Sales Mgr., Sacramento, Calif.

POSTPONED

The dispersal sale of 160 grade Holsteins announced for Monday, December 6, at Marysville, California, has been postponed indefinitely, owing to the recent heavy rains which have made the roads leading to the Garcia ranch practically impassable.

C. L. HUGHES, Sales Manager
Sacramento, Calif

El Dorado Ranch Ayrshires

Young Service Bulls for Sale
From High-Producing Strains
Tuberculin Tested.
Prices Reasonable—Write for Them, or Come and See Us.
EL DORADO RANCH, H. P. Faye, Owner
F. M. LOHSE, Manager
GRAFTON P. O., Yolo Co., California. Ry. Station, Knight's Landing

WILL BREED A FEW COWS

To the Great Herd Sire
KING PONTIAC PAUL NETHERLAND
A son of THE KING OF THE PONTIACS
The only double century sire

C. L. MORSE, PHONE 1008J Modesto, Calif.

PACHECO'S FINE RECORD.

(Written for Pacific Rural Press by Ned Nicolls.)

The Pacheco Cattle Co.'s show herd has just returned home after finishing a season that was quite remarkable. They showed at Sacramento, Los Angeles, Spokane, Lewiston and Portland. The Calf Herd won at every show except Spokane, and they won with their Young Herd at every show except Portland.

With their senior bull calf they won first and junior Champion at Sacramento and Los Angeles, first at Portland, and second at Spokane and Lewiston. There Senior heifer calf was first and Junior Champion at Sacramento, Los Angeles and Lewiston, first at Spokane and third at Portland.

With their senior yearling heifer they won first and junior champion at Spokane, first at Los Angeles, and second at Sacramento, Lewiston and Portland. They closed the season with a grand total of twenty-four firsts and six Junior Champions.

And herd can well be proud of such a record and Mr. Hawkins can be especially proud of this one because, with one exception, every first was won by cattle of his own breeding. It is such herds as his that are attracting the attention of the world to California as a breeding ground. They are strong, rugged and virile, bred to thrive on the hardships of the range and yet of such quality that by freshing up their working clothes a little, they can step out and win in any company.

APPRECIATION VS. DEPRECIATION.

"In the grain belt, particularly, there is an appreciation in the value of horses rather than a depreciation. For instance, in the spring of 1917, I bought a gelding coming four years old for $140. I worked him steadily for four work seasons and then sold him in July this year for $200. This tallies with the reports of the Farm Management Departments of our western universities, which state that there is a constant appreciation in the value of young horses used on farms throughout the corn belt. Therefore, if the farmer does not wish to raise horses, it is good business for him to buy three-year-olds and work them three or four seasons, as they will do the farm work well and at the same time increase in weight, strength and value. (Tractors won't act this way.)

"I am urging our farmers to breed good horses, and where they have not enough pasture to raise young stock, to breed mules. Mules are saleable at any age. The demand and market for them is as staple as for wheat or hogs." (A. H. Gunder, Horse Ass'n. of America.)

ROWE WINS WITH WORTHY ONES.

It was California day when the Milking Shorthorns were shown at the Pacific International at Portland. J. D. Rowe & Sons of Davis, as usual, were in the money, and top money at that many times. Their great cow, Bellevue Daisy, was first in class, senior and grand champion cow. Gipsy Girl, their junior yearling heifer, first in class, was junior champion female. Altogether they won nine firsts and five seconds. They won first in all the herd classes and first in Get of Sire also.

Among recent sales reported by Rowe & Sons are Westward Clay, sired by Westward Ho, the grand champion at the State Fair this year. This young show bull goes to Wallace Wilson of Bellota. Also Buttercup's Beauty 2d, the first prize junior heifer calf at the State Fair and Pacific International to Hugh McLean of Sunnyside, Wash.

PRIZE GUERNSEY RECORD: 13,227 Lbs. Milk

More to It Than Good Feeding

MILK-PRODUCTION records are not the result of good feeding alone. Fact is, the very process of "forcing" a cow to maximum milk-giving is full of grave dangers to her health unless the milk-making organs are assisted in the rebuilding process.

While primarily a medicine for treating sick cows, the recognized tonic and strengthening effect of Kow-Kare on the organs of production, have caused it to be widely used as a preventive of disorders such as are common to cows.

When disorders do arise—such as Abortion, Barrenness, Retained Afterbirth, Scouring, Lost Appetite, Bunches, you'll find Kow-Kare a reliable, prompt remedy. Its action on the digestive and genital organs is restorative and strengthening.

Kow-Kare is sold by feed dealers, general stores and druggists; 70c and $1.40 packages. Write us for our valuable free book "The Home Cow Doctor."

DAIRY ASSOCIATION CO.
LYNDONVILLE, VT.

NOTE: The trade-mark name has been changed from KOW-KURE to KOW-KARE—a name more expressive of BOTH the PREVENTIVE and CURATIVE qualities of the remedy.

NEVADA NEWS NOTES.

Hon. F. A. Gedney of Elko has moved his residence to Twin Falls, Idaho, in order to be located nearer his extensive livestock interests in northern Nevada and southern Idaho.

A very successful campaign against rodents in the Metropolis section of Elko county this year has given such sucess that the farmers are now formulating plans for another drive next spring.

The preliminary surveys and actual construction has been started on a new irrigation project in Lincoln county. The project is situated below Maywood and Pahranagat Lake, and water is available for 5,000 acres of land.

The dairy industry in the Metropolis district is steadily growing in production and in the number of dairy cattle. Nearly every rancher in the section is milking from four to twenty cows. The cream is shipped via Wells to Elko.

Ranchers on the Newlands Project have asked the officials of the Southern Pacific Company to publish a special rate on hay from Fallon and Fernley of $10 to Los Angeles. Officials of the company have the matter under advisement.

It is expected that Nevada wool growers will receive approximately $75,000 as a refund from wool dealers who handled the 1918 clip under the direction of the Federal Government. The refund to individuals will depend on the prices each grower received for his individual clip.

The Western Honey Corporation of California will soon start to erect a warehouse at the end of Fourth street in Reno. This company asserts that Nevada and the immediate intermountain country produces a very high grade of honey, which attracted them to Nevada to locate their plant.

Stock shipments from Lander county are about complete. About fifty carloads of sheep and cattle per week have gone out during the past six weeks. Most of the marketable stuff has already gone out. Plenty of hay has been raised in this section. In spite of the dry season most of the range stuff is in good condition.

The alfalfa growers of the Newlands Project have organized an association to further the interests of the growers. The ultimate results to obtain are to promote the dairy industry, rather than to sell the hay out of the state. A program of advertising will soon be launched, pointing to the advantages of this section as a desirable location for dairying.

A party of Los Angeles men have lately visited Clark county to locate lands for growing cotton. Much interest concerning cotton growing and development in southern Nevada is be-in shown in southern California and Arizona, and a number of successful growers are now investigating the growing of cotton in the Las Vegas country.

Since many of the stockmen are unable to attend the annual meeting of the state association, usually held in Reno, a series of local meetings will be held starting at Ely about November 10th. It is planned to hold meetings at Pioche, Elko, Austin, Winnemucca, Lovelock, and Fallon. Later meetings will be planned for the southern country.

Statistics reported by Labor Commissioner Ingram show that the average of the wages paid farm labor for 4,500 so employed in the state has increased fully 50 per cent during the 1917-1920 period. Working hours have decreased from 9.9 hours to 9.2 hours per day. The largest increase is in the case of sheepherders, of whom there are about 750. In 1917 their daily wage was $1.95, in 1920 it had increased to $3.33.

W. M. Way & Son of Modesto are a firm of Duroc-Jersey breeders that have kept right along raising red hogs of the very best kind and therefore have not lacked for customers. Among recent sales were 3 bred gilts and 4 service boars. Two of the bred gilts went to the California Barrel Company at Arcata and the rest in single lots. There is always a way to sell hogs like the Ways raise.

OLYMPIC DAIRY FEED

The Value Lies in its Digestible Nutriments

GOOD health, good appetite and good digestion are essential to producing and prolonging the productivity of good milkers. Stinting the feed box cheats the milk pail as well as endangers the strength and foreshortens the life of the animal.

OLYMPIC Dairy Feed contains 1,000 pounds to the ton of the four high concentrates, being a duplicate of the mixture made for the Dairymen's League of New York State during the war. It is a scientific blend of Ground Barley, Ground Oats, Linseed Oil Meal, Cotton Seed Meal, Soybean Meal, Corn Feed Meal, Wheat Bran and Corn Gluten Feed.

OLYMPIC Dairy Feed is guaranteed 20% protein and is actually higher. This protein is over 70% digestible. It will bring your herds to the highest practical point of productivity and keep them there with the least tax upon their vitality.

Therefore, when you buy OLYMPIC Dairy Feed, your dealer is selling you *results*—not merely "stuffing". At the great OLYMPIC Feed Mill and in the field, careful analysis and tests are made to insure those results.

For further information and descriptive circular, address

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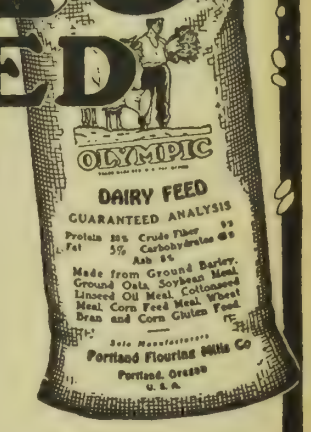
Merchants' Exchange Building.
San Francisco, California.
C. B. SHARP, Agent.



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Treat Your Own Herd as *Dr. David Roberts* Himself Would Treat Them. His Treatment Used Successfully for Past 30 Years.
Easy to Apply—Sure Results

Stamp Abortion Out OF YOUR HERD AND Keep It Out

ASK FOR "The Cattle Specialist"

Sent free on request. Answers every question pertaining to **Abortion in Cows.** Tells how to treat your own herd at small expense. Write

DR. DAVID ROBERTS VETERINARY CO., Inc.
643 Grand Ave., Waukesha, Wis.

ABORTION IN CATTLE

CAN BE TREATED SUCCESSFULLY AND YOUR COWS MADE PROMPT, REGULAR BREEDERS BY

STERILOID

TREATMENT: If STERILOID is used at the first sign of abortion the cow will go her full time and have a healthy calf. If your cows or heifers do not come in season, or fail to get with calf, use STERILOID. Cows get with calf after only one treatment. Write today for **FREE BOOK.** It explains the causes and symptoms of Abortion and tells how to treat Abortion, and make your cows regular, healthy breeders with STERILOID. Also contains letters from breeders who have used STERILOID successfully.

STOP LOSING CALVES

GUARANTEE: We will refund money in every case when **STERILOID FAILS** to make good. **PRICE, $1.00 plus 4c tax. Mailed Postpaid, in plain wrapper.**

MARTIN REMEDY COMPANY, Dept. P, 398-408 Columbus Ave., New York City. Reference—Colonial Bank.

REGISTERED HOLSTEINS

Creamcup Herd offers service bulls and bull calves of 34-lb. breeding. Females offered for foundation stock. Tuberculin tested.

M. M. Holdridge, San Jose, Cal.
R. D. "A," Box 437,
Two miles out North First Street.

JERSEYS

The Cows Without a Fault

TWO-HUNDRED years of careful breeding, with the milk-end always in view, have made Jerseys the ideal dairy breed. Truly they are the cows without a fault.

Jerseys milk earlier and longer—have the shortest "dry" period—thrive anywhere—breed true to type—are willing workers.

Write to the Jersey Information Bureau for the facts about *The Profit Breed* and stories of farmers who are making good with Jerseys.

The American Jersey Cattle Club
324-Y, West 23 St., New York.

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MODESTO.
Registered Holstein Friesians

Prize winners at all the Shows. Inspection invited and satisfaction guaranteed. Write for prices.

R. L. HOLMES, Prop.

LEONARD FARM JERSEYS

Bulls for sale from Register of Merit Cows. Write for information.

W. J. HACKETT,
CERES, CALIFORNIA

PUREBRED JERSEY BULL

Dropped September 9, 1919
Sire—FINANCIER'S REMUS 104,413
Dam—ROMULUS LEGACY LORENE, 294,130
Record 457 lbs. butterfat.

T. B. Purvine & Son
Petaluma, California

Poultry for Profit

ROAST GOOSE AND APPLE SAUCE!

Christmas in many homes is incomplete without them, and for that reason the best season in which to market the goose is the latter part of December, although there is a limited demand all the year.

Goose raising is not so extensively engaged in as duck raising, the conditions under which they can be successfully raised being almost entirely different from those necessary for successful duck raising. The duck, being smaller, can be raised in a more limited space than can the goose, the latter needing free range and water, while the former has been proved to do well without water.

While the goose can not profitably be raised in as large numbers as the duck, still it can not justly be termed unprofitable. There are many places on a farm that are worthless for cultivation that could be utilized with excellent results for goose raising.

Young geese are fattened by placing them in a pen, not too large, so that they will not exercise too much, and by feeding them once a day all they will eat up clean of a moist mash made of one-third shorts and two-thirds corn meal, and two feeds daily of corn with some oats or barley. While fattening young geese they should be kept as quiet as possible; no excitement whatever should disturb them, poultry specialists of the United States Department of Agriculture say. When feeding, approach them quietly, and do not frighten them. At 10 weeks of age, or when the tips of the wings reach the tail, they are ready for market, if they have been heavily fed, and should weigh between 8 and 10 pounds. Most young geese from general farms are sold when they are from 5 to 8 months old.

When young goslings are to be dressed for market, they are killed by sticking them in the mouth with a long-bladed knife and then stunned by hitting them a sharp, quick blow on the head. For dry picking the picker uses a box in front of him about the height of the knees, holding the bird with the left hand and clasping the feet and wings together; he places the head of the bird against the box and holds it in place with the knee. Pick the feathers from the body of the bird, then dampen the right hand and brush the body to remove the down. Leave about 2 inches of feathers on the neck, and also leave feathers on the wings to first joint. Lay the wings against the body of the birds and tie a string around to hold in position. Place the birds, when picked, in cold water for an hour or so to plump them; if they are in the water too long they are liable to bleach and become water-soaked. They are then iced up in barrels ready to ship to market.

COCOANUT MEAL IN THE MASH.

To the Editor: I have found where I can buy some good sweet cocoanut cake meal, and I would like to ask about feeding it to molting hens. What amount would be safe to add to the commercial mash I am using, and which is giving satisfaction as a producer of eggs when fed to hens that are in laying condition? Would it be any advantage to continue to mix it in this mash for an indefinite period? If so, what quantity should be used when fed to layers?—G. W. F., San Francisco.

Examine the guarantee tag on the sack containing the commercial mash and if cocoanut meal is mentioned do not add any, but add a little pure ground flaxseed meal to the mash for the molters. If the mash does not contain any cocoanut cake meal, it would be quite safe to add ten per cent. by weight, for use in feeding to molting hens, but only while they are molting. This material contains a large percentage of fat, and if added to a commercial mash in large quantity the addition results in an excess of vegetable fat, and this excess fat, when fed to hens that are not molting, will nearly always bring on an out-of-season molt that seriously checks egg production, and sometimes causes ill health. For the reason that this material is "in balance" with the average run of commercial mashes, it will not upset the feeding value or ratio to add cocoanut cake meal at any or all times, but because of the amount of fat it contains it would be well to limit the amount to five per cent of the weight of the commercial mash in which it is mixed. There is no doubt that cocoanut cake meal would be used extensively as an ingredient in commercial mashes were it not that when mixed with other feed materials an action takes place a few weeks after mixing which renders it more or less unpalatable; therefore, it is best to prepare only a quantity of mixture that will be used within a month or two.

SONOMA CO. FARM BUREAU EGG-LAYING CONTEST.

At the end of the third week (November 21st) of the Sonoma County Farm Bureau Egg-Laying Contest at Petaluma, the standing of the five highest pens, composed of ten hens each, was as follows:

Owner	No. Eggs
V. H. Guthrie, Petaluma	131
T. G. King, Petaluma	127
Ray Cole, Petaluma	119
S. P. Nielson, Petaluma	113
J. F. Kohnke, Kenwood	112

The following were the high individual hens:

Hen No. & Owner	No. Eggs
200 (J. J. King)	17
159 (T. G. King)	16
217 (J. E. Iddings)	16
225 (J. E. Iddings)	16
416 (V. H. Guthrie)	16
106 (M. D. McLeod)	15
122 (M. S. Baker)	15
164 (T. G. King)	15
245 (W. L. McAllister)	15
253 (Knox Boude)	15
307 (S. P. Nielson)	15
367 (Max Herrernas)	15
418 (V. H. Guthrie)	15
420 (V. H. Guthrie)	15

FEEDING GROWING TURKEYS.

To the Editor: What feed, care and treatment would you suggest for growing turkeys, about 7 months old averaging 8 to 9 pounds? I have a bunch which have not done well. They have until recently been allowed to range in the open on alfalfa, gyp, corn, etc., but they seem to spend most of their time running back and forth. A local authority advised me to confine the turkeys and feed them a mill feed, but it is rather expensive feeding at the rate of $2.80 per 80-lb. sack. I have an abundance of corn on hand, and would like to feed it, if possible. Should turkeys be allowed open range and to have the birds ready for the Christmas trade how would pou feed them for best results?—A. R. E., Turlock.

The practice of running back and forth indicates that this bunch of turkeys have, as it is sometimes expressed by turkey keepers, become "stalled" on the limited variety of feed secured by them on the range. Most likely they have tired of alfalfa and have eaten an excess of grain which has not properly digested and nourished them. They are craving a lighter—more bulky, and more widely varied ration. The mill feed mentioned may be economically fed by mixing with it some cut greens other than alfalfa, or both greens and tender alfalfa if other greens are scarce. If the mill feed contains no salt, dried meat and bone a small amount of these should also be added. We suggest feeding this mixture in limited quantity at regular times in the morning and in the evening. After the morning feed turn them out on the regular range. To put turkeys in market condition for the Christmas trade, two weeks in advance of shipping date confine them in limited quarters for about one-half of the day feeding mostly grain, and allow them to range somewhat during the remainder of the day. At that season they will no doubt be able to pick some growing greens and obtain some insects. Feed some grain near the sleeping quarters toward evening in order to encourage them to come home to roost.

A NEW POULTRY ASSOCIATION.

A large poultry breeders' association has been organized in Alameda county. The new organization has absorbed the membership of the Alameda Poultry Association and will receive other members from various parts of the State. The new organization will hold its show every year in Oakland. Two meetings will be held during the year, one in Sacramento and one in Oakland.

WHITE COMBS.

To the Editor: What is the cause of some of our 9-months-old Rhode Island Reds having almost white combs? The majority are quite normal and in good condition.—J. A. B., Hemet.

Perhaps the pullets with whitish combs are molting heavily, while the others are going through a light molt. January hatched fowls nearly always molt more or less the following fall. The combs of practically all fowls in heavy molt have a more or less white appearance. However, there is a contagious but rare disease of poultry known as white comb or favus. In its early stages it is easily cured by one or more applications of salve made of one part lard and one part powdered sulphur. It appears first as small gray white spots on the comb, wattles, eyelids, and around the ears. In time these spots enlarge and run together forming a scaly crust, at which stage it is difficult to cure. The disease is caused by a fungus known as Achorion schonleinii and it usually starts at a point where the skin has been broken.

SUBSTITUTE FEED FOR GRASSHOPPERS

To the Editor:- My turkeys have oat and barley stubble to run in also alfalfa to run in, but they do not seem to grow as they ought to. They do not get many grasshoppers. What can I give them to make them grow faster?—Mrs. J. H. W., Amsterdam, Merced County.

We believe these turkeys lack an opportunity to secure sufficient insects, grasshoppers, etc. When turkeys cannot find an abundance of insect life on the range, the following mixture will serve as a substitute: Bran or mill run 5 quarts, ground bone 1 quart, meat scrap or flesh meal 1 pint, fine salt 1 level tablespoonful. Keep this mixture in self feeders where the turkeys can readily find it and let them eat it at will. Clabber milk is also a good substitute for insects but as a rule it is not convenient to feed it a sufficient number of times a day to gain the same results that may be obtained from the dry mixture.

Poultry Breeders' Directory

Rate, 4c. per word. Cash must accompany all orders.

SUPERIOR WHITE LEGHORNS — WE BREED THEM.—Order your spring chicks now to insure desirable delivery date. We raise all chicks from our proven producers from OUR OWN YARDS and guarantee them vigorous heavy layers. A card brings full information and catalogue. Bolfing Poultry Farm, Gilroy, Calif.

BABY CHICKS—Stop! Look! Listen! Before you place your order for Single-Comb White Leghorn Baby Chicks, write for my booklet telling you about my large, heavy-laying stock, etc., and price and terms. H. A. Schlotthauer, Exeter, Calif.

BABY CHICKS from good layers. Booking orders now for 1921 delivery: R. I. Reds, Barred Rocks, White Rocks, White Leghorns, Brown Leghorns. Safe arrival guaranteed. Write for circular. Stubbe Poultry Ranch and Hatchery, P. O. Box 67, Palo Alto, Calif.

SANTA CRUZ CHICKS—White, Brown and Buff Leghorns, Anconas, Minorcas, Barred Rocks, Reds, Buff Orpingtons, White Rocks and White Wyandottes. Write for 1921 folder with price list. B. W. Archibald, Soquel, Santa Cruz Co., Calif.

DARK CORNISH Breeding Trios, $25. Our own "Victor" strain, with importations of England's best, bred successfully twenty-six years. W. S. Templeton, Route A, Box 25, Santa Clara, Calif.

WHITE LEGHORN COCKERELS from trapnested hens; guaranteed 250 eggs per year. Cockerel transmits laying qualities. Price, $5.00 to $15.00. A. J. Hill, 311 Eardley Ave., Pacific Grove, Calif.

BARRED PLYMOUTH ROCKS — "Nothing Better in Poultry." Wonderful layers. Choice hens and pullets for sale; also fine cockerels that will improve your flock. Now booking orders for hatching eggs. I have made a specialty of Barred Rocks for over twenty-two years. That's why our birds win at all the leading shows. Catalog free. Chas. H. Vodden, Box 3, Los Gatos, Calif.

WHITE LEGHORN BABY CHIX from heavy-laying Hoganized Stock. Safe arrival of full count, live, strong chix guaranteed. Price list and interesting literature on application. The Pioneer Hatchery, 408 Sixth St., Petaluma, Cal.

CHICKS — EGGS — Hoganized White Leghorns, Brown and Buff Leghorns, Black Minorcas, Rhode Island Reds, Barred Rocks, Anconas, Blue Andalusians. Free circular. Order early. McDonald Poultry Ranch, King Road, San Jose, Calif.

ATKINSON'S PEERLESS ANCONAS lay more and eat less than other breeds. 50 big husky cockerels, $5 and up; 200 pullets, trios, and pens for sale. Hatching eggs. Catalogue free. J. W. Atkinson, Box B, 130 Willard St., San Jose, Cal.

BABY CHIX

We specialize in Rhode Island Red and Black Minorca chix from stock bred for eggs, vigor, color. Any number at popular price. Secure date early. Denton Poultry Yards, Campbell, Cal.

PRUSSIAN HILL POULTRY RANCH—Superb Barred Rock, Black Minorca and Blue Andalusian cockerels. March hatch at $5.00 each. A few extra at $7.50. Pullets at $2.00 each. Geo. I. Wright, Mokelumne Hill, Cal.

WATCH US GROW—"Quality Chicks." We are now booking orders for the season of 1921. White and brown Leghorns, R. I. Reds and Barred Rocks. Order early. E. W. Ohlen, Campbell, Cal.

BABY CHICKS — White Leghorns — 10s, 100's, 1,000's—hatched right in $60,000 brick and concrete hatchery from our selected heavy layers. Pebbleside Poultry Farm, Sunnyvale, Cal.

MAMMOTH BRONZE TURKEYS—Prize winning eastern strain; large bones, vigorous, well marked. Hens, $10; toms, $15 and $20. Mrs. W. S. Adams, Rt. 2, Box 73, Petaluma, Cal.

S. C. WHITE LEGHORN Baby Chicks from our own Bred-to-Lay stock. Now booking for January to July delivery. Our prices are right. Model Poultry Farm, W. C. Smith, Prop., Corning, Cal.

NEWTON POULTRY FARM—White Leghorn Baby chicks from our well-known, carefully selected stock. Best strain. Big plant. Order now for spring delivery. Any number. Los Gatos, Calif., Dept. 1.

GOLDCROFT BUFF ORPINGTONS, Columbian Wyandottes and White Leghorns. Heavy laying strains. Breeders and young stock. Samuel Abrams, Box 13, Los Altos.

MAMMOTH WHITE HOLLAND TURKEYS for sale. Choice hens and Toms from our famous breed of large vigorous turkeys. Earl V. Smith, Loma Vista Ranch, Willows, Calif.

VIGOROUS WHITE PLYMOUTH ROCK Cockerels, farm raised, May hatch; weight 6 to 8 lbs., $6.00, $7.50, $10.00. L. A. Bryan, Planada, Calif.

BARRED ROCKS, WHITE ORPINGTONS—heavy layers; winners at leading shows. Special prices on old and young stock. R. P. Lutzi, 1450 23d Ave., San Francisco.

LARGE NUMBER of Choice Stock Toms and hens; also Geese and Herding Collie Dogs. Stock shipped from St. Helena and San Miguel. John G. Mee, San Miguel, Calif.

HART'S MAMMOTH BRONZE TURKEYS—Large, well-marked, year-old hens. Thrifty young stock of both sexes. Albert M. Hart, Clements, Cal.

FOR SALE—7 Cyphers incubators (400-egg size), all in first-class hatching condition. Meyer Poultry Farm, Rt. A, Box 17A, Modesto, Cal.

MONEY IN TURKEYS? Yes. If you have the right stock and breed. Address A. W. Gauger, Dos Palos, Cal. Breeder of Mammoth Bronze Turkeys.

FOR SALE—300 S. C. White Leghorn pullets, 5 months old, from 227-egg strain. Meyer Poultry Farm, Route A, Box 17A, Modesto, Cal.

CHICKENS, DUCKS, GEESE, GUINEAS, Pea Fowl, Pigeons. Wm. A. French, 545 W. Park St., Stockton, California. Stamps.

PLACE YOUR ORDER NOW for chicks for 1921. Standard varieties. Prices right. Send for circular. Madera Hatchery, Madera, Calif.

BOURBON RED TURKEYS—Buff Orpingtons. The Ferris Ranch, R. 2-144D, Pomona Calif.

WHITE HOLLAND TURKEYS — Breeding stock. H. H. Buhring, Concord.

BOURBON RED TURKEYS—Mrs. Geo. F. Smith, Hardwick, Calif.

RABBITS.

FRENCH SILVER FUR RABBITS—3 mos. old, $3.00. Write for particulars. E. Kaufman, 6320 Herzog St., Oakland, Calif.

S. C. WHITE LEGHORN

Baby Chicks and Hatching Eggs

From 227-egg strain of heavy winter layers. Book your order now for 1921 delivery of guaranteed chicks.

MEYER POULTRY FARM,
Route A, Box 17A, Modesto, Calif.

FOR GREATER EGG PRODUCTION FEED— COULSONS EGG FOOD FULL PARTICULARS IN OUR FREE BOOK "CHICKENS FROM SHELL TO MARKET" Coulson & Co. PETALUMA, CAL.

Oh, You Tex!

By William MacLeod Raine.

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CHAPTER I.

The Line-Rider.

Day was breaking in the Panhandle. The line-rider finished his breakfast of buffalo-hump, coffee, and biscuits. He had eaten heartily, for it would be long after sunset before he touched food again.

Cheerfully and tunelessly he warbled a cow-boy ditty as he packed his supplies and prepared to go.

"Oh, it's bacon and beans most every day,
I'd as lief be eatin' prairie hay."

While he washed his dishes in the fine sand and rinsed them in the current of the creek he announced jocundly to a young world glad with spring:

"I'll sell my outfit soon as I can,
Won't punch cattle for no damn' man."

The tin cup beat time against the tin plate to accompany a kind of shuffling dance. Jack Roberts was fifty miles from nowhere, alone on the desert, but the warm blood of youth set his feet to moving. Why should he not dance? He was one and twenty, stood five feet eleven in his socks, and weighed one hundred and seventy pounds of bone, sinew, and well-packed muscle. A son of blue skies and wide, wind-swept spaces, he had never been ill in his life. Wherefore the sun-kissed world looked good to him.

He mounted a horse picketed near the camp and rode out to a remuda of seven cow-ponies grazing in a draw. Of these he roped one and brought it back to camp, where he saddled it with deft swiftness.

The line-rider swung to the saddle and put his pony at a jog-trot. He topped a hill and looked across the sunlit mesas which rolled in long swells far as the eye could see. The desert flowered gayly with the purple, pink, and scarlet blossoms of the cacti and with the white, lilylike buds of the Spanish bayonet. The yucca and the prickly pear were abloom. He swept the panorama with trained eyes. In the distance a little bunch of antelope was moving down to water in single file. On a slope two miles away grazed a small herd of buffalo. No sign of human habitation was written on that vast solitude of space.

The cowboy swung to the south and held a steady road gait. With an almost uncanny accuracy he recognized all signs that had to do with cattle. Though cows, half hidden in the brush, melted into the color of the hillside, he picked them out unerringly. Brands, at a distance so great that a tenderfoot could have made of them only a blur, were plain as a primer to him.

Cows that carried on their flanks the A T O, he turned and started northward. As he returned, he would gather up these strays and drive them back to their own range. For in those days, before the barbed wire had reached Texas and crisscrossed it with boundary lines, the cowboy was a fence more mobile than the wandering stock.

It was past noon when Roberts dropped into a draw where an immense man was lying sprawled under a bush. The recumbent man was a mountain of flesh; how he ever climbed to a saddle was a miracle; how a little cow-pony carried him was another. Yet there was no better line-rider in the Panhandle than Jumbo Wilkins.

"'Lo, Texas," the fat man greeted.

The young line-rider had won the nickname of "Texas" in New Mexico a year or two before by his aggressive championship of his native State. Somehow the sobriquet had clung to him even after his return to the Panhandle.

"'Lo, Jumbo," returned the other. "How?"

"Fat like a match. I'm sure losin' flesh. Took up another notch in my belt yestiddy."

Roberts shifted in the saddle, resting his weight on the horn and the ball of one foot for ease. He was a slim, brown youth, hard as nails and tough as whipcord. His eyes were quick and wary. In spite of the imps of mischief that just now lighted them, one got an impression of strength. He might or might not be, in the phrase of the country, a "bad hombre," but it was safe to say he was an efficient one.

"Quick consumption, sure," pronounced the younger man promptly. "You don't look to me like you weigh an ounce over three hundred an' fifty punds. Appetite kind o' gone?"

"You're damn whistlin'. I got an ailment, I tell you, Tex. This mo'nin' I didn't eat but a few slices of bacon an' some li'l' steaks an' a pan or two o' flapjacks an' mebbe nine or ten biscuits. Afterward I felt kind o' bloated like. I need some sa'saparilla. Now, if I could make out to get off for a few days—

"You could get that sarsaparilla across the bar at the Bird Cage, couldn't you, Jumbo?" the boy grinned.

The whale of a man looked at him reproachfully. "You never seen me shootin' up no towns or raisin' hell when I was lit up. I can take a drink or leave it alone."

"That's right, too. Nobody lets it alone more than you do when it can't be got. I've noticed that."

"Yu cayn't devil me, boy. I was punchin' longhorns when yore mammy was paddlin' you for stealin' the sugar. Say, that reminds me. I'm plumb out o' sugar. Can you loan me some till Pedro gits around? I got to have sugar or I begin to fall off right away," the big man whined.

The line-riders chatted casually of the topics that interest men in the land of wide, empty frontiers. Of Indians they had something to say, of their diminishing grub supply more. Jumbo mentioned that he had found an A T O cow dead by a water-hole. They spoke incidentally of the Dinsmore gang, a band of rustlers operating in No Man's Land. They had little news of people, since neither of them for three weeks had seen another human being except Quint Sullivan, the line-rdier who fenced the A T O cattle to the east of Roberts.

Presently Roberts nodded a good-bye and passed again into the solitude of empty spaces. The land-waves swallowed him. Once more he followed draws, crossed washes, climbed cow-backed hills, picking up drift-cattle as he rode.

It was late afternoon when he saw a thin spiral of smoke from a rise of ground. Smoke meant that some human being was abroad in the land, and every man on the range called for investigation. The rider moved forward to reconnoiter.

He saw a man, a horse, a cow, a calf, and a fire. When these five things came together, it meant that somebody was branding. The present business of Roberts was to find out what brand was on the cow and what one was being run on the flank of the calf. He rode forward at a slow canter.

The man beside the fire straightened. He took off his hat and swept it in front of him in a semi-circle from left to right. The line-rider understood the sign language of the plains. He was being "waved around." The man was serving notice upon him to pass in a wide circle. It meant that the dismounted man did not intend to let himself be recognized. The easy deduction was that he was a rustler.

The cowboy rode steadily forward. The man beside the fire picked up a rifle laying at his feet and dropped a bullet a few yards in front of the advancing man.

Roberts drew to a halt. He was armed with a six-shooter, but a revolver was of no use at this distance. For a moment he hesitated. Another bullet lifted a spurt of dust almost at his horse's feet.

The line-rider waited for no more definite warning. He waved a hand toward the rustler and shouted down the wind: "Some other day." Quickly he swung his horse to the left and vanished into an arroyo. Then, without an instant's loss of time, he put his pony swiftly up the draw toward a "rim-rock" edging a mesa. Over to the right was Box Canyon, which led to the rough lands of a terrain unknown to Roberts. It was a three-to-one chance that the rustler would disappear into the canyon.

The young man rode fast; putting his bronco at the hills with a rush. He was in a treeless country, covered with polecat brush. Through this he plunged recklessly, taking breaks in the ground without slackening speed in the least.

Near the summit of the rise Roberts swung from the saddle and ran forward through the brush, crouching as he moved. With a minimum of noise and a maximum of speed he negotiated the thick shrubbery and reached the gorge.

He crept forward cautiously and looked down. Through the shin-oak which grew thick on the edge of the bluff he made out a man on horseback driving a calf. The mount was a sorrel with white stockings and a splash of white on the nose. The distance was too great for Roberts to make out the features of the rider clearly, though he could see the fellow was dark and slender.

The line-rider watched him out of sight, then slithered down the face of the bluff to the sandy wash. He knelt down and studied intently the hoof-prints written in the soil. They told him that the left hind hoof of the animal was broken in an odd way.

Jack Roberts clambered up the steep edge of the gulch and returned to the cow-pony waiting for him with drooping hip and sleepy eyes.

"Oh, you Two Bits, we'll amble along and see where our friend is headin' for."

He picked a way down into the canyon and followed the rustler. At the head of the gulch the man on the sorrel had turned to the left. The cowboy turned also in that direction. A sign by the side of the trail confronted him.

This is Pete Dinsmore's Road—Take Another.

"The plot sure thickens," grinned Jack. "Reckon I won't take Pete's advice today. It don't listen good."

He spoke aloud, to himself or to his horse or to the empty world at large, as lonely riders often do on the plains or in the hills, but from the heavens above an answer dropped down to him in a heavy, masterful voice:

"Git back along that trail pronto."

Roberts looked up. A flat rock topped the bluff above. From the edge of it the barrel of a rifle projected. Behind it was a face masked by a bandana handkerchief. The combination was a sinister one.

If the line-rider was dismayed or even surprised, he gave no evidence of it.

"Just as you say, stranger. I reckon you're callin' this dance," he admitted.

"You'll be lucky if you don't die of lead-poisonin' inside o' five minutes. No funny business! Git!"

The cowboy got. He whirled his pony in its tracks and sent it jogging down the back trail. A tenderfoot would have taken the gulch at breakneck speed. Most old-timers would have found a canter none too fast. But Jack Roberts held to a steady road gait. Not once did he look back—but every foot of the way till he had turned a bend in the canyon there was an ache in the small of his back. It was a purely sympathetic sensation, for at any moment a bullet might come crashing between the shoulders.

Once safely out of range the rider mopped a perspiring face.

"Wow! This is your lucky day, Jack. Ain't you got better sense than to trail rustlers with no weapon but a Sunday-school text? Well, here's hopin'! Maybe we'll meet again in the sweet by an' by. You never can always tell."

CHAPTER II.

"I'll be Seventeen, Coming Grass."

The camper looked up from the antelope steak he was frying, to watch a man cross the shallow creek. In the clear morning light of the Southwest his eyes had picked the rider out of the surrounding landscape nearly an hour before. For at least one-fourth of the time since this discovery he had been aware that his approaching visitor was Pedro Menendez, of the A T O ranch.

"Better light, son," suggested Roberts.

The Mexican flashed a white-toothed smile at the sizzling steak, took one whiff of the coffee and slid from the saddle. Eating was one of the things that Pedro did best.

"The ol' man—he sen' me," the boy explained. "He wan' you at the ranch."

Further explanation waited till the edge of Pedro's appetite was blunted. The line-rider lighted a cigarette and casually asked a question.

"Whyfor does he want me?"

It developed that the Mexican had been sent to relieve Roberts because the latter was needed to take charge of a trail herd. Not by the flicker of an eyelash did the line-rider show that this news meant anything to him. It was promotion—better pay, a better chance for advancement, an easier life. But Jack Roberts had learned to take good and ill fortune with the impassive face of a gambler.

"Keep an eye out for rustlers, Pedro," he advised before he left. "You want to watch Box Canyon. Unless I'm 'way off, the Dinsmore gang are operatin' through it. I 'most caught one red-handed the other day. Lucky for me I didn't. You an' Jumbo would 'a' had to bury me out in the lone prairee."

Nearly ten hours later Jack Roberts dismounted in front of the white-washed adobe house that was the headquarters of the A T O ranch. On the porch an old cattleman sat slouched in a chair tilted back against the wall, a rundown heel of his boot hitched in the rung. The wrinkled coat he wore hung on him like a sack, and one leg of his trousers had caught at the top of the high boot. The owner of the A T O was a heavyset, powerful man in the early fifties. Just now he was smoking a corncob pipe.

The keen eyes of the cattleman watched lazily the young line-rider come up the walk. Most cowboys walked badly; on horseback they might be kings of the earth, but out of the saddle they rolled like sailors. Clint Wadley noticed that the legs of this young fellow were straight and that he trod the ground lightly as a buck in mating-season.

"He'll make a hand," was Wadley's verdict, one he had arrived at after nearly a year of shrewd observation.

But no evidence of satisfaction in his employee showed itself in the greeting of the "old man." He grunted what might pass for "Howdy!" if one were an optimist.

Roberts explained his presence by saying: "You sent for me, Mr. Wadley."

"H'm! That durned fool York done bust his laig. Think you can take a herd up the trail to Tascosa?"

"Yes, sir."

"That's the way all you brash young colts talk. But how many of 'em will you lose on the way? How sorry will they look when you deliver the herd? That's what I'd like to know."

Jack Roberts was paying no attention to the grumbling of his boss—for a young girl had come out of the house. She was a slim little thing, with a slender throat that carried the small head like the stem of a rose. Dark, long-lashed eyes, eager and bubbling with laughter, were fixed on Wadley. She had slipped out on tiptoe to surprise him. Her soft fingers covered his eyes.

"Guess who!" she ordered.

"Quit yore foolishness," growled the cattleman. "Don't you-all see I'm

talking business?" But the line-rider observed that his arm encircled the waist of the girl.

With a flash of shy eyes the girl caught sight of Roberts, who had been half-hidden from her behind the honeysuckle foliage.

"Oh! I didn't know," she cried.

The owner of the A T O introduced them. "This is Jack Roberts, one of my trail foremen. Roberts — my daughter, Ramona. I reckon you can see for yorself she's plumb spoiled."

A soft laugh welled from the throat of the girl. She knew that for her at least her father was all bark and no bite.

"It's you that is spoiled, Dad," she said in the slow, sweet voice of the South. "I've been away too long, but now I'm back I mean to bring you up right. Now I'll leave you to your business."

The eyes of the girl rested for a moment on those of the line-rider as she nodded good-bye. Jack had never before seen Ramona Wadley, nor for that matter had he seen her brother Rutherford. Since he had been in the neighborhood, both of them had been a good deal of the time in Tennessee at school, and Jack did not come to the ranch-house once in three months. It was hard to believe that this dainty child was the daughter of such a battered hulk as Clint Wadley. He was what the wind and the sun and the tough Southwest had made him. And she—she was a daughter of the morning.

But Wadley did not release Ramona. "Since you're here you might as well go through with it," he said. "What do you want?"

"What does a woman always want," she asked sweetly, and then answered her own question. "Clothes — and money to buy them—lots of it. I'm going to town tomorrow, you know."

"H'm!" His grunt was half a chuckle, half a growl. "Do you call yoreself a woman—a little bit of a trick like you? Why, I could break you in two.

She drew herself up very straight. "I'll be seventeen, coming grass. And it's much more likely, sir, that I'll break you—as you'll find out when the bills come in after I've been to town."

With that she swung on her heel and vanished inside the house.

The proud, fond eyes of the cattleman followed her. It was an easy guess that she was the apple of his eye.

But when he turned to business again his manner was gruffer than usual. He was a trifle crisper to balance the effect of his new foreman having discovered that he was as putty in the hands of this slip of a girl.

"Well, you know where you're at, Roberts. Deliver that herd without any loss for strays, fat, an' in good condition, an' you won't need to go back to line-ridin'. Fall down on the job, an' you'll never get another chance to drive A T O cows."

"That's all I ask, Mr. Wadley," the cowboy answered. "An' much obliged for the chance."

"Don't thank me. Thank York's busted laig," snapped his chief. "We'll make the gather for the drive tomorrow an' Friday."

(To be continued.)

Home Circle Department

HIGHWAY TREES.

(Written for Pacific Rural Press.)

It is reported that the next big drive of the State Automobile Association will be for the planting of trees along the state highway. Here surely is something that ought to appeal to all of us. We are getting some wonderful roads in California, and, with the good roads amendment carried, we are to have more of them. That is, we are getting a lot of fine roadbeds. Mile on mile—hundreds of miles—of concrete, but the

Concrete Highway Needs Beauty Touch.

A concrete highway is a fine thing to travel over, but we will leave it to you if it isn't a bleak, unlovely thing as it stretches away ahead of you through a treeless country side. It is a mighty useful thing, but to make it a thing of beauty and an unalloyed joy forever it needs to be lined with trees. When all our hundreds of miles of permanent roadways are bordered with trees, California will certainly become the paradise she has been cracked up to be. Piece-meal plantings here and there are enough to indicate what might be. Ever drive over—one is tempted to say through—the Kearney Boulevard at Fresno? Its immense eucalyptus trees arching the road and interspersed with palms and oleanders make it a veritable fairy land drive—a full-grown example of what might be all over the state. Three or four years ago a group of public-spirited men in Sacramento secured the planting of trees along the Auburn Boulevard for several miles out of that city. Those trees are beginning to make a brave showing already—promise of a beautiful highway soon to be. What has been done in a few spots ought to be done everywhere, but will not be for a long time to come if left to local and spasmodic effort.

We need state-wide organization and systematic effort. That is what the Auto Association is and can give us. Dominated by men used to doing big things in a big way, and with a reputation for landing what it goes after, it would seem just the ticket for this big job.

What Trees Shall We Plant?

Given an organization big enough to actually do the planting, what shall they plant? Naturally trees will be chosen for various localities with respect to soil conditions and climate, but beyond this, shall we go in just for beauty, or shall we attempt to add to beauty, utility?

If this were Europe there would be no question about it. Whatever was planted would be capable of returning some revenue. It is said that most of the beautiful Black Forest in Germany is, or was, owned by municipalities that have derived a large and steady income from the sale of wood. But so skillfully has the replanting been handled that, for all the use made of it, there is more forest and it is more beautiful than a hundred years ago. I am told that the municipality of Orsa in Sweden furnished a really good education to all its children and a free telephone service for each village, and yet the inhabitants pay not a penny of taxes. The entire municipal revenue is derived from trees grown by the municipality. As you know, in many parts of Europe the roadsides are lined with fruit trees from which the public derives both pleasure and profit.

Why not, in some localities, anyway, adapt the thrifty policy of our European cousins? If all the miles of highway suitable to their growth were lined with English walnuts, for example? Let some statistical fiend figure out how many sacks of nuts the state would be harvesting in a few years. And the walnut is a beautiful tree beside. I know a mile of eucalyptus along a country road where the trees have been topped back twice within ten years, each time furnishing a goodly supply of wood, and without marring the beauty of the trees except for very short intervals after each topping. It is quite possible that to a large extent idealism and utilitarianism might wed successfully and dwell happily ever after along our country roads.

Save as Well as Plant.

There are great stretches of road in this state where we will never need to plant if we will but spare what nature has already given us. Many of our mountain roads are perfectly flanked with magnificent trees and al-

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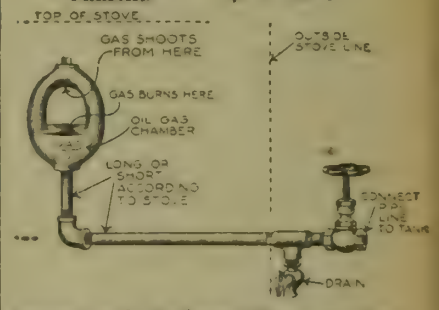

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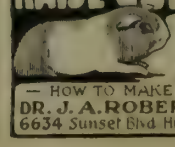

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ways will be if we stay the blighting hand of commercialism. But in some regions, if we do not act quickly, it will be everlastingly too late. Take Humboldt, for example. For a half hour you drive through a forest primeval, too awe-inspiring for words, and then you come out into a bleak, ugly "clearing," where commercialism has shamefully desecrated nature for so many feet of lumber or grape stakes. In a few years, if the social crime continues, what has been one of the most beautiful roads on earth—the one winding among Humboldt's mighty redwoods—will be but a dreary way over which to get to Eureka. In the name of humanity, if not of humanity's God, a strip of those hoary giants, on either side of the road, wide enough to cut the devastation spread by the saw mill, should be saved.

It is a big task the Automobile Association is setting for itself. A big task and an altogether worthy one. When the plan is perfected and the drive begins, let's all be ready to boost for it with all our might.

WOMEN STOCKMEN.

(Written for Pacific Rural Press.)

The writer has visited at least five prominent stock farms in California headed by women. There doubtless are many more—if not prominent, at least successful ones—and to judge from recent purchases, more prominent ones may soon appear on the map. Just the other day a woman, at a Holstein sale, invested over $2200 in purebreds. She did it in such a way as to reveal the fact that she had a definite aim in view, knew much about blood lines, and enough about type to make her anything but an easy mark for the auctioneer. It was no bargain counter rush with her. She knew what she wanted and would have nothing else. By the way, a daughter of this woman walked off with some high honors this fall in both calf and pig clubs. The chances are good that before long another prominent stock farm headed by a woman will be added to the list.

And why not? The maternal instinct (paradoxical as it may seem, every good herdsman acquires it) is essential to the successful development of highly organized purebred stock, and woman does not have to acquire it. The understanding of pedigrees too seems to be natural to the feminine mind for it is said that one of the best authorities in the United States is a Washington woman. And when it comes to business management essential to successful stock breeding—well, without fear of successful contradiction, we assert that among the most efficiently managed plants are some of these that are managed by women, and in at least one of them, considerable of the actual labor as well as the management falls on the little woman, who ranks among California's pioneer Holstein breeders and whose name is surely to go into the breed's hall of fame.

KITCHEN HELPS.

Add a pinch of salt to the white of egg before beating and the whites will beat up much quicker.

To prevent the cream pitcher from dripping, rub a little butter directly under the spout.

Lemons will keep a long time if covered with cold water and kept in a cool place.

Keep a shallow box with a piece of scouring brick in one of the shelves or drawers of the sink for polishing the steel knives when washed. Use a cork to rub the brick on.

Mint jelly is a very delicious accompaniment for meats and is made by adding to the required amount of apple juice, a few fresh mint leaves, or a few drops of mint extract. After a few moments boiling, strain the juice and add sugar in correct proportions and boil for a few moments. Just before removing from the fire, add a few drops of green fruit coloring.

The juice of red raspberries added to apple juice will make a delicious jelly, satisfactory both in color and flavor. After the juices are combined, the method of making is just like any jelly.

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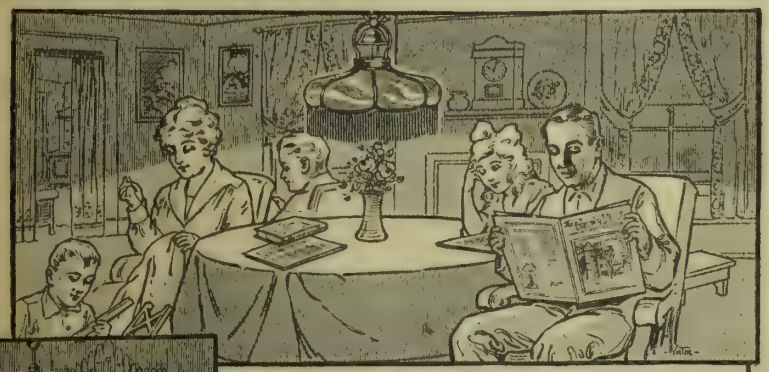

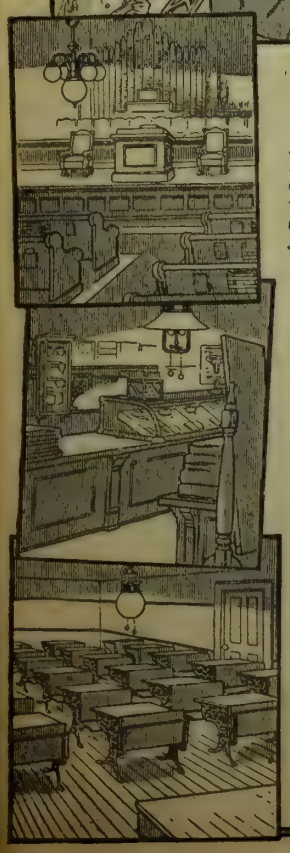

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THE MARKET REPORTS

SAN FRANCISCO

San Francisco, December 1, 1920.

WHEAT.

The wheat market here, as elsewhere throughout the country, has declined considerably and the downward movement still continues unchecked with still lower prices predicted for next week. But few actual sales are recorded, buyers wishing to let the market hit bottom before making any extensive purchases.

Wheat, spot .....$2.50@2.60

OATS.

Quotations are lower although actual buying is at a minimum and the market continues very dull. Oats along with other grains are expected to decline still further before the week is out.

Red Feed, ctl. .....$2.25@2.35

BARLEY.

Barley prices are also quoted at lower figures as to the result of the week slump in the grain market. Although some trading is futures in reported, outside of call board activity the market is quiet.

Feed Barley, ctl. .....$1.80@1.90

CORN.

A considerable amount of the new crop is arriving in San Francisco and corn prices are all lower. Some sales are being made. Corn is thought to be in a little stronger position as regards demand than the grains.

Egyptian, white ..... Nominal
do, brown .....$2.25@2.30
California yellow .....$2.10@2.35

FEEDSTUFFS.

Although some quotations are lower the feedstuffs market has not been affected as much as was thought probable due to the slump in grains. Very little middlings or mill runs have been offered duuring the week.

Rolled Barley, per ton .....$47.00@48.00
Rolled Oats .....$55.00@56.00
Alfalfa Products .....$39.00@40.00
Cracked Corn .....$56.00@57.00
Bran .....$53.00@54.00
Mill Run $64.00
Poultry Scratch, ctl. $3.55
Cocoanut Meal Cake .....$58.00@60.00

HAY.

Prices are still unchanged and practically all grades are moving strongly with alfalfa products leading. The hay market seems to continue steady, despite the recent slump in grains all over the country. Arrivals last week, while still less than normal, were double the receipts of the week previous, which were only 565 tons. Last week 1,193 tons arrived. Because of the fact that hay prices throughout the war period were not inflated as were grain prices, and the hay prices remained closer to the actual cost of production than prices of many other commodities, it is not thought that the hay market will suffer any such sensational declines as have been seen in the grains and in other products. The bulk of this season's crop of hay continues to remain in the hands of the farmers. Prices quoted f. o. b. San Francisco, less $1.00 per ton commission charges:

Wheat, hay, new .....$28.00@29.00
Tame oat, new .....$24.00@27.00
Wild oat, new .....$18.00@20.00
Barley .....$17.00@20.00
Alfalfa, 2nd cutting .....$22.00@25.00

RICE.

Rice is moving very slowly, but there is a fair demand of California choice rice, which is quoted this week at a slightly higher figure.

California Fancy, ctl. $5.75
do, Choice $5.50
Southern Honduras, long grain $9.25
China, No. 1, double mat $8.50
Blue Rose, fancy $7.25
Fancy Head (Philips & Co.) $10.00
California Japanese, No. 1 .....$5.75
do, No. 2 ..... $5.50

FRESH FRUITS.

There are still a few consignments of strawberries arriving, but their price has declined with a poor demand. Raspberries and blackberries are all finished. Casabas are about done and the price on them is nominal as few sales have been made during the latter part of the week. Grapes are also almost finished, except for the white varieties, which are not commanding high prices. Large quantities of the white grapes, however, continue to pour in. There have been some heavy shipments of cranberries during the week. Among the apples Spitzs are the only grade arriving in any considerable quantity.

Apples: Wagner's, 40-lb. box $2.00
do, Spitzenberg, Oregon .....$2.50@3.00
do, Jonathan .....$2.50@3.00
do, Bellflowers, Watsonville...$1.50@2.00
do, Newtown Pippins .....$2.00@2.25
Pears (52-lb. box) .....$2.00@3.50
Strawberries, 6 12-oz. boxes ....$1.25@1.50
Casaba, crate .....Nominal
Grapes, crate (20 lbs. net) .....$1.25@2.00
Cranberries, box. .....$5.00@5.50
do, bbl. ..... $20.00@21.00

POULTRY.

The market is very quiet with an oversupply of both Eastern and local. The demand for all grades fell off sharply the day following Thanksgiving. Prices are all down.

Broilers small, alive, per lb. .....50@55c
do, large .....47@50c
Hens, mixed color .....30@35c
do, Leghorns .....30@35c
Roosters, young .....30@35c
do, old 23c
Friers .....40@42c
Squabs .....70@80c
Geese .....35@40c
Ducks .....35@40c
do, old .....35@38c
Belgian Hare, live .....20@25c
do, dressed .....24@30c
Jack Rabbits .....Nominal
Turkeys, young, large, lb. .....45@50c
do, old, lb. 40c
do, dressed, lb. .....50@55c

BUTTER.

An easier tone with some lack of buying interest characterizes the market and prices are generally lower. But little trading has been transacted on the street since the holiday demand was largely taken care of prior to Thanksgiving. Dealers report the market in fair condition.

	Thu.	Fri.	Sat.	Mon.	Tu.	Wed.
Extra	..	51	..	48½	51	51
Prime 1sts ..	..	..	..	..	..	..
Firsts	..	..	..	..	..	..

CHEESE.

Slight attention is being paid to the cheese market and active trading earlier in the week has apparently filled all wants. With California Young America fancy on the market again, there has been some inquiry for California firsts and Oregon Triplets, but sales of these varieties have not been large.

California Flats, fancy, lb. 30c
do, Firsts .....Nominal
Oregon Triplets 26c
California Y. A., fancy 31½c
do, Y. A., fancy 32½c
Full Cream Jack 29c

EGGS.

Heavy shipments are being made East from Petaluma, and although eggs seem to be plentiful on the local market, prices advanced at the week's close after the lower prices of the first part of the week.

	Thu.	Fri.	Sat.	Mon.	Tu.	Wed.
Extra	..	77	..	75	76	80½
Ex. Pullet ..	..	63	..	60½	62½	67½
Undersized ..	..	58	..	59½	60	64

HONEY.

The extract varieties are not moving. Conditions and prices are the same and no quantity of comb has arrived yet.

Water White (extracted) .....11@13
White .....13@15c
Amber Alfalfa .....10@12c
Light Amber (comb) .....25@30c

POTATOES, ONIONS, ETC.

Vegetables are arriving well but moving slowly with prices unchanged. Cauliflower has made its appearance on the market. Idaho potatoes are coming in strong, with shipments increasing daily. Local shipments of potatoes from up river are lighter, however. Potato prices have veered off about 10 cents. Onions are moving slowly.

Turnips $1.00
Beans, green .....8@10c
Carrots, per sack .....$1.00@1.25
Lettuce, local, doz. ....25@30c
Cucumbers, Alameda, large box ..$1.00@1.75
Tomatoes, Alameda, large box.... 75c@1.50
Summer Squash, box 35-40 lbs... $1.25@1.75
Potatoes, New River, cwt. .....$1.50@2.00
Onions, yellow, sack .....50@80c
do, Red ..... Nominal
Green Onions, box, 25 lbs. .....$1.50@1.75
Celery, crate ..... $3.00@3.25
Cauliflower, doz. .....60@65c

BEANS.

Owing to excessive rains and frost damage the choice quality of beans raised on the Sacramento and San Joaquin rivers is very hard to obtain. Consequently most pinks, large whites, cranberries and reds will have to be sold on No. 1 grade. The market is quiet.

Red Kidneys .....$10.00@10.50
Bayos .....$11.00@11.25
Blackeyes .....$5.75@6.00
Cranberries .....$6.00@6.25
Red Mexican .....$5.75@6.50
Pinks .....$5.75@6.00
Large Whites .....$4.25@4.50
Small Whites .....$4.40@4.60
Limas, S. F. prices .....$7.20@7.30
Garbanzoes .....$4.90@6.50

DRIED FRUITS.

The dried fruit market is unchanged, the situation as regards prices and market conditions remaining the same.

Apricots.

Extra fancy Moorpark, lb. 30c
Fancy Moorpark, lb 23c

Growers Quality.

Growers' quality—Fancy, lb. 26½c
do, lb. 24½c
do, Choice lb..... 22½c
do, Slabs, lb.....20c
do, Standards, lb. 18c

Raisins—The following prices have been established as the opening prices of the California Associated Raisin Company for the 1920 crop of raisins.

Muscat, Sun Maid, seeded, pkg, 36-16s. 20½c
do, Fancy ..36-16s, 20½c; 48-12s, 15¾c
Bulk, seeded, Baker's Sun Maid, 25-lb. 19½c
do, Fancy Sun Maid, 25-lb. boxes,.... 20c
do, 4-crown, recleaned, lb. 23½c
Loose, 1-crown, recleaned, lb. 19½c
Layers, 3-crown, flat pack, 5-lb. box..$1.30
do, 3-crown, flat pack, 5-lb. box..$1.30
Clusters, 4-crown, flat pack, 20-lb. box $4.70
do, 4-crown, flat pack, 5-lb. box..$1.40
Sun Maid, 100-lb. boxes $20.50
Thompson Seedless, Sun Maid, recleaned, lb. 20c
do, Sun Maid, bakers, lb. 21c
Sultanas, Sun Maid, recleaned, lb. 19¾c
do, Sweat-box, layers, lb. 18½c

..Figs—Following prices have been established as the opening prices for the 1920 crop of dried figs.

White Adriatic, 12-10 oz. $1.25; fancy, $1.30
do, 12-8 oz. .....$2.00; fancy, $2.05
do, 50-6 oz. .....$3.10; fancy, $3.20
do, 70-4 oz. .....$3.30; fancy, $3.40
Adriatic, bulk, Standard, 50-lb. boxes, lb. 9c
do, bulk, fancy, 50-lb. boxes, lb. 13c
Black Mission, Standard, 50-lb. boxes, lb. 7c
do, Fancy, 50-lb. boxes, lb. 12c
Prices f. o. b. Fresno.

(Peach Growers, Inc., prices f. o. b. Fresno.)

Peaches.—Following prices have been established as the opening prices of the California Peach Growers for the crop of dried peaches.

Yellows, Standard, lb 15½c
do, Fancy, lb. 17½c
do, Extra fancy, lb. 18½c
do, Slabs, lb. 15¼c
Muirs, Standard, lb. 15¾c
do, Fancy, lb. 18¼c
do, Extra fancy, lb. 19½c
The above prices are bulk basis.
Shipment: September, October, November.
Seller's option. The above prices are guaranteed against Association decline until January 1, 1921.

Prunes—Following prices have been established as the opening prices of the California Prune and Apricot Growers, Inc., for the 1920 crop of Prunes.

(Calif. Prune and Apricot Assn., f. o. b. California.)

Sunsweet Brand, 20-30s, flat, lb. 25c
do, 30-40s, bulk, lb. 16c
do, 40-50s, bluk, lb. 15c
do, 50-60s, bulk, lb. 12c
do, 60-70s, bulk, lb. 11c
do, 70-80s, bulk, lb. 10c
do, 80-90s, bulk, lb. 9c
do, 90-100s, bulk, lb. 8½c

First half September shipment, ½c premium; last half September shipment, ¼c premium. The above prices apply only to contracts already issued.

SPECIAL CITRUS REPORT.

Los Angeles, December 1, 1920.

The last of the Valencia oranges in the Eastern markets, totaling about twenty cars, will be cleaned up this week. The Valencia market has held up in splendid shape and the fruit has been giving entire satisfaction. Few new crop navels reached the Eastern market in time for the Thanksgiving trade. The only car reported in the auction was sold in New York, $7.40 to $8.50 per box. There is no life to the lemon market. F. o. b. quotations are on a basis of $2.00 to $2.50 per box.

CALIFORNIA FARM BUREAU MARKETING ASS'N.

REPORT OF SALES.

Tulare, November 23, 1920.—87, 184, $13.45, E. B. Miller; 70, 234, $13.10, J. D. Biddle; 61, 212, $13.05, J. D. Biddle; 88, 200, $13.05, Donaghee; 70, 237, $12.75, J. D. Biddle; 76, 214, $12.00, Virden Packing Co.; 32, 343, $11.00, J. D. Biddle; 1, 110, $11.00, J. D. Biddle; 90, 165, $10.75, Holaday Bros. Seven cars sold, 48 consignors.

Visalia, Nov. 24, 1920.—78, 200, $13.50, Jas. Donaghee; 54, 200, $13.35, L. A. Packing Co.; 62, 237, $13.10, Jas. Donaghee; 39, 155, $12.35, L. A. Packing Co.; 14, 290, $12.35, L. A. Packing Co.; 85, 225, $11.50, H. A. Frame; 29, 124, $11.50, J. F. Nall; 10, 327, $11.00, Jas. Donaghee. Five cars sold, 21consignors.

Hanford, Nov. 26, 1920.—86, 200, $12.20, J. D. Biddle; 72, 216, $12.10, Virden Packing Co.; 38, 219, $12.05, Virden Packing Co.; 39, 198, $11.80, Virden Packing Co.; 5, 310, $11.10, Virden Packing Co.; 25, 155, $11.05, E. B. Miller; 6, 316, $9.25, J. D. Biddle. Three cars sold, 22 consignors.

LOS ANGELES

Los Angeles, November 30, 1920.

BUTTER.

There was a weaker tone and less active movement in this market the past week. Receipts picking up. For the week, 276,800 pounds. The recent good rains north of us starting the grass and the production is beginning to show an increase. Extras are in very good demand, but 3c lower than a week ago here in Los Angeles and 6½c lower in San Francisco. Chicago and New York went off 3½ cents during the week. Low grades are not only lower but slow sale at the decline. We quote:

California extra creamery 53c
do, prime first 51c
do, first 49c
These prices are 14c lower than a year ago.

EGGS.

There is little new to note in this market from a week ago. A demand fairly good the past week, but with Thanksgiving past and the receipts picking up, extras went off 1c during the week and pullets 3c. Case count unchanged. San Francisco declined 3c on extras the same time, while Chicago and New York are unchanged from a week ago. Compared with a year ago prices are 2c lower on extras, but 6c higher case count and 3c higher on pullets. Receipts by rail for the week, 511 cases. We quote:

Fresh ranch, extras 75c
do, case count 73c
do, pullets 65c

POULTRY.

The Thanksgiving demand having been satisfied and the carryover heavy, the market the past week has been quiet. Hens are lower and slow sale at the decline. Heavy broilers are also off a little and demand only fair. Friers slow sale. Turkeys and ducks steady and in fair demand.

Broilers, 1 to 1¼ lbs. 38c
do, 1¼ to 1¾ lbs. 47c
Friers, 2 to 3 lbs. 40c
Hens 32c
Roosters (soft bone) 3 lbs. and up.....33c
Ducks .....28@32c
Turkeys .....43@45c
Geese 25c

FRUITS.

Apples made up most of the offerings the past week, if cold storage stocks be excepted. Offerings of apples fairly good, but not excessive, and meeting with a very good demand at steady prices. We quote from growers:

Bellfleurs, 3¾@4 tiers .....$1.40@1.50
do, Newtown Pippins, 3½@4 tiers .....$1.75@2.00
do, A. B. C. grades, 3½@4 tiers ..... $1.40@1.50
do, Banana, lb. .....7@9c
do, Jonathan, lb. .....5½@6½c
do, Delicious, lb. .....6@7c
do, Black Twigs, lb. .....4@6c
do, Winesaps, lb. .....5@5½c

VEGETABLES.

But few changes to note in this market the past week. Receipts off green stuff are getting lighter every week and the tone of the market firmer. Potatoes continue to come in quite freely and the market is a little lower under the increased offerings, but demand fairly good at the decline. Onions dull but unchanged. Peas coming in more freely and lower, but demand fair. Wax and green string beans steady, but Kentucky Wonders higher, and demand fair. Summer squash steady and in fair demand. Tomatoes selling very well at old prices. Sweet potatoes steady and demand fair. Celery dull, but unchanged. Lettuce steady and in good demand at quotations. Cauliflower selling very well at last week's prices. Green peppers steady and in very good demand.

Potatoes, local, cwt. .....$1.75@2.00
do, Northern, cwt. .....$2.00@2.25
do, Idaho Russett, cwt. ....$$2.00@2.05
Sweet Potatoes, lb. .....3@3½c
Cauliflower, local crate.....25@40c
Celery, pony crate .....$2.00@2.25
do, Northern, crate .....$3.00@3.50
Onions, Stockton, white, cwt. ....$1.25@1.50
do, yellow, cwt. .....90c@1.00
do, Australian Brown, cwt. ..$1.05@1.10
do, local, crate .....40@50c
Lettuce, crate .....40@50c
Rhubarb, per 30-lb. box .....$1.15@1.25
Peas, lb. .....10@12c
Carrots, bunches, ...30@35c
Summer Squash, local, lug .....$1.00@1.25
String Beans, green, lb. .....7@9c
do, wax, lb. .....7@9c
do, Kentucky, lb. .....10@11c
Cucumbers, lug. .....$2.00@2.75
Tomatoes, home-grown, No. 1 lug ..75c@1.00
do, No. 2 .....25@35c
Bell Peppers, lb. .....3@4c
do, Chile, lb. .....3@4c

BEANS.

It is still quiet in this market. There was some little doing in limas the past week at quotations and a fair movement in blackeyes and pinks. Whites, however, continue as dull as ever.

Limas, per cwt. $6.00
Large whites, per cwt. .....$4.50@5.00
Small white, per cwt. .....$3.00@3.25
Pink, cwt. .....$5.35@5.50
Blackeyes, cwt. .....$5.30@5.35

HAY.

There was very little doing in this market the past week. Receipts were only fair, yet ample for the demand. Buyers holding back and only taking such lots as needed for immediate use, and to effect sales concessions of

Special Livestock Market Report

San Francisco, December 1, 1920.

CATTLE—The beef cattle market is in a strong position and indications point to steadily advancing prices. Cows appear rather slow of sale. The influx naturally retards a sudden upward movement of prices , but they may be expected.

Steers, No. 1, 1000-1200 lbs..... 9 @10c
do, 2nd quality ..... 7½@ 8½c
do, thin ..... 6 @ 6½c
Cows and Heifers, No. 1 ..... 7½@ 8c
do, 2nd quality ..... 6 @ 7c
do, thin ..... 3 @ 4c
Bulls and Stags, good ..... 4½@ 5½c
do, fair ..... 3½@ 4c
Calves, lightweight ..... 9½@10c
do, medium ..... 8 @ 9c
do, heavy ..... 7 @ 8c

SHEEP AND LAMBS—Mutton sheep are in request, but offerings show a corresponding falling-off as the result of feed conditions throughout the entire coast. The price situation is one of strength and is ruling as high as last year, less the price of pelts, which go begging on the local market.

Lambs, milk ..... 9½@10½c
do, yearling ..... 8 @ 8½c
Sheep, wethers ..... 7½@ 8c
do, ewes ..... 4 @ 5c

HOGS—Our predictions last week were fully borne out in the sharp slump in values for the week; the decline amounted to fully one cent. The prospects for the coming week also indicate a further slump, owing to disquieting market reports from the big trading centers east.

Hard, fat, grain-fed, 100-150 lbs. 11c
do, 150-225 lbs. 12c
do, 225-300 lbs. 11½c
do, 300-400 lbs. 10½c

Los Angeles, November 30, 1920.

CATTLE—There was a little better tone to the market the past week. Good fat steers continue scarce and what few coming in meeting with a good demand at quotations. Light steers slow sale in sympathy with cows. Cows meeting with a little better demand at last week's decline. Canners still dull.

Per cwt. f. o. b. Los Angeles.

Steers, prime to choice, 1050-1000 lbs. .....$10.00@10.50
do, good to prime steers, 900-1000 lbs. .....$ 8.00@ 8.50
Prime cows and reifers.....$7.50@8.00
Good cows and heifers ....$6.50@7.00
Canners .....$3.25@3.50

HOGS.—In sympathy with sharply lower markets east of us, buyers the past week took off $1.00 a cwt. But at this decline there was a fair demand from the fresh meat trade for light and medium weights. Curers, however, are still holding back and buying sparingly even at the lower prices.

Heavy, averag'g 275@350 lbs. $ 9.00@10.00
do, 225@275 lbs. .....$10.00@11.00
Light .....$11.00@11.50

Rough docked 20 lbs. piggy sows 40 lbs. and stags 40 per cent.

SHEEP—A steady market and fair demand was had the last week for lambs and yearlings. Receipts are holding up very well, though not excessive, the trade taking what lambs and yearlings coming in without trouble. Ewes and wethers still dull.

Prime wethers .....$6.00@ 7.00
Yearlings .....$6.00@ 7.00
Prime ewes .....$5.00@ 6.00
Lambs .....$10.00@11.00

$1.00 to $2.00 a ton had to be made, and even at this decline no one cared to buy ahead. The country is known to be pretty well supplied with hay and buyers are holding back looking for still lower prices in sympathy with grain.

Barley hay, ton	$20.00@23.00
Oat hay, ton	$24.00@26.00
Alfalfa, Northern, ton	$24.00@25.00
do, local, ton	$27.00@30.00
Straw, ton	$ 8.00@ 9.00

WALNUTS.

The Association reports no change in the market the past week. They are continuing to fill small orders at old prices. Not many left back in the country. Shipments the past week only three to four cars a day. Buyers from independent growers are still paying 12@14c a pound for orchard run, but are backward in taking hold as a shipment of Manchurian walnuts have arrived in this country and are being offered on the market. Association prices are:

No. 1	22½c
No. 2	16½c
Fancy budded	25½c

WEEKLY BUTTER AVERAGES.
Cents per pound for Extras.

Week Ending	San Francisco 1919	San Francisco 1920	Los Angeles 1919	Los Angeles 1920
Jan. 2	66.19	62.80	63.16	65.00
" 9	61.00	63.70	64.00	65.00
" 16	61.70	62.58	64.16	66.00
" 23	55.83	55.50	62.16	61.00
" 30	44.91	62.50	49.00	66.00
Feb. 6	43.58	64.75	47.33	68.60
" 13	46.80	60.75	47.60	64.00
" 20	51.58	60.80	63.16	64.00
" 27	53.90	59.40	55.00	66.00
March 6	56.16	58.06	59.00	62.00
" 13	55.58	57.50	58.00	59.00
" 20	54.41	59.50	56.00	59.00
" 27	56.41	58.58	58.00	62.00
April 3	54.23	56.00	55.50	56.00
" 10	57.16	55.41	56.00	55.00
" 17	52.41	55.76	54.00	56.00
" 24	52.41	55.00	54.00	55.00
May 1	52.41	54.66	54.00	55.00
" 8	52.91	52.90	54.00	55.00
" 22	57.91	52.83	59.00	54.00
" 29	57.91	51.41	59.00	54.00
June 5	54.12	50.90	57.00	54.00
" 12	53.58	51.25	57.00	54.00
" 19	53.16	53.66	57.00	55.50
" 26	52.83	55.75	55.00	57.00
July 3	52.37	56.91	55.00	57.00
" 10	52.13	57.70	54.00	58.00
" 17	52.71	56.80	56.00	58.00
" 24	54.24	55.91	57.00	58.00
" 31	55.08	56.58	57.00	....
August 7	55.50	56.10	59.00	58.00
" 14	52.33	57.08	57.00	58.00
" 21	52.66	57.50	56.00	59.00
" 28	52.66	59.70	58.00	61.00
Sept. 4	56.20	63.90	59.00	63.00
" 11	58.70	65.87	61.00	65.00
" 18	59.70	65.62	62.00	67.00
" 25	60.58	64.20	66.00	67.00
October 2	62.70	62.90	67.00	65.00
" 9	63.41	63.80	67.00	65.00
" 16	62.90	61.75	65.00	63.00
" 23	62.00	56.20	65.00	59.00
" 30	62.25	54.60	64.00	54.00
Nov. 6	62.66	52.21	64.00	55.00
" 13	64.50	52.90	66.00	55.00
" 20	63.83	54.25	66.00	56.00
" 27	63.83	54.00	67.00	56.00
Dec. 4	76.30	50.37	67.00	53.00
" 11	63.91	....	67.00	....
" 18	64.60	....	67.00	....
" 26	65.66	....	68.00	....

WEEKLY EGG AVERAGES.
Cents per dozen for Extras.

Week Ending	San Francisco 1919	San Francisco 1920	Los Angeles 1919	Los Angeles 1920
Jan. 2	75.60	62.50	69.50	60.00
" 9	69.91	61.20	66.66	58.00
" 16	58.70	62.66	62.41	58.00
" 23	52.58	57.66	54.66	55.00
" 30	48.75	58.00	52.33	55.00
Feb. 6	42.00	48.16	43.00	47.00
" 13	40.90	45.41	37.80	45.00
" 20	36.41	44.10	39.33	43.00
" 27	37.40	45.60	33.60	42.00
March 6	37.58	41.33	37.00	38.00
" 13	37.16	37.41	37.00	38.00
" 20	38.41	39.66	39.33	41.00
" 27	40.41	41.91	42.00	40.00
April 3	42.41	40.83	45.00	39.00
" 10	42.91	40.83	45.00	40.00
" 17	45.10	39.41	46.00	40.00
" 24	45.00	39.33	46.00	39.00
May 1	45.00	42.91	44.00	42.00
" 8	46.50	42.60	42.00	44.00
" 15	47.91	42.91	50.00	44.00
" 22	49.16	43.50	51.00	44.00
" 29	47.58	41.33	49.00	43.00
June 5	45.50	41.30	46.00	42.00
" 12	47.60	42.08	47.00	43.00
" 19	45.91	43.66	47.00	45.00
" 26	49.66	42.75	50.00	47.00
July 3	43.97	45.91	51.00	48.00
" 10	47.60	47.70	51.00	50.00
" 10	47.66	51.00	51.00	51.00
" 24	49.33	54.58	51.00	52.00
" 31	53.16	56.25	52.00	52.00
August 7	55.50	54.50	51.00	52.00
" 14	55.00	54.50	56.00	54.00
" 21	51.80	53.66	52.50	56.00
" 28	53.91	56.10	52.00	58.50
Sept. 4	56.70	62.60	53.00	61.00
" 11	61.50	64.50	61.00	61.00
" 18	61.83	67.00	58.00	67.00
" 25	62.75	67.60	68.00	67.00
October 2	68.70	71.70	68.00	76.00
" 9	69.91	77.20	69.00	75.00
" 16	67.70	83.50	71.00	78.00
" 23	72.25	79.60	73.00	78.00
" 30	70.08	74.20	73.00	75.00
Nov. 6	81.25	77.50	75.00	79.00
" 20	76.86	87.62	75.00	88.00
Nov. 27	76.66	82.00	75.00	76.00
Dec. 4	80.90	77.12	77.00	75.00
" 11	79.16	....	77.00	....
" 18	71.16	....	68.00	....
" 26	65.91	....	65.00	...

HARDING SHORTHORN SALE.

The following telegram has just been received from Edward Cebrian, manager of the Caledonia Farms, West Sacramento:

"In the Harding Shorthorn sale at Waukesha, Wisconsin, the average price was $1616. The calves sired by our bull, Imp. Caledonia, that were from nine to twelve months old, averaged $2,470. All others, excluding the Caledonia calves, averaged $1,515. A nine-months old son of Caledonia sold for $6,250.

MARKET COMMENT

New Citrus Fruit Crop Moving.

The new citrus fruit year began on the first of November and carload shipments of navel oranges are moving out of the central and northern California producing districts. The crop outlook in these sections is good, recent rains having helped to size up the fruit, and in southern California the condition of the crop is improving as the harvest season approaches. The forecast for the 1920-21 crop is 49,000 cars as compared with 35,675 in 1919. Valencia oranges have been practically cleared off the market, leaving the early winter field to the navels, the prices for which are accordingly high as compared with last year. Indications are that the new crop will be taken rapidly by the trade and increased outlets are being developed both here and in foreign countries.

Demand for Standard Apples.

Weather conditions have not been altogether favorable during the apple picking season in the Northwest, and this, combined with a heavy production of small-sized fruit, has cut down the estimated yield to 26,485,000 bushels compared with the October 1 estimate of 29,058,000 and as against 38,484,000 bushels last year. There has been a good demand all season for standard varieties in desirable assortments and medium to large size at prices that would net the grower a satisfactory profit. Prospect for the late varieties are better at present than they have been for some time. Local supplies are being absorbed in the middle western markets, and with the setting in of cold weather, consumption is expected to increase.

Rice Growers Encouraged.

Rice growers of the Sacramento valley are taking encouragement from the upward trend of prices last week, when the market touched the top figure of $5.75. There was little cleaned rice on hand to take advantage of the offer, but the situation is not likely to again arise, on account of the association taking over the mills. Threshing in the valley has been resumed following the recent rains, which, according to J. H. Stephens, president of the association, ruined about 800,000 bags, valued at between a million and a half and two million dollars. The 1920 crop was estimated at 4,000,000 bags and the loss will amount to about 20 per cent.

Grape Shipments Practically Over.

Clear weather during the last two weeks in October saved the grape situation, however, and up to October 31st, 23,136 cars in the same period last year. This increase of 5,600 cars is represented almost entirely by increased activity in the wine grape market, there being but little increase in the production of table grape varieties.

Olive Picking Under Headway.

Olive picking of the 1920-21 crop is now proceeding rapidly. An estimated yield of 10,000 tons is expected, compared to 14,000 tons last season. In the Sacramento valley the crop is about 25 per cent larger than last year and a large crop is reported in the San Joaquin valley. In southern California, however, the trees are only bearing about 25 per cent of a possible crop. Few contracts have been closed for this year's crop. Prices to the grower are now $60 to $100 a ton compared to $2.10 a ton last year and a high mark of $400 a ton in 1918.

LIVESTOCK QUERIES AND REPLIES.

Indigestion.—My cow persists in bloating on hay. Bloats very quickly. Eyes are running some. Left ear lopped down and she is swollen about the eyes. Stomach on left side seems to be harder and firmer than it should be. Have been feeding ground barley and bran with wild hay in the barn at night and alfalfa in the day time. An old cow is very stiff in her hindquarters. When she walks her joints pop and crack. Please give me remedy for them.—E. M. C., Cedarville.

The bloating in the first cow is caused by feeding new hay, improperly cured, mouldy, musty or rusty feed. The swelling about the eyes indicate this. Change the feed entirely. Give a purge once a week of Epsom salts, 1 to 2 pounds at a dose. Also the following medicine: R.—Sulphuric ether, 4 ounces; turpentine, 4 ounces, Pearson's Creoline, 2 ounces; oil of wintergreen, 10 drops; linseed oil (raw), 1 quart. Mix and give one tablespoonful twice daily syringed on tongue. The old cow has chronic rheumatism. Give one tablespoonful twice daily of the following prescription: R.—Potassium Iodide, 4 ounces; Wine of Colchicum Root, 6 ounces; Syrup Sarsaparilla, 6 ounces. Mix.—Dr. E. J. Creely.

Injury.—A bull calf 4 months old seems dull and lacks activity. He is now lame in one hind leg. Are there any indications of tuberculosis? Will he outgrow the trouble?—G. A. W., Yountville.

The calf has been injured. Examine closely to see if the exact seat of trouble can be located. Apply ammonia liniment twice a day, giving plenty massage. It is not rheumatism nor tuberculosis and he probably will outgrow it.—Dr. E. J. Creely.

Injured Udder.—Two-year-old heifer freshened on November 11th. The first day her udder was all right, but now the milk is bloody from all teats. Cow seems to be normal otherwise and eats all right. Please advise me what to do.—J. W. B., Tulare.

An infection due to an injury. Bathe twice daily with a warm salt solution, 1 teaspoonful of salt to each pint of water. Give at one dose, 1 lb. Epsom salts in combination with 1 lb. Glauber salts. Keep on diet of green feed and bran mashes. Give 8 ounces every 12 hours of the following: R.—Olive and castor oil each 1 quart; Formalin, 2 ounces; Oil Wintergreen, 10 drops.—Dr. E. J. Creely.

Malignant Growth.—A heifer has something growing on one of her eyes. This growth is of a pink color, covers about a third of the eye and exudes pus. Is of a spongy nature. Do not know how long it has been growing as the animal has been on pasture all summer.—W. E. C., Adin.

This is a malignant on the haw or finger of the eye. Call in the nearest qualified veterinarian to remove the growth. Bathe the eye several times daily with a 1 to 10,000 solution Bichloride of Mercury (poison) until the veterinarian takes charge.—Dr. E. J. Creely.

Classified Advertisements.

Rate, 4c. per word. Cash must accompany all orders.

COUNTRY LANDS.

FOR SALE BY OWNER—82 acres river bottom, mostly in alfalfa and orchard (walnuts, pears and almonds) yielding large crops. Own irrigation, highway, railroad station, store on place, $850 an acre. 80 acres Linden district, rich soil, close to Calaveras river, $300 an acre. Both places real bargains at price offered. For terms and full description. Box 2260, Pacific Rural Press.

120 ACRES in Sutter County Fruit Belt; unimproved, fine, level land. Cement highway being laid; never-failing water; juice in front; station one mile; surrounded by fruit. Splendid neighborhood. I live too far away to give it attention. $200 per acre; most liberal terms. J. A. Bennett, owner, R. F. D. 1, Walnut Creek, Cal.

IMPROVED VEGETABLE and Dairy Ranch near Lafayette, Contra Costa Co.—93 acres—30 acres bottom, balance pasture; 6 acres alfalfa. Good house, barn and outbuildings. Fine springs, concrete reservoir; family orchard. $22,500; easy terms; might sell part. N. H. Bennett, owner, Walnut Creek, Cal.

MEXICAN LANDS—400 acres in American colony near Hermosillo and Southern Pacific Railway. Rich river bottom land; will grow anything; two crops each year. Investigate this opportunity to start big farming at small cost. Owner, 329 Ochsner Bldg., Sacramento, Cal.

$20.00 TO $25.00 PER ACRE.—Fine level irrigable fruit and alfalfa lands, abundant water, fertile soil, ideal climate, close to railroad. Write Chamber of Commerce, Willcox, Ariz.

2200 ACRES—Improved stock ranch, $20 per acre. 160-acre dairy, complete equipment, $50,000. 1245 acres, fine grain ranch, $75 per acre. Have other attractive bargains. Harry Miner, Madera, Calif.

FOR SALE—85 acres near Vacaville on State Highway. $17,500.00. House and barn, 20 acres orchard. R. S. Lurvey, Vacaville.

MISCELLANEOUS.

BUNYIP SEED WHEAT ..

Recleaned Seed for sale.

FOSGATE & LION,
Seed Growers
Mountain View, Calif.

TENNESSEE WINTER BARLEY

Recleaned seed for sale.
Grown from State Universiay Farm Stock

W. A. BEARD
Marysville, Calif.

WANTED TEN THOUSAND GOOD DAIRY Cattle to consume our surplus alfalfa hay. Dairy opportunities unexcelled on the Newlands Irrigation Project. Never failing water supply. Adequate storage. Mild climate. Good dairy market. Great variety of crops. Our alfalfa hay unexcelled in feeding value. Supplements not essential. Orders handled. Leasing or feeding contracts available. Address Alfalfa Project Alfalfa Association, Fallon, Nevada.

HELP WANTED — Competent, practical single man as choreman. Fine grade Guernseys to be developed into selected herd for cream production; at present 20 fat hogs marketed per month. Foreman in charge. Write giving references, experience and wages asked. Coastways Ranch, Pescadero, San Mateo Co., Calif.

PRUNES, LARGE, SWEET, Evaporated French prunes—packed in sanitary boxes; will keep 10 and 20 pound boxes, 22c per pound; 40 pounds and over, 20c per pound—all delivered prepaid any California express station. Buy direct from grower and obtain best fruit at less cost. Sunset Ranch, Live Oak, Calif.

BERRY PLANTS — Strawberries, Loganberries, Currants, Gooseberries, Blackberries, and Raspberries for immediate delivery. All stock first-class and strictly true to name. Write for prices. M. J. Moniz, Berry Specialist, Sebastopol, California.

APPLES FROM GROWER—Bulk pack: Bellflowers, No. 1 grade, $1.30 per box; No. 2, $1.00; Newtown Pippins, Langford Seedlings, Missouri Pippins, $1.75; No. 1 grade, $1.25 per box. Edward A. Hall, Rt. 1, Box 39, Watsonville, Cal.

REMANUFACTURED PIPE

All sizes standard pipe and wrought iron screw casing. All kinds of fittings. Guaranteed good as new. Write for prices. Weissbaum Pipe Works, 160 Eleventh street, San Francisco.

EQUIPMENT

WILSON WETTERHOLD GRINDING MAchine for feed grinding. This machine is new. The price is cheap. A. H. Simpson Co., 129 Fremont St., San Francisco, Cal.

ALL SIZES OF PIPE and screw casing, both new and second-hand, dipped and undipped. Guaranteed. Prices right. Shecter Pipe Works, 304 Howard St., San Francisco.

$1200—ONE HOLT "30" ENGINE, just overhauled; in good condition, with 5 disk moline plow. Cost, new, $465; outfit for $1200. J. M. Nelson, San Jose, Cal.

FOR SALE—Budlong 7-ft. double-disc, excellent condition; also 140 feet 6-inch O. D. well casing, dipped in asphaltum. H. Portus, Santomas Road, Campbell.

FIVE-INCH CENTRIFUGAL PUMP—Dow steam pumps. Oil pumps. 35 H. P. steam engine. Best offer. Will sell separate. X. E. Burns, Santa Clara.

THORNLESS MAMMOTH BLACKBERRY "Cory" for choice plants. Order from grower. Chas. E. Morteneon, Rt. A, Box 253, Lodi, Cal.

CROLEY'S BALANCED HOG FEED—The cheapest feed to fatten hogs. Write Geo. H Croley, Townsend St., San Francisco, Calif.

TREES, PLANTS, ALFALFA SEED, Etc.—Full stock, best varieties now . Write, J. L. Lawson, San Jose, Cal.

CERTIFIED KADOTA FIG trees and cuttings Beckwith Fig Gardens Co., Reedley.

ALWAYS RELIABLE

Gombault's CAUSTIC BALSAM

SURE IN RESULTS

THE ACCEPTED VETERINARY AND HUMAN REMEDY

A RELIABLE, safe and active blister and counter irritant--is used successfully by the very best stockmen everywhere. The very fact that it is both "reliable and safe" for anyone to use is of particular interest especially to those who are not veterinarians or within reach of one; and when you consider that many of the veterinary surgeons are buying and using it, you can well believe it is a valuable and reliable veterinary and household remedy.

NOT ONLY SEE WHAT OTHERS SAY, BUT SATISFY YOURSELF BY TRYING IT

CAUSTIC BALSAM
AS A HUMAN REMEDY IS
Penetrating — Soothing — Healing

It is generally true that an external remedy that is good for the animal is also good for the human body, and **Gombault's Caustic Balsam** is no exception to this rule. In fact, we sincerely believe that there is no liniment or external remedy on the market that is as good or as safe and reliable to apply to the human body as **Caustic Balsam.** We can safely recommend it in all cases where an external application could benefit. It is also cheaper according to cost because it requires very little and that little is effective.

A Safe and Reliable Germ Killer

Caustic Balsam, applied at once to any bruise or flesh wound, as soon as it stops bleeding and is thoroughly washed, will prevent blood poison and cause it to heal at once with scarcely any soreness. Persistent, thorough use will cure many old or chronic ailments, and it can always be used on any case that requires an external application, with perfect safety, and good results.

Veterinary surgeons use Caustic Balsam. Many recommend it. Why? Because it is a safe remedy for their customers to use and it brings satisfactory results.

Never Failed To Do Its Work

I am in the saw mill business and keep from twenty to thirty head of stock all the time. I have been using your Gombault's Caustic Balsam for the last ten years and I have tried it for every known lameness and it has never failed to do the work yet. I have cured sweeny and never take them from the wagon. I have tried it on oxen's necks with good results. Hoping this will be some benefit to some stock owner,
Clarence J. Henley, Maplesville, Ala.

Information on special cases freely given. The accepted Human and Veterinary Remedy of the World.

Sure Cure For Rattle Snake Bites

Have used Gombault's Caustic Balsam for years and wouldn't be without it. It will not only do what is claimed for it, but it is also a sure cure for rattle snake bites, if taken in time. We have saved two horses and one cow with it. Thought you might want to put this in your list of cures, as so many use Caustic Balsam. It might save them a horse or cow some time if they knew about it.
S. H. Felt, Hartford, Michigan

Caustic Balsam will absolutely remove all poisonous secretions and create a healthy action.

Caustic Balsam Does More Than Claimed for it.

Enclosed please find draft for which send me one dozen bottles of Gombault's Caustic Balsam. I have been using your Caustic Balsam for four or five years and it does more than you claim for it. A neighbor, Mr. Seegar, had a horse with a bad case of sweeny. He could not sell the animal for $25.00. I advised him to use your Caustic Balsam and he did so, curing the horse, and has since refused $100.00 for her. My niece had her knee badly injured by falling from a wagon. The doctors failed to effect a cure and she began using Caustic Balsam. She is now practically well. I have also known it to cure neuralgia and stop tooth-ache. It is one of the finest medicines for man and beast. H. D. Sweazy, Beecher City, Ill.

Does Away With Firing

TO WHOM IT MAY CONCERN:-
I have made many fine cures with Gombault's Caustic Balsam. I have cured bowed tendons, capped hock, splints, ringbone, sidebone, shoe boil, quitter, poll-evil, fistula of withers and many other long standing cases. It is either a mild blister or a fine counter irritant; does away with firing.
E. L. Seltzer, Shelltown, Md.

Caustic Balsam Does More Than Guaranteed

I have used Caustic Balsam for the last seven years and found it just as it was recommended, and even more, because it will cure where other medicine fails and I can prove it. I can certainly recommend it. J. T. Sullivan, Chebanse, Ill.

Twenty Years Success With Caustic Balsam

After using Gombault's Caustic Balsam for twenty years I can say it has never failed to do all you recommend it to do. While it seems high to one that has never tried it, once a customer always one. I have used it for twenty years and use no other but it. W.A.McCauley, Malone, Tex.

Good For Any Cut or Bruise

I recommend your Caustic Balsam for any kind of rusty nail or barb wire cut and has also cured bad cases of blood poisoning. I am a veterinarian and surgeon and I recommend to any man this Caustic Balsam as a cure of what I said.
— F. Max Scheibe, V.S., Duke, N. Mex

Gombault's Caustic Balsam
As a Liniment for the Human Body has no Equal

A Liniment that benefits; it kills pain. A home remedy for the Human Family

ALL TESTS prove the wonderful efficiency of **Gombault's Caustic Balsam** in relieving human ailments, such as Rheumatism, Neuralgia, Sprains, Sore Throat, Sore Lungs, Chest Cold, Backache, Lumbago, Diphtheria, all Stiff Joints. It is penetrating, soothing and healing, and for Old Sores, Bruises or Wounds, Felons, External Tumors, Cancers, Boils, Corns or Bunions **Caustic Balsam has no equal. It removes the soreness and strengthens the muscles**—in fact aids all troubles where an external application is necessary. **We would distinctly say to all who buy it that it does not contain a particle of poisonous substance, and therefore no harm can possibly result from its use.**

THIS GREAT REMEDY literally works wonders! It removes bunches on horses and other livestock, thereby increasing the value of the animal fully 50 percent. A successful treatment for Curb, Splint, Sweeny, Capped Hock, Strained Tendons, Founder, Windpuffs, all Skin Diseases or Parasites, Thrush, Diphtheria, Pink Eye, and Lameness from Spavin, Ringbone, and other Bony Tumors; also all obstructions in circulation, and imparts new life and vigor. It is a peerless remedy for all Throat and Bronchial Troubles.

WHY! Because Caustic Balsam can be applied by anyone with safety, will do its work well and in no way injure the horse, while other blisters need daily attention and care and then are liable to leave a blemish.

If you have a lame or unsound horse, YOU CAN WELL AFFORD TO TRY A REMEDY THAT IS SO HIGHLY RECOMMENDED.
Information on special cases freely given on request.
It is FAR SUPERIOR, MORE ECONOMICAL, and a PERFECTLY SAFE, RELIABLE and PROMPT Remedy to use as compared with any other remedy used for like purposes.
The demand is produced strictly by its merits.
IT SUPERSEDES ALL CAUTERY OR FIRING
IMPOSSIBLE TO PRODUCE ANY SCAR OR BLEMISH
IT IS THE SAFEST AND BEST BLISTER

CAREFUL FARMERS
USE CAUSTIC BALSAM
A Safe and Reliable Anticeptic

Do you turn your horses out for the winter? If so, we want to call your attention to a very important matter. Horses which have been used steadily at work, either on the farm or road, have quite likely had some strains whereby lameness or enlargements have been caused. Or perhaps new life is needed to be infused into their legs. Gombault's Caustic Balsam, applied as per directions, just as you are turning the horses out, will be of great benefit; and this is the time when it can be used very successfully. One great advantage in using this remedy is that after it is applied it needs no care or attention, but does its work well and at a time when the horse is having a rest. Of course, it can be used with equal success while horses are in the stable, but many people in turning their horses out would use Caustic Balsam if they were reminded of it, and this article is given as a reminder.

Found Nothing That Equals Caustic Balsam

Kindly permit me to express my deep appreciation of Gombault's Caustic Balsam. I have cured sprains, ringbone, strained tendons, sweeny, poll-evil with it in fine shape and do not see how a better liniment could be manufactured. I have used many things for removing puffs from horses but have never found any that would equal Caustic Balsam. I also had a cow that had lump jaw. I used Caustic Balsam and cured it.
John H. Wallgren, Logan, Kansas

Bunches on horses or any other livestock are unsightly.

Caustic Balsam Prevents Blood Poison

We have used Caustic Balsam for several years and have found it to be unequaled for horses or people. My husband ran a rusty nail in his hand and blood poison set in. We used two applications of Caustic Balsam and the swelling and fever left his hand and arm and it healed up without any more bother. It is also as efficient for snake bites and we would not think of being without it.
L. H. Globe, Forest Grove, Mont.

Caustic Balsam is good for that sore feeling after baseball or football games.

A Splendid Human Remedy

I think your Caustic Balsam a splendid human remedy. We use it for cuts, burns, sores, swellings, sore throat and lameness and find it very beneficial. We expect to keep it on hand ready for any emergency.
Mrs. Robt. B. Newton, Columbus, Miss.

The world's greatest and surest veterinary and human remedy. Has imitators, but no competitors.

Worth Its Weight In Gold

I have used Gombault's Caustic Balsam for my own horses and for others, and it has never failed yet. My little girl had rheumatism for a long time. Nothing did her any good until we used Caustic Balsam and she is all right. My wife had throat trouble and used Caustic Balsam with great results. It is worth its weight in gold.
Dr. Ira Le Dunlap, V.S., Rochester, Pa.

None genuine without the signature of The Lawrence-Williams Co. Sole Proprietors & Distributors for the U.S. & CANADA. CLEVELAND, O.

Gombault's Caustic Balsam

MAY HAVE IMITATORS, BUT HAS NO COMPETITORS

PRICE $1.75 PER BOTTLE AT ALL DRUGGISTS OR SENT BY PARCEL POST.

THE LAWRENCE-WILLIAMS CO.

1013 Oregon Avenue, Cleveland, Ohio

None genuine without the signature of The Lawrence-Williams Co. Sole Proprietors & Distributors for the U.S. & CANADA. CLEVELAND, O.

VOL. C—No. 24 Fiftieth Year

THE PACIFIC RURAL PRESS

SAN FRANCISCO DECEMBER 11, 1920 LOS ANGELES

California State Lib 7-1-22

JUST A BIT OF CALIFORNIA AT ITS BEST.

This is but one of the many enchanting views that dot the California landscape from Siskiyou to San Diego. It shows a charming scene in the San Joaquin Valley—the face of Nature "touched up" a bit by the esthetic hand of man, and caught at its best by the photographic artist.

Delano--California's Newest Grape Section

Written for Pacific Rural Press by Mrs. H. S. Clees.

At last Delano has come into her own! For many years she has had a varied career of ups and downs, mostly downs, but now she will fulfill her destiny and in the very near future outstrip her northern rival, Fresno, as a producer of grapes and raisins.

Delano and the surrounding country, which includes the Jasmine, Earlimart and Richgrove districts, has been on the map for many years. Forty years ago it was one huge sheep corral, and they may still occasionally be seen eating up the stubble and straw from the wheat fields that are still with us. At a latter period it was an immense wheat field, when dry farming was practiced almost exclusively. And the time is not far distant when it will be one mammoth vineyard.

The orange, the deciduous fruits, the fig, and the almond do equally well here, but this article will treat the prolific vine, and the method used in the A. E. Imbler vineyard, situated six miles east of the town, where a yield per acre has been obtained which is almost unbelievable.

Mr. Imbler has 20 acres of olives, Missions and Manzanillos, but needing returns before his olives would come into bearing, he interset with Thompson Seedless vines, of which he has 4,800, 480 of which had their first crop this season. From the above vines the average yield per acre, this the fourth year, was six and seven tons of raisins, with vines set 6x12 feet apart. Last year, the third, they yielded 4½ tons of raisins per acre; and the 2nd year, when he should have had 2 tons per acre, owing to lack of proper care of his vines when he tied them straight up to the stakes instead of training them on wires, he only had one-half ton.

The method used in the care and culture of the vineyard, is in part, the one known as the Henry method, which is as follows:

Irrigation.

Preparation is made for the coming year's crop very soon after the present crop has been harvested, by thoroughly irrigating, which means soakisg the vines. This will hold the leaves, which are needed to store up the plant food for the vine the coming season. Caution: care must be taken not to give this irrigation too early when it would start wood growth. The exact time can best be determined by noting the temperature of the ground as well as the atmosphere, which must be cold enough not to start such growth.

If it is a dry winter, when less than six or seven inches of rain falls, a good irrigation is given in March in order to soak the ground before blooming. This will supply the needed moisture for the vine during the blooming and fruit-setting period.

So far there has been no late frost damage to vines in this section, so that does not have to be reckoned with.

The next irrigation comes after the fruit is set. This commences the summer irrigation, which is kept up continuously until picking time. No set rule can be laid down as to how many irrigations during the summer are necessary; but keep the vine vigorous and growing, even if it requires eight or ten irrigations. The specific method used is to make basins around the vines, which will hold from five to twenty gallons of water.

Pruning.

February first of each year pruning is started, and the long method is used.

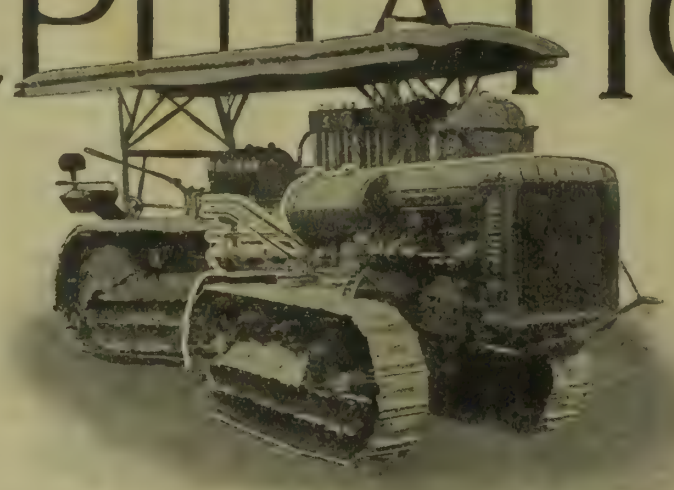
It has been found from experience that new wood grown on two-year-old wood is more prolific than new canes one year old. In other words one foot of wood on a year-old cane is worth more than two feet of wood on a renewal cane. The aim is to always put up two or more renewal canes each year, together with two or more old canes with new growth. But the number is determined by the vigor of the vine. If it is very vigorous several canes old and new are left. The old ones are the best.

After the pruning is finished and the shoots start in the spring, fruit forms will show on each; then the end is pinched off each shoot where the fruit form shows. This prevents the cane from developing too much wood and increases the size of the fruit. All sterile shoots are removed entirely above a line where renewal canes are wanted, which is everything above about 18 inrhes. The shoots that appear below 18 inches are to be used for renewal canes and the terminal bud is pinched out of them when they reach a length of 6 feet. This method has proven by experience that it increases the number of laterals on the renewal cane; and each base bud on these laterals is good from two to four bunches of grapes. The vineyard is gone over the second time to get any sterile shoots missed in the first gleaning.

This completes the care of the vines except sulphuring, which is done immediately after each irrigation to keep off mildew as the evaporation at that time creates an ideal condition for it to form. The spray is composed of one-half sulphur and one-half dehydrated lime. The latter is used to keep off the leaf hopper. In the early spring the cut worm must be watched, as it will attack the bud just as it is swelling, eating an almost imperceptible hole, not much larger than a pin head in it, thus killing the bud. The new bud which follows seldom has fruit.

The estimate of the American corn crop by the United States Department of Agriculture is 75,000,000 bushels more than ever before produced.

REPUTATION



The Best Tracklayer Sixty Tractor has built a reputation for stamina, reliable power and low up-keep. This reputation so closely guarded by the manufacturer has been due to the quality of material used, the proven design and the knowledge of tractor requirements which has been gained through years of experience in the actual building of tractors and the incorporating of modern improvements in each new model.

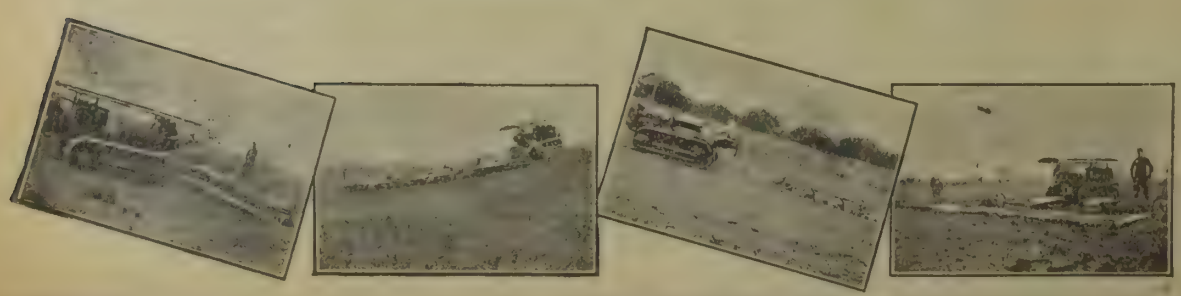
The "Sixty" was too powerful for all uses; so, upon the demand of farmer, orchardist, contractor, in fact all lines of industry where tractors are employed, the factory has perfected a model to be known as the Best Tracklayer Thirty Tractor, in which has been incorporated all of the experience of the manufacturer as to design, etc., together with all of the reliable improvements of the age. The "Thirty" is years ahead of any other tractor on the market.

Delivery date on this new model "Thirty" About February 1st, 1921. Send for circular.

C. L. BEST TRACTOR CO.

SAN LEANDRO CALIFORNIA

Best TRACKLAYER Tractors



General Agricultural and Horticultural Review

HORTICULTURAL JOTTINGS.

Both of the stemming raisin plants at Sanger have been temporarily closed, with the result that 50 to 60 employees are idle.

Frank A. Gibson of Redding gathered 363 oranges from a four year old tree in his front yard. The fruit was high grade and retailed locally at $1 per dozen.

The Butte County Citrus Association at Thermolito are shipping two cars of oranges daily. The fruit is fine and the weather is such that picking is progressing rapidly.

Strawberries have proved such a profitable crop in the Anderson, Shasta county section for the last few years that J. H. Gardner, is planting ten acres on his place near Anderson.

The recent rains have put the soil in condition that tree digging is going on in some of the nurseries of the state. The Loma Rica nursery at Grass Valley is lifting 25,000 to 50,000 trees daily.

The new cotton gin of the Wasco Cotton Growers' Association is connected up with the power lines, and is now running. The plant will gin the cotton from 2,500 acres in that territory.

The Lodi office of the Pacific Fruit Express has closed for the season as the harvest of the 1920 grape crop in that section has been completed. Records show that 5200 carloads of grapes were shipped from the district.

From November 30 to December 5 there was shipped from Southern California as follows: lettuce, 139 cars; tomatoes, 17 cars; mixed vegetables, 125 cars; cauliflower, 65 cars, and spinach, 21 cars.

The orange packing houses at Sanger are now operating at full speed, there being an abundance of well colored fruit. The American and Sanger Association houses are packing between them about 9 cars per day.

George Elicker of the Mt. George district, Napa county is planting 30 acres of land to prunes and cherries. A splendid selection as soil and climatic conditions of that particular locality are most favorable for such fruits.

Ships of the Canadian Government operating between Vancouver and Australia, New Zealand and the Orient will shortly be equipped with cold storage facilities. Which means added accommodations for Northwestern apple shippers.

The Algerian fig crop amounts to 2000 tons this season, two thirds of that will be set aside for export, however, it is thought that owing to shortage of food stuff in the country the major portion of the crop may be retained for that purpose.

The Interstate Commerce Commission has established a carload minimum of 50,000 pounds on all grains, with the exception of oats, ear corn and corn in the shuck on which a minimum of 80 per cent of the marked capacity of the car was fixed. These minimums become effective January 1.

Apples from the Grande Ronde Valley are to be sold to Portland people at a penny a piece. The local market situation has reached the point where it is not profitable to ship the fruit East or to the Middle-West, according to apple dealers, as freight rates eat up the profit leaving the orchardist nothing.

It is reported from Bridgport, Mono county, that a reduced scale for range and farm labor has been put into effect by ranchers of that section of eastern California and western Nevada. The wages of shepherders are reduced from $115 to $90 per month, and those of farm laborers from $3.50 and $4 per day to $2.50 a day.

With $40,000,000 invested by California farmers in tractors numbering one for every 700 acres of improved land in this state, with over 33,500 electric motors and 20,000 stationary gas and oil engines used on the farms, the California farmer uses more mechanical power per acre than any other farmer in the United States.

With opening bids for the sale of bonds of the Byron-Bethany irrigation district, Volney Taylor, Byron farmer, acting for himself and several local buyers, bid par for $100,000 worth of the bonds and the bid was accepted. This places the irrigation system of Byron on the soundest possible basis, according to local opinion.

The suit of the Earl Fruit Company against the Southern Pacific Company for $53,020.75 damages for failure to provide cars for shipment of grapes in the Sacramento and San Joaquin valleys in 1917 has been transferred to the United States district court for the Northern district by Superior Judge C. O. Busick.

Yucaipa Apple Growers who are members of the Association have just received $10,000 as first distribution of returns for the apple crop. This is a preliminary payment to cover picking and packing expenses on the early varieties, the larger part of the crop having just been handled with returns as yet incomplete.

The first pool of the Oxnard Walnut Growers Association has closed. This first pool contained about 90 per cent of the 1920 crop according to R. B. Edmondson president. Thirteen carloads have been shipped, and the balance will amount to about four carloads. There are still the second and third pools in formation.

Four hundred and sixty-four acres of bare land near the Armstrong switch, near Lodi, San Joaquin county, known as the Simpson and Gray ranch has been purchased by W. G. Mike, independent fruit shipper and owner of large vineyard and orchard properties at Lodi. According to reports the purchase price was $140,000. The property will be planted to Tokay grapes.

Dr. C. W. Evans of Modesto, won in the first of two suits against him by Pratt-Low Preserving Co. for $100,120 damage for alleged failure to deliver his peach crop to the company yesterday when Superior Judge J. C. Needham sustained a demurrer to the complaint without leave to amend. A second suit for approximately $600,000 damage for alleged breach of contract has been put over until February 7.

Preliminary work for the Madera irrigation district is now completed, preparations being made for its presentation to the State Irrigation Bond Commission for approval. Construction of the dam, ditches and laterals will begin, it is believed, in the early spring. The system contemplates the storage of 400,000 acre-feet of water, in a large reservoir. The dam will be 290 feet high and will be built across the entire river.

Following figures, compiled by the Bureau of Foreign and Domestic Commerce, will show the popularity of corn syrup, the great sugar substitute during the past year or two, breaking all export records last year with 255,617,709 pounds. The popularity of the syrup seems to be increasing, as may be shown that the exports during the first nine months of this year aggregated 134,121,305 pounds with a total value of $8,824,998.

Estimates for the 1921 Hawaiian sugar crop indicate that the territory's output will be approximately 31,000 tons greater than the estimate for this year. Official estimates of the Sugar Factors, Limited, indicated a crop of 488,000 tons for that concern in 1921 and 85,000 tons of other raw sugar in the islands during the same period, making the total estimate output 573,000 tons.

AGRICULTURAL NOTES.

Authority has been given to establish the Medera Irrigation District in Madera county.

Artichokes are moving freely from Half Moon Bay to local markets and Eastern shipment.

Tractor drivers are being paid $4 per day in place of $6, which was the standing wage less than a month ago.

For the month of October 35,002,977 bushels of wheat were exported against 13,686,675 same month in 1919.

In 1919 New York consumed 480 car-loads of fresh asparagus, New Jersey producers supplied about 57 percent of this quantity.

Pruning demonstrations in Sacramento county are now being conducted by Guy L. Philp of the University Farm at Davis.

From November 30 to December 5 there were shipped from Southern California 322 cars of oranges and 57 cars of lemons.

The rice growers of the Sacramento Valley are "whistling" for a heavy north wind to dry out the crop which was so heavily soaked by the recent rains.

California is among the first states in the production of onions with a record of 2000 carloads out of the state and a record of 300,000 sacks raised annually.

The National City Bank of New York has notified its Havana branch to place $10,000,000 at the disposal of Cuban sugar planters, to enable them to prepare for the coming crop.

So popular has the wine-grape become that buyers are already in the field for the 1921 crop and it is even reported that some sales have been made at $150 a ton.

T. E. Elliott, the Atwater manager of the California Peach Growers' plant, reports that they have cleaned up 850 tons on the 1920 dried peach crop, which is an increase of 150 tons over that handled last year.

Unexpected activities has aroused the Sonoma hop market after many weeks of dullness. More than 2000 bales of last year's crop was sold last week at prices ranging from 33 to 35 cents per pound.

Negotiations for sale of the Cox ranch one mile west of San Romon, Contra Costa county have been completed. The ranch embraces 180 of the richest land in San Romon valley. The consideration, it is understood, will approximate $35,000.

Wages of ranch laborers, and particularly in the rice camps, have been cut, in some instances, from $4 to $2.50 per day with room and board. This information is from the State Free Employment Bureau of which H. L. Miller is manager.

Geo. H. Sawyer, president of the Stanislaus County Farm Bureau and grain director of the Federation of Farm Bureaus is in Indianopolis acting as one of the members of the resolution committee of the National Federation of Farm Bureaus.

Five carloads of watermelons were shipped from Keys, Stanislaus county to Fresno, last week. This is the latest shipment of watermelons yet shipped from the county, but as watermelons are a hot weather "food" it is a question as to whether they will meet with favor these frosty mornings.

Indications point to the erection of a $70,000 plant for the California Peach and Fig Growers' Association in which to handle next year's crop. It is understood the plant will include a receiving point for peach products and a complete manufacturing plant for figs.

Under injunction proceedings instituted by the Moulton Land Company assurance has been given that 25,000 acres of rice land in Butte county will be planted to rice next year, when the board of supervisors granted a petition for the formation of a drainage district in that section.

The Pacific Pea Packing Co. will begin this week planting peas for the 1921 campaign. More than 1,000 acres will be planted in the Empire district of Stanislaus county under contract with different farmers of that section.

The first car of Orland, Glenn county oranges were shipped to Oakland last week. Practically all of the Oakland fruit is being handled this year through an informal association, which it is believed will be the nucleus for a real Orange Growers' Association the next season.

The Yolo County Board of Supervisors has authorized William Gould of the Board of Trade to offer $1000 in prizes to the four best farms in Yolo county at the close of the 1921 season. Prizes ranging from $400 for the best farm to $100 for the fourth best will be awarded upon the decision of a selected committee from the agriculture college.

Decision to call at once for bids upon the construction of 30 miles of ditches has been finally reached by the trustees of Reclamation District No. 833. The district comprises 38,000 acres of lands near Gridley. Much of it will be made fruitful for the production of vineyards, orchards and gardens as a result of the delivery of water which will be obtained from the Sutter-Butte Canal Company.

Figures just compiled by J. O. Davis, Collector of Customs show that from January 1 to September 30, the San Francisco receipts of sugar totaled 108,567,041 pounds of sugar valued at $18,064,376. The heavy importations were due to the high price of sugar in America during the early part of the year. During the same period exports of sugar totaled 1,824,872 pounds, worth $259,380.

A movement whereby the interests of Sacramento business men will be more closely allied with those of the people living in the rural districts of th surrounding country, was inaugurated at a joint meeting of representatives of the Chamber of Commerce, the Count Board of Supervisors, State Department of Agriculture and other organizations, held under the direction of the Farm Bureau.

Directors of the Stanislaus live stock show have employed Stockton architects to lay out a general scheme for the fair grounds in Modesto prepartory to beginning construction of the buildings to be used at the first Stanislaus county fair at the new park. The county will build the first fair structure, beginning with the new year, at a cost of $10,000. Early in December, however, the municipality of Modesto will proceed with the erection of a two-plane hangar at a cost of $2,000 in time to be used first for the big sale of the Stanislaus County Holstein Breeders' Association the middle of December.

BENJAMIN HOLT HAS PASSED.

Every California farmer knew of Benjamin Holt. He was the inventor of Caterpillar tractors which took California power farmers by storm and which later in another sense took the Germans by storm. The Holt factory, established at Stockton in 1883 and now the biggest institution of that thriving city, early manufactured steam tractor engines for road work. Gas engines, and combined harvesters soon issued forth for the good of the farmers. Then wheel-type gas tractors became popular; but with all the ingenuity devisable, they had difficulty in soft places; and in 1905 Mr. Holt introduced his track type tractor, which until a few years ago out-numbered all other tractors on the farms of California. Well may we all emulate the usefulness of his life!

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EDITORIAL

CALIFORNIA: A. D. 2000!

To the Editor: In your issue of November 20 you allude tolerantly to the proposed scheme of Robert Bradford Marshall for an irrigation of the Sacramento and San Joaquin Valleys? I am enclosing a map which I found quite generally distributed through the San Joaquin Valley. It is, I believe, a resurrected proposition sponsored by Mr. Maxwell, who left here some years ago and went to Denver. I always considered him a sort of a dreamer, but under the guidance of the present captain in charge, this thing has reached a tremendous momentum and the arguments put forth are as alluring as those in "Coin's Financial School."

One thing is certain that until Sacramento and San Joaquin Rivers are duplicated, or until an all-powerful legislature appoints a Commission to regulate rain, I can see nothing in the future toward the accomplishment of more irrigation except along practical and sane lines, all of which you are familiar with, and you will agree with me that it would be fatal to start something so big as contemplated that might result in a sad mixing up of present vested riparian rights. The proposition, generally, seems to be to get a monster petition before the State Legislature to appropriate $500,000 for a preliminary survey and the full completion of the plan predicates an investment by the State of $750,000,000.

To accomplish this, subscriptions in the amount of $25 each are being accepted down the valley and I was told that at Escalon that 100 people had each paid their $25. The promoters promise to get the matter before the legislature, which makes necessary the large clerical force and office building at Sacramento. Most of the sponsors are my friends, few are my enemies. Question: Am I living in a dream or are they?—F. M. P., San Francisco.

We must acknowledge that the scheme struck us about that way when we began to read the propaganda and study the picture maps of it. We were not deeply impressed by the array of distinguished citizens who allowed their names to be used as underwriters of the undertaking, because we know that some such parties often find it easier to consent than to state reasons for objection, and ohers are always willing to ride in any promotive bandwagon. And so the scheme hung in our thoughts like the proposition to shoot a projectile to Mars and other transcendant enterprises. What led us to think more seriously about it was the attitude of the plain people when the scheme was outlined at the Fruit Growers' Conventions at Chico last year and at Fresno last month. The declarations then made, added to the observation at one point which you describe, convince us that the people are not averse to investigation and consideration of the question, although the promotion costs them contributions and the entrance upon realization will require truck-loads of bonds. Therefore we are inclined to follow our constituency and assume the attitude that a thing of such great potentiality in the complete development of the great interior valley and which has before it no natural obstacle which engineering and finance can not surmount, ought to be carefully looked into. If people wish to blow in $25 each to have it tested out, why not? It is only the cost of a hundred average movie entrances and the pursuit will yield more thrills than they, even if it gets no farther than the engineer's maps and the promoters' orations. Besides, it is perfectly true and reasonable that all the productive land in the interior valley of California, which has area enough to make a couple fair-sized eastern states, can never reach its capacity for production and home-making until all the water which falls on the mountains is distributed over the foothills and plains. On the other hand, if such distribution is made, the valley and foothills will provide for a population of twenty millions, supported by expanded rural and urban industries. It is a part of the plan that every one shall have more water than now—therefore, issues based upon present ownership of water, so that no one can take it away, need not arise. Such ownership will have all it can prove ownership of and therefore need not lose anything that land which has no water shall be supplied. Can you not enjoy a dream of the valley when all the great rivers shall encircle it at relative elevations instead of plowing through it in haste to be lost in the ocean? Do you not get thrills from thought of the high environment of the valley dotted with lakes for storage reservoirs and crystal streams coursing across canyons in granite aqueducts in their circling movement and dropping artificial streams wherever there is land to be reached and made productive? Such a thought stirs us more deeply than a hundred movies and those who desire to pay that much to make a break toward demonstrating whether it is realizable or not, should not be denied their right to do so—providing the scheme is honestly and expertly promoted, as we infer it is to be.

PRODUCER'S PRICES: CONSUMER'S COSTS

To the Editor: In your issue of November 27 it is stated that an apricot grower at Porterville received $5,300 from his orchard of 1,100 trees. This is a fine record for any orchard of equal size, but I consider the statement as it stands a detriment to our orchard business. Coupled with the above figures there should have been a fair statement of what those same apricots cost the consumer when he placed them upon his table after they had passed through all of the different owners. To make a statement of a record income like the one mentioned without a statement of the added cost to the consumer leads many to think that the price the grower received was much higher than it ought to be and is one of the reasons why producers have been accused of profiteering in the production of fruits and other food supplies. Until we show the public by facts what causes the difference between the price we, as growers, get and what the public pays for our proudcts, we cannot hope to stop the all-too-high prices of many of the ordinary foods on the market.—C. C. B., San Jose.

Yes; your point is a good one, but we cannot see how it can be attainable either by the producer himself or by an agricultural journal of ordinary resources. Even if it were otherwise possible, it would cost the Porterville producer more than he received for his crop to follow every box of it to its destination and ascertain at what price retailers in all parts of the world sold its contents to their customers. That, as we understand your letter, is the demonstration you desire to have made. It seems to us it would be sufficient and in many cases practicable, if such an item as you cite should have a statement of the price per pound which the producer received as well as the gross receipts for the crop. Then the public, which you desire to have correctly informed, can compare the price paid to the grower with the price which it pays at the stores and see where the most of its money goes. That is one reason why we are alert to get into print, whenever we can, not only the generalized facts in our market reports, but specific instances of sales at prices stated. It is not usual to get them, however, unless they are high, because growers are loth to state prices which they fear may be less than their neighbors secure. The current reports of actual sales are, therefore, apt to be high and to exaggerate the general receipts in the public mind. As for the proposition of pursuing one's own product to final sale, it has been done once in a while, as a traveling producer has happened upon his own product at retail sale and always, so far as we have heard, with a rise of his anger at the small fraction of the consumers' money which he received. For this fact and for the wrong impression produced upon the public mind, we know of no adequate remedy. Direct sale by producers' personal solicitation or by consumers' co-operative buying is apparently increasing to some extent because much effort is being put forth from the consumers' side, but it is so small as compared with the bulk of the product to be disposed of that it is almost negligible. Individually, it may sometimes help the producer and keep the consumer from thinking that producers are profiteers, but collectively it is of little influence either way. The public notion of the producers' profiteering has much to do with the current exaltation of value in farming lands and is therefore nuts to the owner who desires to sell out, but it is fierce in its effects upon the owner who desires to stay in, because the assessors have been acting upon it, and this year's taxes are being based altogether too far upon what the public counts the land to be worth and is willing to pay for it and not held down to valuation in relation to the net value of its production or capability of production as it ought to be. As a matter of newspaper policy we cannot escape the publication of statements of yield or gross selling value of products unless we can impeach them as inaccurate. It does not yet appear how unwary persons can be prevented from drawing wrong impressions from them or how the producer could be protected from public misapprehension of his share in the prices which it has to pay.

A CALIFORNIA SUCCESSION.

We have delayed reference to the activities of Dean Hunt of the University College of Agriculture in connection with the International Institute of Agriculture at Rome, because the current press dispatches gave no intelligable account. The fact, which we learn from personal correspondence, is that Dean Hunt is what is called "the permanent delegate from the United States." Such incumbency, if prolonged, would necessitate his retirement from his work in California, but as Dean Hunt is spending his sabbatical year in Europe he can serve as the delegate from this country to the Institute during his absence abroad and can advise our government concerning its future representation in the Institute. If this be the fact, as our advices seem to indicate, Dean Hunt will have the honor of being the successor to David Lubin, the founder of the Institute, and California will enjoy the satisfaction of having one Californian succeeded by another in this unique and important work. Dean Hunt is eminently qualified for the work entrusted to him. His specialty is agronomy, which is the field so far covered by the Institute, and he has special taste for researches in world production and distribution of staple crops, which is the aspect of agronomy in which the world now has keenest interest and need.

Mr. Lubin's old friends in California will read with keen intenrest the following from the remarks of President Pantano at the first session of the Institute following the departure of Mr. Lubin:

The first idea of this Institute arose in the generous heart and spontaneously original mind of David Lubin and was carried on with all the means at his disposal and in all countries until this idea at last found its realization through the will of the King of Italy. This collaboration between a King and an Israelite, born in the humblest conditions and who rose to eminence by the most honorable means, was well worthy by its democratic character to give birth to an institution which looks to the future as an ever widening field of action. On the other hand, the relations brought about for the realization of a conception as great as it was novel between the King of a people whose civilization dominated the ancient world and the citizen of a nation which draws from modern civilization the stimulus requisite for its magnificent progress, may well give food for thought to the sociologist and the historian. We mourn the death of the man who was the living soul of our Institute. I will not pronounce the eulogium of David Lubin. That eulogium is implicit in the task on which we are now engaged, in our sorrow, our poignant emotion at seeing his place among us empty. Let it suffice for me to say that he was great because he was a great servant—a servant of humanity, of democracy, of all generous and disinterested ideas. Honor be to his memory, peace to his soul, as to that of all men of good will.

A marble tablet will be placed in this building, bearing an inscription which shall recall all that the Institute owes to David Lubin, and communication will be given to Mr. Lubin's family and to the great people of the United States of our regret and

of the grateful memory in which we hold the great man who has gone from among us.

To this tender and appreciative declaration by the President of the Institute Dean Hunt made fitting response and acknowledgement—expressing "the gratitude of the United States for honor conferred upon one of its most worthy citizens and the expectation of the United States that the Institute will accept as a sacred trust the responsibility of perfecting the idea to which this apostle devoted his mind, his substance and his soul through a long and active life."

THE FREIGHT RATE INQUIRY.

There seems to be a line of cleavage tracing itself in the attitude of our producers and shippers toward the increase of freight rates which has been granted to the carriers by the Interstate Commerce Commission, which we do not understand and which we regret as indicating a possible break in the solid front which should be maintained on this subject of increased cost of transportation until the increase is fully determined to be justifiable and unavoidable. At the request of Governor Stephens, who in his letter of November 29 said this:

We must be ready to assume our just burden. We cannot and will not ask for special favor. We must insist, however, that there shall be sympathetic understanding at Washington of our agricultural and industrial situation and of the handicaps we suffer because this state of all the states is at a maximum distance from the great markets.

Market Director G. B. Daniels has called a meeting of producers and shippers in this city on December 20 to discuss the bearings of the increased freight rates upon their industries. Mr. Daniels' motive is thus described in his call for the meeting:

While all recognize that the first requirement of the shipper is service, and that in order to give such service it is necessary that the transportation companies receive adequate revenue, yet it is proper for us to satisfy ourselves that we are paying no more than our just share and also whether or not there are other means of getting our goods to market that will be equally satisfactory at a less cost.

Dissent from the desirability of an inquiry into the matter from the above points of view has been expressed by Wylie M. Giffin, President of the California Associated Raisin Company in the following announcement, published in the Fresno papers of Friday, December 2:

"While we are vitally interested in trans-continental rates, we feel that the recent increase granted the railroads was justified by the abonrmal conditions and for that reason do not desire to enter any protest.

"We also believe that the interstate commerce commission, which made the rate award, was competent to pass on the important question and was fully cognizant of all factors entering into the decision to make it fair to both the shipper and the roads."

This is a very serious matter in view of the statements confidently made at the Fresno Convention of last month that the increased rates would be destructive of the business and that the traffic would be sufficiently profitable to the carriers without them. The meeting is requested by the Governor of the State and provided by the State Market Director to proceed toward a demonstration of whether such claims by those who will have to pay the increased rates are true or not. It looks serious to us to decline to take part in such an effort. We are not pre-judging Mr. Giffin's action. At this moment we are simply describing and regretting it.

QUERIES AND REPLIES

By the Editor.

Inquirers Must Give Full Name and Address
Answered Questions also on other pages.

Budding Pomegranates.

To the Editor: As far as I can ascertain, all pomegranate trees have been propagated from cuttings. As you know, most trees propogated from cuttings are not very deep rooted and in the case of pomegranates many of them fall over or blow over when they are laden with fruit. I had thought of trying to grow them from seed and then bud them over and in this way I thought perhaps I could secure a better-rooted tree. Do you think this would be good policy and if so, what variety of pomegranate would be the best to use for seedlings?—L. E. I., Lindsay.

You are probably right in expecting a better root system from a seedling, but as for budding pomegranates on seedlings, you are breaking new ground. Such writers as we have (includuing European) say nothing about it. Presumbaly it is so much easier to get the kinds true by cuttings that no one thinks it worth while to bud. We do not even know whether buds take easily, though they presumably do. It is easy to grow seeddlings by holding over the ripe fruit until the ground gets warm, say in February, and then plant the seed in nursery rows. But there are other things to think of than roots. You would need to grow your trees with single low stems so you could watch for suckers and be sure you got no growth below the bud, or your plantation would be largely worthless. With a plant growing like a pomegranate it is a great comfort and economy to know that everything that grows is what you want. It strikes us it might be cheaper to grow a wind-break, or even to anchor the bushes to windward than to keep a bunch of men crawling around on their tummies, hunting for suckers. However, the pomegranate should probably be grown as a low standard and not as a bush, and that would make the sucker game easier to play—but still, with the root different and probably worthless, you would need to be always watching more closely than otherwise.

More About the Fellenberg.

To the Editor: In your November 27th issue, E. J. D. asks about the Fellenberg prune, and you say that it does not take to the California climate very well and is not, in other words, liked very well. What are the objections to the Fellenberg? In my small prune orchard the best-bearing trees on it are the Fellenbergs; in fact, a late frost or something affected the French and Imperial prunes so that they did not set at all, although they had many blossoms on them and we had practically no crop on them, but the Fellenbergs gave us a very big crop and they all dried nicely and made a nice prune. Now, if they are not good and not desirable, I would like to know, and I will graft them to something else.—C. R. B., Richmond.

Your experience proves that the Felilenbergs are good for you, and it would be unwise to reject them. They evidently like your place and you like a sourer prune than the California prune industry builds upon and finds commercially desirable, as the trade-name "Sun-sweet" indicates. The Fellenberg does not make such a prune and in Oregon, where it is chiefly grown, a virtue is made of the wholesomeness of its acidity. The leadership of California, however, shows that it is profitable to sell more sugar in the prune. The Fellenberg behaves well in some localities in California, and it is profitably sold as fresh plum shipments to the East, but, broadly speaking, its propagation and planting were largely abandoned years ago.

Restoring Injured Trees.

To the Editor: I have 200 two-year-old plum trees that have become sunburned and worm-eaten. I do not want to pull them out. What treatment will bring them back to a thrifty condition?—Subscriber, Winters.

Whether they are worth an effort to "restore" them depends upon how badly they have been sunburned and bored. If they made a fair growth last summer in spite of the injuries, we should try to bring them back. If they made little growth and are badly stunted we would rather plant new trees and protect them from sunburn by keeping all surfaces exposed to the sun well white-washed. The treatment for injured trees consists in scraping off all dead bark (to and below the surface); killing borers by cutting out or punching in the burrows with a piece of pliable wire and covering all debarked parts with Bordeaux paste and later keep everything whitewashd that the sun can hit.

Interplanting Trees and Vines.

To the Editor: Will it hurt young trees to put grape vines between them? My trees are 20 feet each way, and I wanted to put a vine every ten feet, between the tree row, leaving a space of ten feet one way and twenty the other. Are rooted vines the best? I am informed that the cuttings are just as good.—Subscriber, Morgan Hill.

If the soil is deep and rich you can get some grapes that way for a few years without hurting the trees much, if you have water to keep them going. If the soil is only ordinary and you are going by rainfall there is a chance of making both trees and vines unsatisfactory through insufficiency of water and interference with thorough cultivation to hold what you have. As a rule trees 20 feet apart should have all the ground and even then they are set too close. For interplanting, rooted vines are altogether better because they will come sooner and will give more before they must be taken out.

Baldwin Spot.

To the Editor: Your discussion of "water-core" of the apple, in your issue of November 13th, is most interesting. Another physical abnormality of the apples, characterized by the occurrence of pithy spots, of the color of iron rust, as if the fruit pulp had been dotted with bruises close under the skin. It has been explained as a result of deficient moisture. Has this been established?—Orchardist, Tuolumne County.

The description seems to indicate "Baldwin spot"—so called because that variety is very subject to the trouble, though others are also affected. If this is the right diagnosis, the trouble cannot be explained by lack of moisture. The cause is a fungus, which enters through the stomata in the late summer and develops during the ripening period. A summer spray, such as is used for the "scab," ought to reduce it. The use of eight pounds of basic lead arsenate to 200 gallons of weak lime-sulphur (1 to 35) will be a late spray for codlin moth and the Baldwin spot also.

Suckering Citrus Trees.

To the Editor: I have three orange trees and two lemon trees 2 years old. I left the top last spring, but this year they grew all in the bottom, some branches higher than the top. How shall I prune these trees? Would it be all right to cut out the old top and keep the bottom suckers?—F. M., Concord.

You should have rubbed off those suckers when you saw them starting. Next spring (after the cold weather is over) you should cut away all the suckers close to their starting places—leaving no dormant buds to make more suckers. If necessary, remove earth to get at the starting place. Let the tree grow by extensions of the older wood and keep out all suckers, which will put the older wood on the blink. You may need new shoots, of course, but you do not need sucker growth, which is recognized by its rankness.

Root-Grafting Plums.

To the Editor: Kindly tell me if the late creation of Luther Burbank (the Black Plum), of which I have a few but they have not borne yet, is a commercial success? Also, can I graft them this winter on Myrobolan roots, putting them in moist sand until spring?—C. H., Vacaville.

We presume you mean the Beauty plum, sometimes called "Black Beauty," because of its color—but that is the name of a horse. Beauty is becoming very popular as a shipping plum. Its shape is very unique and its color attractive. You can root-graft most plums in the way you propose and, so far as we know, the Beauty has no objection. We have never tried it, but you can do that and let us know how you can come out. In that way we can all get wise.

Trees on High Water.

To the Editor: What kind of ornamental, forest or shade trees of any kind, can be grown on good land with a water table raised within 2 feet of surface by rice water, where otherwise water table would be 4 to 6 feet?—Subscriber, Willows.

We cannot answer comprehensively for lack of observation, but we would be disposed to plant elms or willows. Perhaps readers who have trees doing well in such a place will name them.

CALIFORNIA WEATHER RECORD

The following rainfall and temperature record is furnished the Pacific Rural Press by the United States Department of Agriculture Weather Bureau at San Francisco for the week ending December 6, 1920.

Station—	Rainfall Past Week	Rainfall Seasonal To Date	Rainfall Normal To Date	Temperature Highest	Temperature Lowest
Eureka	1.98	13.89	11.07	62	32
Red Bluff	.80	9.54	6.38	60	36
Sacramento	.68	5.38	4.25	58	38
San Francisco	.68	5.11	4.76	60	47
San Jose	.66	4.35	3.68	66	32
Fresno	.24	2.19	2.27	64	34
San Luis Obispo	.08	2.93	3.83	68	32
Los Angeles	.06	1.78	2.66	76	48
San Diego	.12	.47	1.55	72	47
Winnemucca	.38	.42	2.12	52	14
Reno	.38	.42	2.59	54	10
Ponopah	.01	.64	3.06	50	20

Snow on ground at Summit, 44.0 inches.

Farmers Want Laws Passed to Remedy These Evils

Written for Pacific Rural Press by R. E. Hodges.

What laws do you want the Legislature to pass during the 1921 session next January and March? Thus questioned during the last three or four months by field men of the Pacific Rural Press, visiting them on the farms, over 1,200 California farmers have up to November 20 indicated their first thoughts on the subject; and some of them have indicated second preference. The surveys were taken in all parts of the State and are still progressing.

Being approached in such a manner, these farmers have spoken out of the fullness of their hearts in regard to conditions pressing on them. The things that hurt most were probably the things that came first to their minds. The range of subjects is so wide that the actual votes on particular subjects are generally few as compared with the total.

Want Orientals Excluded.

Of these first thoughts Japanese occupation of local land leads all others by far with 372 votes, mostly for Japanese exclusion, but partly for restriction of their land holdings. Some simply want to prevent more Japanese from coming in. Many want to banish all that are here already. Some adopt the milder view of regulating Japanese immigration. Some in addition to the 372 want to exclude Chinese, Hindus, Armenians and Mexicans. One man wants Japanese kept here and compelled to become citizens and adopt our methods. One wants a law prohibiting farmers from hiring any but American laborers. Selling or leasing to Japanese is condemned in several cases. Two want Japanese labor under bond only, and one is not in favor of anti-Japanese legislation at all.

Tariffs Farm Products.

The various phases of marketing require more legislative action than any other, in the opinion of those who have farm products to sell. The vote for a tariff to protect our home production and exclude the products of cheap foreign labor stands 118 strong out of the 1,269 preferences expressed. These tariff advocates generally specified lemons, beans, almonds, "fruits," "foreign products," Australian and Chinese eggs, oranges, walnuts, olives, vegetables and wool. One sweeps the slate clean by calling for a tariff on all farm products. Another wants the tariff removed from foodstuffs.

State Control of Markets.

State control of markets was regarded by 84 as the most pressing problem. Especially in Santa Barbara county, whose assemblyman introduced the first State Commission Market Act, the ranchers are strong for real State markets; though we find a few suggestions for "co-operative State markets." One wants State markets for butterfat and a number want State supervision of creameries in their butterfat buying and testing. State supervision of the distribution of milo is suggested.

Better Standardization Needed.

Standardization of farm products should be improved, expanded, and better enforced in the opinion of many, though a number object to sending wormy apples to by-products factories; and a few consider standardization enforcement too drastic. Compulsory grading of grains, State grading of fruits at canneries, standardization of dairy feeds, standardized seed true to name, and compulsory spraying to avoid transfer of pests from neglected orchards to clean ones are desired. One advocates State control of feeds and tree diseases.

Prices Regulated by Law.

Price regulation by law received 81 votes almost as varied as the voters. One wants a set price for every grade of fruit. Another wants better protection of prices and contracts. Some want absolute price fixing; others want price regulation; many want prices regulated in proportion to the prices for farm labor; some simply want prices of farm products standardized; some specify the State or the Government as the authority to set prices; while many want co-operative organizations encouraged to protect farm products from speculators, middlemen, and profiteers and thus to regulate prices fairly. Some want laws to regulate price of fruit; one wants prices to be regulated so they would be about the same every year. Several want such prices as will guarantee 8 per cent on investment after costs of production are paid; several would have a fixed ratio between prices charged by all handlers between producers and consumers. One wants markets so controlled that commission men could not juggle prices. One wants the State to appoint a committee to set wages and prices of farm produce. One wants to compel retailers to sell at reasonable prices.

Middlemen Need Regulating.

Fifty-nine farmers specified middlemen as the leading subjects for legislation. Their recommendations varied all the way from hanging and "cutting them out" to the more complex proposition of regulating the profits of all classes of middlemen on a uniform scale of variance from producers' prices at all times. A number wanted to prevent middlemen from "gouging"; many wanted laws to prevent profiteering; several want to dispose of middlemen altogether. They know that some one frequently gets huge profits on their products before consumers get them, and they want such profits more righteously divided between producers and consumers.

Persecution of Co-operatives Condemned.

In the districts where co-operative marketing organizations have been persecuted by the Government, this was uppermost in the minds of fifty-six farmers who desire legal protection from such persecution and legal encouragement for more co-operative organizations to market crops. Twenty of these are in Fresno county. Seven beet growers want State control of their markets and prices. Sixteen farmers simply specified more laws to encourage co-operation.

Foreign market development, Farm Bureau markets, Government ownership of packing houses, killing the Chicago Board of Trade, cutting out speculation, doing away with gambling on Wall street and on exchange, taking the market-making power away from the San Francisco Dairy Exchange, control of markets by producers, and other more or less feasible remedies are suggested for our present evils.

Tuberculin Testing Unsatisfactory.

Tuberculin-testing of cattle comes in for numerous comments and the doctors disagree about 42 to 14, the majority being against it as at present administered. One says, "laws relating to tuberculin testing should either be repealed or made more effective—they are a nuisance now and doing almost no good." One wants testing done by the State; others want retests for reactors. One wants testing eliminated unless the State pays full compensation. Many others want reimbursement for reactors, one of them on basis of beef value. Many want testing to be compulsory on all dairymen; many want to apply it only to purebred cattle. One wants tuberculin testing eliminated "until they are sure of the test." One objects to the sale of any milk, raw or pasteurized, from tubercular cows; and another wants the State to kill all reactors.

Taxes Are Interesting.

Tax laws are of prime interest to 77 of the farmers interviewed. The "Single tax" took more attention than any other one phase, partly because it was to be on the ballot in November. Why did fourteen want the single tax and only eight want it prevented? Possibly for the same idea that led several to want bare land taxed more heavily in order to force it under cultivation. But a sentiment is also evidenced favoring reduction of taxes on land in process of being developed to vineyards and fruit until their bearing age. Los Angeles county people must have had some agitation recently on uniform taxation of cattle, for 23 farmers spoke first for this, mostly in that county. Only two asked for reduction of taxes on cattle; but fourteen others wanted taxes reduced in general; and one wanted the number of county officials reduced, presumably for the same reason. Several want poll taxes restored so foreigners will help pay expenses of government and schools. Only one complained of the income tax being too high!

Fair Credit Provisions Wanted.

A great many farmers are alive to the economy of borrowing money for productive operations and to enable themselves instead of speculators to hold their crops until consumers demand them. Easier money being mentioned oftener than cheaper money indicates difficulty in getting money at all at reasonable rates. Many suggested the need of continuing the present Government farm loans. Some want the system simplified and some red tape eliminated. Several want State loans. One wants to require banks to advance money on warehouse receipts to enable producers to hold until markets are favorable. One wants farmers to have credit facilities equivalent to those of big interests. Another wants the joint stock land bank maintained.

Irrigation and Power Regulation.

Irrigation and power occupied first place in the minds of more than a half a hundred, but it is notable that only three or four complaints are made directly against rates. Kern county has been especially exercised about power and water as evidenced by twenty votes there for Government control of those utilities. Tehama county people are thinking "irrigation district" strongest of all. Other ideas are voiced against turning water and power from the San Joaquin to Southern California, against waste of water, against compelling farmers to put up cash for building electric extensions to their ranches, etc. Several seem not to know that the State already controls power and water. In the case of water, State control has been hampered by lack of funds for use of the State Water Commission. Such an appropriation will be asked next spring.

Eighteen specified that the Railroad Commission should be elected by the people. Half a dozen want farmers directly considered in appointments to the Commission; and some want the latter elected by farmers and subject to recall. One wants it displaced by a Board of Farmers. Many want their own profits guaranteed as the Railroad Commisison guarantees public utility profits.

Labor and Wages Unsatisfactory.

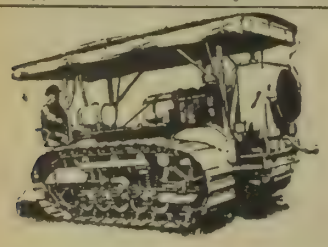
Improvement in the labor situation by enactment of laws occurred to twenty-one people as of first importance. One wants wet laws returned to help the labor situation. Another wants town idlers forced to work. One wants Government control of wages, one says wages should be based on experience, another says farm help wages should be uniform. One objects to the eight-hour day on the ranch; many want to exclude Oriental labor; one wants better quarters provided for farm help. One wants a State committee to set wages. Many want a definite relation between wages of farm help and prices of farm products. Several want to use the labor of minor children and therefore want repeal of the compulsory education law.

Many Other Pertinent Suggestions.

Squirrel and gopher law enforcement was asked in terms that indicate laxness of some of our horticultural commissioners in this respect. Twenty-four thought first of better roads. Weeds have been agitating twenty, who want impartial and adequate enforcement of laws against weeds not only on ranches but also on roadsides. Many want a pureseed law. Several have bought nursery stock not true to name and they want nurserymen made liable for such errors. One man wants to be able to prosecute auctioneers who make false statements. Several object to rulings of the Weights and Measures department regarding ownership of containers, stamping lug boxes, etc. Cotton grading and less promiscuous sampling are urged. Dairy inspection is approved and disapproved. One man wants a law compelling us to elect a Democratic Congress when we elect a Democratic President. One wants to stop the exportation of gasoline. One asks more liberal awards for goats at the State Fair. Rocks and adobe in baled hay are condemned. Producers should be licensed in one opinion. Lawyers should be put out of business as they are parasites on the farmers. Middlemen should be protected. The State should control natural gas; and oil companies should be publicly regulated. Banks and factories also should be controlled by the people. Rabbits should not be protected. Only taxpayers should vote. Too many laws already—need less of them and more enforcement.

Not all of the suggestions exhibit full comprehension of their far-reaching effects. Many indicate that farmers feel an urgent need but have not attempted to work out details of legislative remedy. They know what they want but not how to get it. Nevertheless, their feeling of unrest and disapproval may well be heeded, and the causes removed by safe and sane laws impartially and fully enforced.

Approximately 6,000,000 bushels of sweet potatoes, kept in modern storage houses, will be available this year after the sweets kept in common cellars or earth pits have spoiled or gone to market, as estimated by the U. S. Bureau of Markets. It can be seen that the removal from present markets of that many sweet potatoes out of a total estimated crop of 105,676,000 bushels in the United States may have had quite an effect in avoiding still lower prices than have prevailed recently. The U. S. crop is a little less than two per cent greater than in 1919, but storage facilities have increased in much greater proportion.



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Sprays---Times and Methods of Application

Written for Pacific Rural Press by W. S. Killingsworth.

It should be remembered by every orchardist that, beginning with December, it is "open season" on many of the most injurious insects and pests that the fruit growers of California are annually called upon to deal with, therefore it should not be necessary to go into detail, for rules governing the treatment of each will have the same beneficial effects one season with another, provided, however, the same care is exercised in the mixing and in the application of the material prescribed for that particular insect or pest. To say that the orchard has been sprayed at intervals, is lacking in evidence many times; that it was not sprayed at the proper time, either through ignorance or neglect—such often happens, and when it does the amount of material that was applied to the trees would have been just as effective had it been applied to the side of the barn instead. Special emphasis is placed upon the timeliness of any spray to produce results. The extensive orchardist can ill afford to sit idly by and not familiarize himself with conditions, such as the enemy he must meet and the course he must pursue in order to accomplish its defeat. He should know its life history, its stages of development, and when its attack is most injurious, all of which determine the time the deck should be cleared for action in order to secure its control.

The Peach Blight.

The peach growers of the state have had their "inning" with that menace known as "blight." Well do we recall the seasons from 1904 to 1906 when it attacked the orchards in Solano county, first at Suisun Valley and then at Vacaville. So telling was its effect in Suisun Valley that the orchardists became very much alarmed, fearing that its spread would wipe out their orchards. It came on over night, so to speak, and at a time when it was too late to spray expecting to accomplish results that season. Its attack was more noticeable on Muir peaches. We remember having examined Muir orchards where there was not a living leaf or twig within five feet of the ground. The foliage would turn brown, curl up, then turn black and drop off, while at the same time the twigs were undergoing this change; and when the attack had reached the peak the trees had the appearance of having had fire under each one, the damaging effect of which had reached a height of five feet. A white gummy substance exuded from around each bud of the twig attacked, which added but little to its attractiveness and far less to its chances for future productiveness. There was a heavy rainfall during the winter of 1905, which aided and abetted the blight in its most disastrous attack during the following spring. However, there was but little "territory" for it to work on, nevertheless it was there on time. In the interim the growers of Suisun and Vacaville had set about to find a remedy by which this new comer might be controlled, as the crop for at least two years had been practically ruined in the badly infected orchards, which of course weakened the trees to a damaging degree.

Identification of Blight.

When the trees are attacked the orchardist will know at once that it is the blight, as it is in a class by itself as to its mode of procedude, for it differs in this from any other peach trouble, as may be observed when the trees are well under its control. The infection fortifies itself well during the winter months prior to the coming of the new growth on the twigs which were in a healthy state at the close of the season the previous fall. It was not always the case that all of the buds on the fruit-bearing twigs that were attacked were killed, for many buds escaped with sufficient vitality to reach the blooming state; however, the days of the fruit which escaped the preliminary attack were numbered, for it was attacked previous to its development, turning black and dropping off. For at least three seasons the loss to the peach growers of the State was enormous, and especially so where little if any effort was put forth to arrest it.

The State Department of Agriculture, and the County Horticultural Commissioners exerted every effort in suppressing it, and but for the combined efforts of all, the commercial peach acreage of California would have suffered a loss requiring much time to overcome. In the beginning we mentioned its attack on the Muir peach trees, but it did not stop there, as all varieties were more or less affected.

What Spray to Use and When.

Now the question was, What spray should be used and at what time of the year? Some of the leading orchardists took the matter in hand and made a study of its workings, and they finally arrived at the conclusion that the usual practice of spraying peach trees in the spring, when this infection was to be dealt with, was all wrong; it was simply a case of "locking the stable," etc., in other words, it was too late. By careful watching it was found that twigs that were healthy in December were found to be spotted in February. Those orchardists who had been accustomed to spraying in the spring with the regulation Bordeaux mixture, or lime-sulphur and salt, in many instances greatly increased the strength of these sprays, thinking that relief might be gained in this way; but not so, as the gumming produced by the blight simply pushed back the coating of spray and came to the surface on the affected twigs, therefore the disease was in no way interfered with. By this time those who had given the matter much study determined that fall spraying was the secret which they were looking for. Such well-known orchardists as J. R. Chadbourne, William Pierce, Chadbourne Brothers, Ralph Sheldon, W. R. Morrison and many others of Suisun Valley, sprayed their trees in December, and when the time arrived for the blight to show up in the spring the effects of their work were most satisfactory, and they as well as all those who did not spray in the fall were satisfied that the December spraying with Bordeaux mixture did the work.

Bordeaux Also For Curl Leaf.

It must be understood that the spraying must be done in the early part of December, if best results are obtained, for some who delayed the game not later even than January 1st, saw that they had made a mistake. This destructive agency is, as a rule, accompanied by a "pal" if we may use the expression, a disease known as the "Curl Leaf"—properly named. We have seen this disease attack the leaves on the Elberta peach variety and curl so tight that it really looked as though the trees would be drawn out by the roots, and where the attack is as severe as this, all hopes may be abandoned for a crop of fruit that season. Some buds may run the gauntlet, blossom out, and the small fruit start on its way, but it will not go far until the leaves go on the ground. However, the control of this disease is not beyond the power of the orchardist; as a matter of fact it is easily controlled if taken in time, and that time is in February or March, just before the buds commence to open. While the Bordeaux mixture is used in driving out the peach blight, it is also used in successfully combating the curl leaf, but at a different time and of different strengths. While the Bordeaux is applied in early December for the blight, it will have but little effect in stopping the curl leaf, but when applied in February or March it will stop the curl leaf and not the blight, which makes it annoying as well as expensive, but it confirms our statement at the beginning of this article, in the matter of applying spray at the proper time and of being sure that it is the proper spray for the disease or bug that you are after.

Specific Instructions.

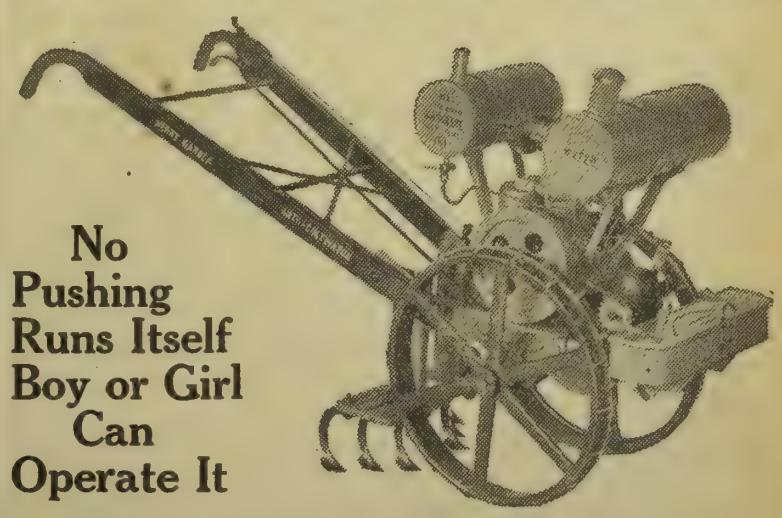
In order that there may be no mix-up in the time each should be sprayed and the correct formula to be used we herewith make the matter plain. For the blight, spray with Bordeaux mixture between November 1 and December 15. Use 30 pounds of bluestone, and 35 pounds of quick-lime to 200 gallons of water. For curl leaf spray about February 15, or just before the buds open, spray with Bordeaux mixture, 20 pounds of bluestone, 20 pounds of quick-lime to 200 gallons of water. For the curl leaf some use the lime sulphur solution for spraying instead of the Bordeaux mixture, but it must be used at the time that the Bordeaux would be used. To do effective work in the matter of spraying it should be bourne in mind that when possible, the trees should be pruned and all brush moved from the orchard, in the first place there is a great saving of material, and in the second place the surface to be sprayed can be more readily reached and the spray forced into the recluse where it belongs, as the insects and pests are not always out on dress parade that they may be destroyed with a mist from an obsolete spray outfit.

The San Jose Scale—Don't Let It "Move In."

In a former article we took up the matter of damaging effects so widely distributed by one of the worse enemies known to horticulture—San Jose Scale. Knowing its ill effects we feel that it is not time or energy wasted in constantly reminding the orchardists that it is imperative that constant watch be kept in order that this enemy shall not invade the premises, for it is much easier to head it off than it is to rout it after it has "moved in" and gotten comfortably fixed for the winter. Those who have had to deal with it, will appreciate our motive in sounding this warning, and those who may expect it at any time, that will commence now to prevent its invasion will hereafter say that this warning was "good and timely." We shall not enumerate the life history of the San Jose scale, as the orchardists are not interested in such. What they want to know is, how to prevent its invasion, or destroy it after it has made its appearance. That is a matter that must be looked into with no little concern, as we might publish all the known remedies and unless they are used in compliance with instructions, its another case of "loves labor lost." The scale washes employed in destroying this pest are several in number. However, our experience has been with the lime-sulphur solution. Years ago we prepared it on the ranch which was more or less unsatisfactory, as it was practically impossible to get the same "scald" on every tank sent into the orchard, and that the lime-sulphur solution is now prepared on a large commercial scale we advise the purchase of it in that way. All of the fruit shipping concerns handle it; therefore there is no difficulty in securing it at any time, and instructions as to the proper way of mixing it accompany each package. And, by the way, we will state that this solution in combating San Jose scale must be applied when the trees are dorment, and now is the time to get busy.

Director Hecke, makes the statement that owing to the extremely crowded condition of the California State Insectary makes it necessary for all growers desiring ladybeetles for the spring of 1921 to send in advance requests. Such requests must be made before March 1 and must be accompanied by a deposit of $1.50 for each colony desired. This deposit is necessary to cover express charges and as a guarantee of the return of the empty boxes.

Solve the Labor Problem



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PEAR GROWERS ATTEND!!!

Every authority agrees that no condition of location, altitude, soil, or climate can give permanent immunity from pear blight—that it is merely a question of time until this scourge of pome fruits invades all pear districts. It jumped the Rocky Mountains, and it will pass any local barrier sooner or later.

Science, after 140 years' study of the disease, offers neither preventive nor cure. CONTROL—alone—remains.

Scientific men, after much research, have provided the greatest aid toward Blight Control—certain pear seedlings or stocks of such resistance to blight as to be practically BLIGHT PROOF.

A new practice must be adopted by orchardists to secure the greatest benefit from these new stocks at reasonable cost—they must plant these seedlings in the orchard row, properly form the head of the tree, and then top-work the branches to the desired variety. It may take an extra year to bring such trees to bearing, but this would be an insignificant price to pay for trees which, for all time, would be practically immune to blight in all their vital parts—roots, trunk, and main-limb crotches.

The remarkable results of a series of experiments, extending over five years, participated in by the Oregon Agricultural College (the pioneer in this work), the U. S. Department of Agriculture, certain great eastern nurseries, and ourselves, justify our positive assertion that the most blight-resistant, the hardiest, and the best of these new stocks are seedlings of the cultivated type of the species PYRUS USURIENSIS, a native of Manchuria and northern China.

Allowing a liberal amount for the cost of top-working, your pear orchard can be constructed on this practically blight-proof foundation at no greater cost than with the usual budded trees, which give no protection whatsoever from blight. With Usuriensis seedlings, top-worked in the branches, you will have blight-protection that will double the value of your orchard and safeguard your investment to a degree once considered impossible.

It is our good fortune this season to have the only large supply of these seedlings in the entire world!

Instead of taking advantage of this unique situation and charging extortionate prices, we sell these invaluable stocks at but little more than half the cost of the budded nursery trees.

They have splendid roots and are ideal size for orchard planting (2 to 3 and 3 to 5 feet). They are the same age as the roots of one year budded trees. We guarantee them against death from pear blight for ten years, under agreement to refund purchase money.

We have sold more than 75,000 to leading pear men of California, Oregon, and Washington, and have 25,000 more to sell.

WHEN THESE ARE GONE, WE SHALL HAVE NO MORE for an indefinite period, because we have thus far been unable to secure seed of the true, cultivated type. We have a faint hope that we may obtain seed for 1921, but the difficulty of securing that which is reliable is so great that we urge pear planters to take no chances on the future but take advantage of the present opportunity—an opportunity which may not come again for some years.

Booklet and prices on request. We have a small but extremely high grade stock of budded pears and apples in assortment, on usual roots.

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R. E. Pierce OXNARD, CAL. A. G. Snow

Timely Work in the Orchard

(Written for Pacific Rural Press by W. S. Killingsworth.)

Get in Readiness for Tree Planting.

Never before in our experience in orchard work do we remember of more ideal prospects for planting young trees. The bountiful rains that have fallen, at a time and in such way that the ground has absorbed practically all of it, have placed the land in a condition that trees may be planted with ease and with an assurance that they will live, provided, however, care is used in the planting of same. Now that the ground in most of the nursery districts has been thoroughly soaked, making it easy to dig nursery stock in all probability such work will begin at an early date, or as soon as it is deemed safe to do so, as the nurserymen delay digging stock until the trees are fully dormant, which, of course, is the proper thing to do. However, just as soon as the nurseries will deliver the stock, it should be planted at once, unless there should happen to be heavy rainfall about the time stock is received, then planting should be delayed until the ground dries off, for under no consideration should the trees be "mudded in." Trees planted under such conditions often receive such a setback that it requires years for them to recuperate; as a matter of fact, some never survive the shock—they dwindle away and eventually die, and the nurseryman gets a "panning" for selling bum stock, when it was not his fault. On arrival of trees, if conditions are such as we have mentioned, they should be healed in and allowed to remain so until soil conditions are adjusted, which, in time, will occur; then if planted properly, approximately 100 per cent proficiency may be expected. It is a crucial time in orchard work, so be careful.

Crown-Gall of Fruit Trees.

Crown-gall is contagious. Infection often takes place through wounds induced by grafting and by carelsss cultivation. In many cases the infection takes place in the nursery and the disease passes unnoticed by the grower when planting out his trees; therefore, it is imperative that young trees received from the nurseries should be well examined before they are planted. While those trees are supposed to be carefully inspected before leaving the nursery and possibly again upon arrival at destination, it would not be out of place to examine them again as they are planted, as further developments might reveal the fact that they were infected with this disease. Those who have had experience with crown-gall state that it can be communicated in a number of ways: (1) By the water of irrigation; (2) by the implements used in cultivation; and (3) by insects. When detected trees should be dug out and burned, and any implements used in the operation should be dipped in a solution containing 5 parts of formalin to 100 parts of water before being used elsewhere. Lime should be distributed over the soil from which the trees were taken and then plowed under. It would be advisable not to replant the land to young trees for at least one year.

Watch the Pruners.

Much pruning is, or should be, going on at the present time. Now, whether it is by contract or day work, keep a constant watch on what is being done. The abuse that a tree will receive in the pruning process of one season will take years to recover. Cheap, inexperienced day labor pruning and cheap contract pruning are in the end the most expensive as well as the most destructive transactions that were ever consummated on orchard property. Guard against all such; start your trees off right and keep it up by employing the best help possible in the matter of pruning.

House the Lug Boxes and Trays.

The season is over, and we are all glad of it, for two reasons: first, it was a successful one; second, we hope that it has set the pace for equally as profitable one in 1921. However, let us not forget that all is not profit when we practice waste. Now, are the lug boxes all in from the orchard? Are the drying trays clean and stacked under cover? This should not be overlooked, as lug box and tray lumber runs into real money these days, and every box that is left in the crotch of a tree, and every 3x6 tray left laying flat on the dry yard will fail to function another season, so stop the leak now.

Commercial Fertilizer in the Orchard.

Your trees and vines have produced abundant crops for years. Now have you done anything to repay them for such faithful work? What fertilizers nave you used and what results have you obtained? If you have used no fertilizer, do you think that your trees and vines will continue to respond? We are of the opinion that they will not. There are a number of standard fertilizers on the market that have been tested and they are bringing about results. We would advise our orchard readers to look into the matter, and begin to build up their orchards, which we know must have run down, from giving up and receiving nothing in return. It stands to reason that in time the trees and vines will just naturally "peter out." If you are not familiar with the fertilizer game, we will assist you in becoming so by putting you in touch with responsible fertilizer concerns, who will teach you how such should be used.

Watch the Gopher.

The ground is soft and the gopher will now be on the constant move. Those of you who have cherry orchards had best be on the constant watch, for before you are aware of it, a tree of great value has been destroyed. There are various ways of getting the gopher. Some are successful when other fail with the same remedy or device; so if you fail with one, try another, but get the gopher.

Level the Ground with Scraper Now.

Don't wait until next summer when it is time to irrigate the orchard before the high places are pulled down with the scraper. The ground will be hard and you will be in a hurry to get to work and the job will be half done and will be a source of annoyance through the entire season. Now, after these splendid rains, while the ground is mellow, level off the ridges so that when the time arrives to irrigate everything will be in readiness and the water will flow freely.

Necessary Tree Repair Work.

In many orchards the pruning gang is at work. Now it will be a good idea to have some one who may be depended upon to follow them up and do repair work, such as removing all dead, decayed, diseased, or injured wood or bark. Sterilize all cut surfaces. Waterproof all cut surfaces. Leave the work in the most favorable condition that the healing process may not be retarded. All projecting stubs of decaying wood which has become a menace to the living parts adjoining should under no consideration be allowed to remain. We have seen apricot and pear trees so poorly pruned year after year that great knots have been formed and long dead spurs projecting therefrom, producing not only an unsightly mess but a rendezvous for every insect pest that can climb a tree. Such care as we have mentioned is time and money well spent, so don't forget it.

A Good Grafting Wax.

Those orchardists who contemplate doing their own grafting and wish to know how the wax used in covering the wound is prepared, will find the following formulas to be all right Two and one-fourth lbs. resin; two pounds of beeswax; three quarters of a pound of tallow. One pound of mutton tallow, two pounds of beeswax, four pounds of resin. One pound of beeswax, five pounds of resin, one pint of linseed oil, one pint of flour—the flour stirred in a little at a time after

BARTLETT PEAR ON JAPAN ROOT:

We have a fine lot of yearling Bartlett, as well as Bosc, Anjou, Comice, Flemish Beauty and Winter Nelis.

These trees are grown on new soil, never before in nursery stock, are well rooted, clean, healthy and hardy. Hundreds of thousands of our trees in all parts of the west are now bearing profitable crops for their discerning owners.

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Prices most reasonable.

We ship any quantity, anywhere on approval. Return at our expense if not better trees than you usually get.

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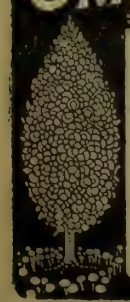

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FRUIT TREES
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the other ingredients have boiled together and cooled somewhat. Pour into shallow pan or crock and allow to harden and when ready for use, break off as much as desired at time of grafting.

OLIVE SALES.

(Written for Pacific Rural Press.)

The unfortunate condition of the olive industry as a result of the flurry over poorly canned stuff a year ago is indicated by the difficulty in getting any price at all, but there are some favorable aspects to the matter, too.

E. Y. Foley, the fruit buyer and shipper, has plunged by purchasing 200 tons of San Joaquin Valley olives for $100 a ton, 5 cents a pound. It is said that olives are selling in lug boxes on New York streets for 18 cents a pound, being eagerly purchased by Italians and other southern Europeans, who would sooner put up their own fruit than pay the high retail price that canned olives sell for. Several Tulare county olive growers are consigning their fruit on the chance of getting big money from it. There is more than half a chance that a fine market will be developed in this way, that would have been overlooked if the olive industry were in a normal condition.

It would appear that the dried olive ought to have an excellent opening, while the pickled product was in a bad way. They can be prepared cheaply, require no expensive cans for packing, will keep until sold, and the large Italian population of the country is acquainted with the product and bought it liberally while the war was on and imports from Italy were restricted.—W.

PHOSPHATES COLORED GRAPES.

(Written for Pacific Rural Press.)

An heavy application of phosphate fertilizer greatly helped the color of Emperor grapes on a vineyard of Charles Walter near Exeter in Tulare county. This vineyard of 14 acres, on rich sediment soil, was getting more vigorous every year as the result of good care and the growing of a luxuriant cover crop every winter. Growth was so heavy that good color was hard to get. As a help a heavy dose of phosphate fertilizer was put on 14 acres.

On seven of these 1,500 pounds per acre was applied, far more than the agent recommended. On the other and more vigorous half, 600 pounds per acre were applied. On both the grapes colored far better than usual. On the first part 80 tons were picked the first time over and only 48 tons on the second part. The total crop was about the same on each.

It seems apparent that nitrogen and vegetable matter can be fully supplied to vineyards under these conditions, but that chemical fertilizers are needed to balance up the supply of the various plant foods.—W.

FERTILIZER DISAPPEARS.

(Written for Pacific Rural Press.)

On the Merryman ranch in Tulare county the past couple of years barnyard manure has been applied in deep trenches made with a lister, or by throwing a double furrow with a plow. These run about 14 inches deep on an average and are about filled with manure and the dirt thrown back on top of it. After a year only a thin layer of the manure can be found, from an inch and a half down to half an inch, or even less. This shows what an immense amount of manure would be needed to make a great change in the texture of the soil, after it had all rotted. If, for example, the ground could be covered 9 inches deep and plowed under, in a year only about an inch of well-rotted material, like leaf mould, could be found, judging from the way it works in the fertilizer applied in trenches.

Cow manure, from dairies, practically disappears in a year; coarse manure shows up stronger and apparently changes the texture of the soil more even if it may not contain any more plant food than the cow manure.—W.

Top-Dressing Talk No. 2.

Fertilizing the Citrus Orchard

Both the scientific investigator and the practical grower indorses *Arcadian Sulphate of Ammonia* as the nitrogenous fertilizer for citrus.

The following is the opinion of the Manager of the Fontana Farms Co., Mr. John R. Lundimo, after very carefully testing *Arcadian Sulphate of Ammonia* in the citrus orchard:—

"I candidly believe it to be true, that where one wishes to build up a poor soil into a fertile one and retain it under years of cropping, no better economical selection could be made of a nitrogenous fertilizer than *Sulphate of Ammonia* and home-grown leguminous cover crops to plow under as a source of organic matter. The above combinations are the most essential ingredients required in most Southern California citrus soils."

ARCADIAN
Sulphate of Ammonia

Arcadian is the nitrogenous top-dressing for all crops needing nitrogen. It contains 25¼% of ammonia guaranteed. It is all soluble, quickly available and non-leaching. Fine mechanical condition makes it easy to apply by hand or machine. Made in U. S. A., it is truly the *Great American Ammoniate.*

Arcadian is for sale by:

CALIFORNIA: San Francisco; Hawaiian Fertilizer Co., Pacific Bone Coal & Fertilizing Co., Pacific Guano & Fertilizer Co., Western Meat Co., California Fertilizer Works. Los Angeles; Pacific Guano & Fertilizer Co., Pacific Bone Coal & Fertilizing Co., Agricultural Chemical Works, Hauser Packing Co., Hawaiian Fertilizer Co., Ltd., Southern California Fertilizer Co. OREGON: North Portland; Swift & Co.

For information as to application, write Desk No. 8.

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Why Do You Spray?
YOU WAN'T RESULTS—DON'T YOU?

Because Rex Sprays have continued to give practical and profitable results for more than 25 years they have become the STANDARD SPRAY MATERIALS.

REX LIME and SULPHUR SOLUTION
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"the genuine GIANT dates back to 1866"

"I remember well when we used black powder for stump blasting and mining. Just after the Civil War the first Giant Powder ever made in the United States was manufactured in a little laboratory in what is now Golden Gate park.

"Out of that beginning has grown The Giant Powder Co., Con., with its chain of great plants and magazine stocks throughout the entire West. And the Giant Farm Powders are being used for stump blasting, boulder blasting, tree planting, etc., by thousands of Western land owners. Giant Powders have always been so popular that some people have thought any ordinary dynamite was Giant Powder, but that is wrong. The only way to get Giant economy and efficiency is to get the genuine Giant Powders made by the originators of the name."

Just tell us "send me your book," and we will mail you our valuable guide to blasting, "Better Farming with Giant Farm Powders."

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STUMPING EUREKA

Figs for Commercial Planting

We solicit your inquiry regarding your requirements. Varieties are yet complete, and we feel that they are the best that experience and labor can produce. Another good feature is the price is right. Therefore, if you are in the market for select stock, you should give us a trial.

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"GROZ-IT" BRAND
Pulverized Sheep Manure

IN BAGS OR IN BULK. NOT LIKE ORDINARY MANURE.
"Groz-It" is well aged, dry, free from weed seeds and foreign matter.
Odorless. Can be applied with a drill.
A Complete Fertilizer. Cheap and efficient.
Minimum Guarantee
2.25% AMMONIA. 1.25% PHOSPHATE ACID. 3% WATER SOLUBLE POTASH
1 ton is equivalent to from 5 to 7 tons ordinary barnyard manure
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PACIFIC MANURE FERTILIZER COMPANY,
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RELIABLE
MARIOUT
BARLEY SEED
HAS
Greatest Yield Record. Our Seed Is
COMPETENTLY TESTED FOR
HIGH PURITY.
H. G. STEVENSON, JR.
Winters, California

Here and There in the Fruit Business

Apple Storage Reports.

The weekly cold storage report of apple holdings in Los Angeles shows that last week 601,011 boxes of apples were in icehouses in that city, and at the end of the preceding week of this year 594,325 boxes were being held. Latest advices from Watsonville indicate that packers in that district are easing in their demands, and are now willing to accept $1.75 for prime quality apples.

Apple Pack Biggest Known.

The Graton packing house branch of the Sebastopol Apple Growers' Union has completed the season's pack of fresh apples. More than 10,500 boxes of Gravensteins and about 15,000 boxes of the late varieties of apples were packed at the plant, which is the largest pack ever put up at the branch house. The new branch packing house at Molina packed nearly 50,000 boxes of Gravensteins.

Expected Increase in Citrus Crop.

According to data collected by the Los Angeles Chamber of Commerce, last year's California citrus crop of approximately 50,000 cars is expected to be exceeded next year by more than 7,000 cars. The coming into bearing of a large number of new orchards is the principal reason for the increase. A forecast of the 1921 crop in carload lots follows: Navels, 23,220; Valencias, 20,710; lemons, 10,400; grapefruit, 507; miscellaneous, 2,165; total, 57,102.

Fresno County Orange Crop Good.

According to Fred P. Roullard, county horticultural commissioner, the orange crop of Fresno county this season will be greater than estimated by the local fruit-shipping concerns. Seven houses are busily engaged in packing oranges and shipments are going east for the Christmas trade. Fresno county produces a fine navel orange, and it is stated by the shippers that the quality of the fruit this season is better than usual. Climatic conditions have been favorable and the fruit has ripened slightly earlier this season than usual.

Riverside Makes Excellent Showing.

The citrus crop of Riverside district for the season which closed October 31, 1920, brought over $5,000,000 f. o. b. Riverside, and that total is one of the largest, if not the largest, ever received from a season's crop. There were 2,830 full carloads of citrus fruit shipped and the average number of boxes per car was 470, the cars being loaded heavier than ever before on account of the car shortage. It is a conservative estimate that the returns f. o. b. were $4 per box, or $1,880 per car. The actual carload shipments were 178 carloads above the total of 1918-19.

Schedules Suspended on Transports.

Special fruit transport schedules have been suspended by the Inter-State Commerce Commission until April 1 for further examination. They were to have been effective this week. The schedules concern increased diversion charges on fruits and vegetables and limit the number of diversions permitted in connection with transportation movements. The commission also has suspended, for the same period, schedules providing increased demurrage charges and alterations in the rules which govern weather interference, bunching and averaging agreements.

Embargo on Ripe Olives.

Detroit's embargo on ripe olives, as a result of the recent scare in the East and Middle West, due to the appearance of a number of cases of botulinus poisoning, has been lifted by the Health Department of that city. Health Commissioner of the State Board has announced that California ripe olives may again be sent into the Detroit Market when properly packed. A number of Eastern cities placed a ban on all olives following Detroit's experience with botulinus, but this embargo is being gradually lifted as a result of the announcement by the California authorities several weeks ago, that a perfectly safe way of guarding against the poison through sterilization has been found.

Increase Cost for Material.

The high cost of orange packing and shipping has been further increased by the new contracts for orange wrappers and boxes, according to reports made to the meeting of the Mutual Orange Distributors' directors, held in Los Angeles last week. Wrappers have advanced 300 per cent in cost and orange shook for boxes have more than doubled, with the result that the box and wrapper for a box of oranges now costs 45 cents. While the 25 per cent increase in freight rates, increasing in icing charges added cost for picking of almost 100 per cent, the grower this year will be unable to place oranges on the Eastern market within $1.50 per box of what the cost was five years ago.

Oroville District Suited for Figs.

I. J. Condit, in speaking before a large delegation of representative fig growers of the Oroville section, said at a meeting a few days ago, that Butte county has a future, as a fig producer, compared with any in the State. Condit appeared before the Oroville growers as a representative of the California Fig and Peach Growers' Association, which has been recently reorganized. It is the purpose of the association to market crops for the growers co-operatively. The association will assist in the control of disease and the solution of problems of cultivation. A large number of growers from various sections of the State will attend the fifth annual Fig Institute at Fresno, January 7-8, 1921.

Bartlett Pears in Berryessa Valley.

For a long while Berryessa Valley, Napa county, has produced a Bartlett of superior flavor and keeping quality. For years the writer was familiar with the Bartlett pears produced by Napoleon View, in Beryessa Valley near Monticello. The fruit would hang until early fall, when we have shipped some boxes as late as October to Eastern markets, fruit arriving in best of condition and selling at fabulous prices. With a knowledge of this reputation, additional plantings are being made. We learn that M. T. Meek is planting 100 acres to Bartlett pears. There was formerly but one drawback, that being the distance the fruit had to be hauled over rough mountain roads; however, that has been overcome by good roads leading into Winters, Yolo county, where the fruit is now loaded for eastern shipment.

DETAILED CARE PAID.

(Written for Pacific Rural Press.)

On an Emperor vineyard on the Merryman ranch in Tulare county, it was formerly the rule to send a bunch of pruners with orders to leave so many canes per vine and so many spurs. The pruners did what they were told, all right, but the trouble was that as much wood was left on a weak vine as a strong one. The first had too much wood, the second too little, for its strength.

Several years ago this plan was changed and the pruning was done under the definite direction of Mr. Alvah Moye, assistant foreman, each vine being pruned according to its individual needs. As a result the yield has increased and quality has improved every year. This year irrigation was also done according to scientific soil tests and it is claimed that the grapes were at least equal to the best from any vineyard in the county. Although the bunches were not as numerous as the year before, they were a magnificent size.—W.

Sutter Basin is now planting 175 acres to winter peas for Eastern shipment.

State Funds Are Urged for Agriculture

(Written for Pacific Rural Press.)

Governor Stephens was once asked on behalf of the farmers' organizations of California for favorable consideration of certain legislative measures needed for encouragement of farming. He considered the request not very well backed by the farmers because subordinates represented the organizations. The most impressive aggregation of principals in those organizations that ever appeared in the Governor's office surely took that excuse away from him December 1, when a committee of nineteen presented certain requests to him and to the State Budget Board with particular reference to the financial needs of the University Farm and the State Department of Agriculture. The committee consisted of C. C. Teague, California Walnut Growers' Association; S. S. Knight, Poultry Keepers' Ass'n. and Poultry Producers of Central California; J. L. Nagle, California Fruit Exchange; Wylie M. Giffen, California Associated Raisin Co.; F. B. McKevitt, California Fruit Distributors; L. B. Scott, Nurserymen's Bud Selection Ass'n.; W. H. Heileman, California Farm Bureau Federation; Fred Harvey, Associated Dairymen of California; G. Harold Powell, California Fruit Growers' Exchange; H. G. Keesling, California State Grange; H. C. Dunlap, California Prune and Apricot Growers, Inc.; C. E. Virden, Virden Packing Company; R. P. Van Orden, Fruit Growers of California; Geo. W. Pierce, California Almond Growers' Ass'n.; H. H. Gable, Hereford Breeders' Ass'n; T. A. Kilkenny, California Farm Bureau Federation; J. M. Henderson, Jr., Associated Dairymen of California; M. D. Lack, California Cattlemen's Association; R. N. Wilson, Agricultural Legislative Committee.

They asked approval of the Governor and Budget Board for the entire proposed budget of the State Department of Agriculture. They also asked for $225,000 appropriation for new investigation and extension instruction by the College of Agriculture in addition to a building program involving $250,000 per year for the next two years. Teaching and extension work by the College of Agriculture were stated to have become so insistent that research work and even building repairs have been practically abandoned for lack of funds. Even some of the experimental orchard trees were allowed to dry out and die for lack of money with which to install adequate pumping plants. Buildings and equipment at Davis are overcrowded and inadequate for the great number of students seeking instruction. No promises were made by the Governor and Budget Board.

The new activities proposed for the College of Agriculture are as follows:

Fruit products investigation	$20,000.00
Further deciduous fruit investigations	50,000.00
New Poultry investigations to include work at Petaluma now being partly supported locally	20,000.00
Extension of irrigation investigations	10,000.00
Rice Experiment Station	15,000.00
Extension specialist in dairy manufactures	8,000.00
Investigation of cost of milk productions	25,000.00
Investigation of abortion	25,000.00
Increase in extension funds	52,000.00
Total	$225,000.00

Orange shipments at Penoyu, Placer county are under full headway. Fruit is reported to be of good size, sweet and well colored for the season.

Compliments

The greatest compliment paid to a manufacturer
Is to have his product copied or imitated.
When you are told that such-and-such
"Is just as good or the same as ZENO"
Or that what they are selling is "so-and-so's
ZENO" they are only trading on the
Reputation of ZENO which is an
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ZENO
Is an internationally used
Miscible oil tree spray, and these are reasons
Why it has proved the best by years of test.

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Write for free book and learn how Fruit-Fog—the scientifically atomized Hayes high pressure Super-Spray envelops every twig, branch and leaf like a mist—works into the microscopic niches, cracks and crevices, kills not only the *outside* pests, but also the millions of *hidden* pests, which no ordinary, coarse, low pressure spray can possibly reach.

This amazing thoroughness accounts for the remarkable success of the Hayes System of Fruit-Fog Spraying. It is adding fortunes to fruit, potato, hog and poultry profits each year.

WRITE FOR FREE BOOK TODAY—Tell us what you want your sprayer to do, and we will tell you which of the Fifty Styles of Hayes Sprayers is best suited to your needs, and its price. We'll also send our New Book of Hayes Sprayers and valuable Spraying Guide FREE.

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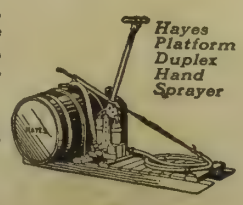
Hayes Platform Duplex Hand Sprayer

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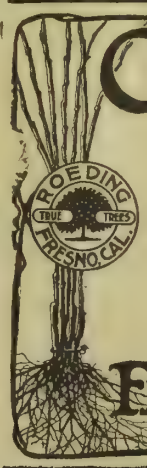


If you have not already decided what Trees you will probably want this season we suggest that you do so at once as many varieties will be scarce.

Any delay in ordering may mean a years delay in planting.

WE ARE ALWAYS PLEASED TO ANSWER QUESTIONS REGARDING BEST VARIETIES TO GROW, SOIL, IRRIGATION, PRUNING, ETC.

FANCHER CREEK NURSERIES
FRESNO, CALIFORNIA

FREE BOOK ON LAND CLEARING

MAKES HARD WORK EASY

WRITE FOR THIS BOOK TO-DAY
IT ALSO TELLS ABOUT THE WORLD FAMOUS
LABOR SAVING FULLY GUARANTEED
SINGLE-DOUBLE-TRIPLE POWER

100% POWER AND SPEED

BULL DOG
SUPERIOR ONE MAN
STUMP PULLER

BULL DOG pulls largest, smallest, low cut, green, rotten, tap-rooted stumps or trees, either in swamp or on hillsides in minutes. Other methods take hours. Made of tough steel. Weighs less. Will last a life time. *You alone* can yank out biggest stumps quickly and cheaply. Plenty of the strongest cable, blocks, hooks and guaranteed "Take-up." Root Hook FREE with every outfit.

FREE TRIAL

FOUR PLANS OF PAYMENT

MOHR STEEL CO. 2809 26th St., San Francisco.

FOUR THOUSAND AND MARIOUT SEED BARLEY

Limited surplus of high class seed of these two heavy-producing varieties, grown directly from University Farm Stock.

SAMPLES ON REQUEST

F. P. Wray, Davis, Calif.

"CALIFORNIA FRUITS And How to Grow Them"
BY E. J. WICKSON

Standard work on fruit growing in California.
$4.00 per copy postpaid.

PACIFIC RURAL PRESS, Publishers

Agricultural and Mechanical Service

Fertilizer for Heavy Vineyard Soil.

What fertilizer should be applied in an old somewhat neglected vineyard in Contra Costa county, where soil is heavy to medium heavy. Some of the vines showed good growth last year. Others looked discouraged. We have pump irrigation.—Subscriber, Contra Costa county.

Nitrogen and superphosphates may be needed, especially the former, where the growth was poor. Lime or gypsum may improve soil texture; and more humus is probably desirable. To get the latter, let all the weeds grow as late as convenient in spring and apply all the farmyard manure you can get during the winter. You can get superphosphate at the factory nearby and we suggest that you treat a strip several rows wide across the vineyard. For the nitrogen, which is probably most needed, you have the choice of several forms of fertilizer. Of these nitrate of soda and sulphate of ammonia are readily available and should not be applied until spring growth starts unless your winter cover crop needs stimulation. Organic nitrogen fertilizers, such as blood, tankage, fish meal, etc., should be applied before growth starts as they are less readily available. They have the advantage of supplying not only nitrogen, but also organic matter, which will become humus later. Gypsum and sulphate of ammonia supply sulphur, which may be needed by the vines. Test various fertilizers in strips across the vineyard.

Where Is the Thief?

I was interested in your Home Circle article November 13, evidently inserted for the benefit of the rice men. They have my sympathy. I have grown beans for three years, this year for the last time. Last season sold some very fine pinks to a local store, about 25 sacks, delivered for six cents. A week or two later I saw the same beans marked 15 cents per pound—some profit, eh? I agree with your article—let the farmer help the farmer. My ranch is right in the midst of rice men, but how about 12½ cents per pound for rice? That's what my wife paid last week. Who gets the difference? — G. H. G., Stanislaus county.

The writer has just interviewed a wholesale grocer in San Francisco, who offers to sell clean milled rice by the sack at $5.75 per hundred pounds. That is better than 12½ cents, even after you pay freight or express to your station. You named one of a number of possible profiteers when you told your bean story—but everybody's doing it. If you can't use a whole sack, combine with your neighbors to get one. We do not guarantee the financing or quality, but have every reason to believe that the wholesaler mentioned above is on the square.

Caked Cement Questionable.

We have two sacks of cement, which was bought some time ago. It never got wet but is set. What is the cause of it, and can it be utilized in any way to make a cement furnace inside a building to heat water in a large iron kettle.—J. J. S., Mendocino county.

If the cement lumps can be crushed readily between the fingers it is all right, because it is probably lumpy due to pressure in storage. Cement "sets," due to formation of crystals when it is mixed with water. After these crystals are formed, the cement is useless as such. If it has absorbed moisture from the air, it is correspondingly damaged and would increase your fire hazard far beyond the cost of fresh cement.

Bacteria from Oregon.

How long will it take to get inoculating material from the Oregon Agricultural College at Corvallis.—E. J. W., Stanislaus county.

They probably have it in stock ready for shipment; so it should not take much longer than is required for the mails to carry your order north and the bacteria south, if you send the money with your order. We understand that it costs around 25 cents per acre.

Lime or Gypsum on Ash Soil.

What is the best alfalfa fertilizer on white ash land, slacked lime, or gypsum, and about how much per acre? Where can superphosphate be bought? —E. B. B., Fresno county.

Probably your soil is not acid now and will not need lime to correct acidity. Alfalfa will benefit by the sulphur in the gypsum and your best guess is to try 500 pounds of gypsum per acre on a part of the place, leaving part untreated to check up the results. Name of superphosphate manufacturer sent by mail.

Re-nickeling Auto Lamps.

How can automobile electric light reflectors be re-nickeled?—O. P. L., Yuba county.

Patent preparations are on the market for this purpose, but have generally proved unsatisfactory to the users. New nickel-plating, similar to the original job is the only permanently satisfactory way if the reflectors are in too bad shape to polish with a buffing machine.

TRACTOR OWNED CO-OPERATIVELY.

Co-operative ownership of a tractor too big for the economical use of any of the owners and still of a size necessary to do the heavy subsoiling deemed necessary is being tried out by ten members of the Fair Oaks Farm Bureau Center in Sacramento county. Before buying the tractor, a committee was appointed to investigate last summer. In their investigations they became favorably impressed with the Henneuse tractor recently designed and manufactured at Sacramento and then being tried out in actual work. They asked for demonstrations on the subsoiling work at Fair Oaks; and this new tractor, with its 40 horsepower engine, performed satisfactorily two or three days. Thereupon, ten of the ranchers signed a binding agreement to buy and use the machine cooperatively. Their system is to hire a man to operate it all the time and care for it. Each owner is charged a fixed amount per hour while the tractor is working for him and the money is put into a common fund. Outsiders are charged a higher amount; and, of course, they can get the use of it only when the owners have no need. The tractor will also be used for plowing and rapid work cultivating the orchards of that district, as well as the many other jobs that will be found for it.

IMITATION SPARK PLUGS ILLEGAL.

Spark plugs made in imitation of the Champion and advertised for the same purpose as the latter's most popular model, were declared illegal by a Federal judge at Omaha recently. Full damages and profits were allowed to the Champion people on the ground that the imitation resulted in palming off these goods for those of the original manufacturer and in stealing the "good will' which had been built up at considerable expense by extensive advertising.

People who want to control soil moisture next season by pumping should contract now for whatever new pumps they are likely to need. A cash deposit of five or ten per cent should be required with the order; but the arrangements will likely be unsatisfactory if delayed until the rush comes.

The Farmer's Friend

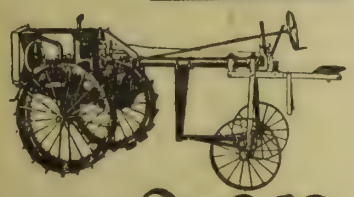
Formaldehyde throughout the world is termed the farmer's friend, because it serves the scientific farmer in a thousand ways.

FORMALDEHYDE
The Farmer's Friend

is the best and cheapest disinfectant. Officially endorsed as the standard treatment for seed grain by the U. S. Dep't of Agriculture. Rids seeds of smuts and fungus growth, also scab and blackleg diseases of potatoes. Insures healthy grain, clean potatoes, onions, cucumbers, etc. One pint bottle of *Formaldehyde* from our laboratories will treat 40 bushels of seed—ask your dealer. Write for the new Hand Book, it is FREE.

Perth Amboy Chemical Works
709-717 SIXTH AVENUE NEW YORK

Allis-Chalmers Farm Tractors



The 6-12

Pulls two 12-inch plows, a two-row cultivator with 26½ inch clearance, mower, rake, binder or any standard four-horse implement. Delivers 12 H. P. at the belt—a one man tractor with any implement.

H. V. CARTER MOTOR CO.
Distributors
52 Beale St. San Francisco, California

SAVE MONEY—BUY PIPE FROM US

Farmers, Miners, Builders—people in every kind of business are saving money buying used or renewed pipe from us. We sell every kind of pipe. Send in a list of your requirements today and get our prices. We have saved hundreds of people 33 1-3 to 50 per cent on their pipe bills. Here's a partial list of some of the miles of pipe we have in stock for immediate delivery.

8,000 ft.	6 in.	Riveted	16	gauge
700 ft.	8 in.	"	16	"
5,000 ft.	12 in.	"	12	"
1,000 ft.	18 in.	"	12	"
800 ft.	22 in.	"	14	"
300 ft.	24 in.	"	14	"
500 ft.	36 in.	"	12	"

10,000 feet light wrought iron 8-inch pipe with cast-iron collars.

All above pipe thoroughly overhauled and inspected and ready for immediate use.

We also have large quantity standard pipe and screw casing, pressure tested and guaranteed.

Don't delay—write for our prices on your pipe requirements today.

PACIFIC PIPE COMPANY
229 Howard Street, San Francisco, Cal.

CRESOLITE

makes

STUMPS HUMP

also willows and all brush. Money back if it don't.

LOUIS BAHRS, Loomis, Cal. Agents wanted.

THE ALFALFA ASSOCIATION FINANCING IMPROVED.

(Written for Pacific Rural Press.)

There has been considerable dissatisfaction among members of the "Alfalfa Growers of California" because, under their circuitous methods of accounting, growers had to wait too long after their hay was sold until they received final accounting. It was a complex system of handling all sales through the State central office; and it was a great handicap to the Association in holding and increasing its membership.

A better and more local method of financing the marketing activities of the Association is now being explained in the seven different districts into which the State has been divided for co-operative alfalfa marketing. It has received approval in all cases up to this writing, and there is every reason to expect that it will be put into operation the latter part of December.

All Money Handled Locally.

Under the new plan, each district is to be subdivided into appropriate local units, each of which will have a representative on the district board of trustees. These trustees will appoint a manager to handle all intra-district business and sales. All inter-district or outsides sales will be supervised by the State Association, which will also have close advisory and informational connection with the intra-district business; but will not handle a dollar of the money from any sales inside or outside the district. Its expenses will be met by pro rata contributions from the various district organizations.

The district organizations will be financed from the beginning by loans from their members, chiefly in the form of notes payable to the district offices. This money is needed to carry on the business; such as advancing the freight charges, carrying accounts, etc., until collections can be made on hay actually sold. In the Oakland district six unit organization meetings have aleardy been held and six notes aggregating $1,450 have been signed jointly by a considerable number of the members so they are thoroughly good security at any bank for whatever loans will be needed. The growers, in addition to signing the notes jointly or singly, as they are doing in other districts, authorize their district organizations to deduct $2 per ton to cover expenses of marketing and 50 cents a ton to be used along with any surplus that may accumulate out of the $2 marketing charge to repay the original loan and still maintain a working capital. Thus those who sign the notes will never have to pay them except to the extent of 50 cents per ton on the hay sold by the district organization for them. When the notes have been repaid and enough working capital accumulated, the trustees in any district will naturally cut out the 50-cent charge.

Meanwhile the producers will have all the benefits of co-operative marketing and local control of all sales. This will result in prompt accounting and quick returns. The fact that the State Market Commission has a director on the Alfalfa Association board of directors is largely responsible for the satisfactory reorganization now in progress.

DISPUTED POWER BILLS.

Public utilities are not allowed to discontinue service to consumers who dispute the amount of their bills and refuse payment, provided the consumer deposits with the State Railroad Commission the amount claimed. The Commission will investigate such disputes and distribute the money according to its findings. This may interest our readers who have been afraid to antaognize the companies by disputing their bills. This plan was inaugurated in May, 1916, and the Commission has settled 1006 complaints of this nature.

Newspaper reports say that New York City last year spent $6,000,000 trying to keep snow off the streets. This season the city has bought fifty caterpillars to aid in snow removal.

Plant Trees That Grow!

We have been in the nursery business for a good many years and we have learned the best varieties adapted to the various soil and climatic conditions of this state. This experience is yours for the asking. Start right and success is yours. Start wrong—and you're headed for sure disappointment.

Write for Price List.

And at the same time, tell us the kind of trees you want and the number desired. We specialize on family orchard collections.

Elmer Bros. Nursery

"The Nursery That Helped to make Santa Clara Valley Famous."

76 So. Market St., SAN JOSE, CALIF.

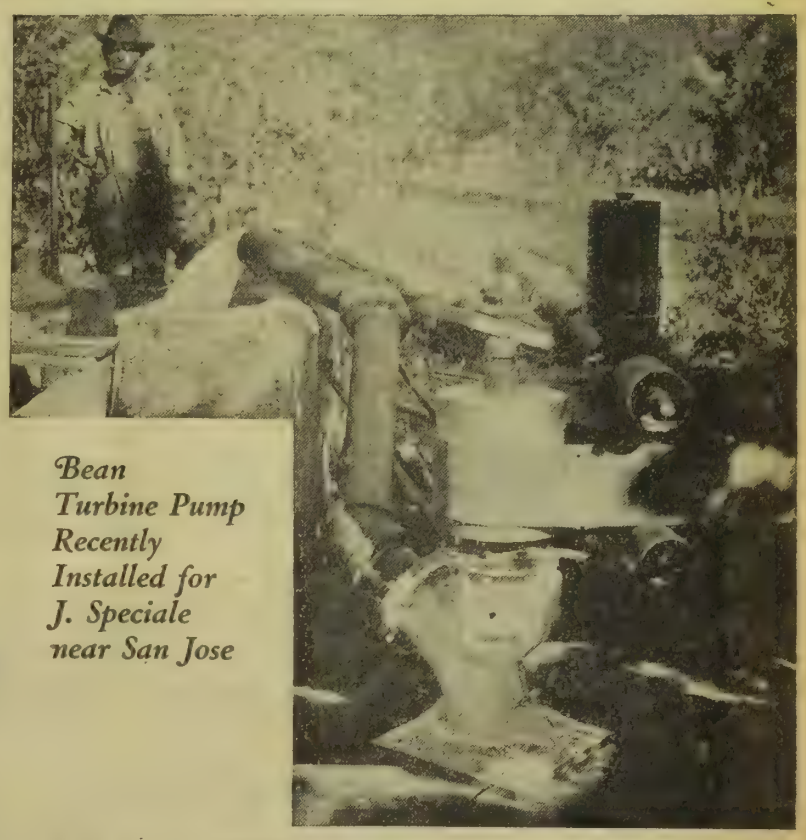
Your Soil Needs Humus and Nitrogen Bacteria

Melilotus Indica Supplies Both

Now is the time to plant it. Buy only seed that has a quality test tag on every sack. It protects you against seed of low germination.
Buy from your local dealer or from

Aggeler & Musser Seed Co.

Look for the Tag LOS ANGELES, CAL.



Bean Turbine Pump Recently Installed for J. Speciale near San Jose

WATER!

The water level in Mr. Speciale's well was getting so low that his old vertical pump was almost useless. Instead of digging the pit deeper and trying to use the old pump a little longer, he installed a Bean Turbine in the same well and solved his water problem for all time. You can do the same. Sign the coupon.

BEAN SPRAY PUMP CO.
111 W. JULIAN ST., SAN JOSE, CALIF.
Branches: Fresno Los Angeles

Bean

Turbine Pumps

(Clip Out and Mail)

BEAN SPRAY PUMP CO.
111 W. Julian Street
San Jose, Calif.

Distance to water below surface of ground.....
Probable distance to water when pumping.....
If water is to be raised above surface of ground, how high? (Length and size of pipe line).....
Volume of water desired (Gals. per min.).....
(Inches).....
If you have pit, give width..... *length*.....
depth.....
H.P. of motor or engine if you have that equipment.....
Give total depth of well.....
Inside Diameter of well.....
Is well straight and true?.....
Is electric power available?.....
Name.....
.....
Address.....
Rural Route No......
(50-PS) *Box*.....

Significant Agricultural Pointers

"Hand-to-mouth" Marketing.

With almost every farm crop we find during the present season what is termed "hand-to-mouth" buying. This is due to the downward trend of prices. Nobody wants to buy any surplus quantity at today's prices when he fears that tomorrow's prices will be lower. This situation is the best object lesson in the world of what we will face when all speculation is eliminated as so many farmers are urging individually and through their organizations. If farmers want to eliminate the speculative middlemen, they will have to hold their crops until the consuming demand takes them in hand-to-mouth quantities. Present market conditions may, however, be some worse than they would be if speculation were eliminated in times of stabilized prices; for then the consuming demand would be taking crops in larger quantities non-speculatively, in order to benefit by the lower prices such buying would permit. So, let us not rail at our present hand-to-mouth markets; because they are due to the very lack of speculation we have so long been asking for; and perhaps, by accepting the present situation gracefully, we will be in a more consistent position to advocate elimination of speculation when prices shall have become so stabilized that direct marketing will proceed in larger quantities without speculation, the producers holding until consumers demand the crops.

More Hope for Bean Tariff.

A bean tariff is practically sure to be enacted at the next session of Congress, or at the one following it if routine matters shall preclude tariff legislation at the session now on. Bean men recently met in Chicago to organize all of the leading bean producing States for that purpose, dealers being admitted as associate members only. Congressman J. W. Fordney of Michigan, chairman of the Ways and Means Committee at the last session, was none too favorable to the project although he represents one of the greatest bean-producing States. It was by his committee that leading California bean growers and others were heard last session in favor of a four-cent tariff. The committee recommended a two-cent tariff; but Mr. Fordney, in his campaigning previous to the November elections, came out rather strongly in favor of real protection for the American industry. He did not mention figures, but bean growers and dealers know that a two-cent tariff could hardly be called "real protection."

Sutter Shipping Vegetables East.

Cauliflower and celery in Sutter Basin are reported by Crop Production Manager R. G. Risser of the California Vegetable Union to be in excellent condition for shipping. Lettuce and potatoes will soon be moving to the Atlantic seaboard.

Green Tomato Shipments Abused.

Abuse of a good thing makes a bad thing out of it. Shipment of mature green tomatoes to the East and North has made a lot of money for Californians this season. But with a penny blinding their eyes to the dollars just ahead, the shippers have proved not content to ship the mature greens, but are sending immature stuff, which New Yorkers are finding scarcely fit for pickling and certainly no good as a fresh vegetable because they can never ripen as the mature green tomatoes do.

Southern Cotton Growers Organize.

Oklahoma cotton growers have adapted the California co-operative marketing plan to their crop and are now engaged in a campaign to sign up 30,000 growers in an ironclad contract to market all their cotton through the proposed association for the next seven years. This is estimated to total about 200,000 bales. The Oklahomans hope that other cotton States will organize similarly so that all may federate and establish a national cotton marketing agency that will have real power in keeping prices above cost of production and still eliminate the speculation and profiteering that have so greatly reduced the demand for cotton goods in recent months. Success to them! California cotton growers may well get busy on the same line!

One Crop Exceeds Total Water Cost.

Reservoirs of 9,441,910 acre-feet capacity for irrigation water had been built by the U. S. Reclamation Service up to July 1, 1920. Dams, flumes, ditches, pipe lines, bridges, roads, railroads, telephones, power transmission lines, power plants developing about 60,000 horsepower, and other accessories to reclamation work in addition to actual excavation have cost $125,000,000. About 3,300,000 acres of irrigable land lie under the projects completed or now under way. About 2,200,000 acres were irrigated from Government ditches in 1919. Crops grown in 1919 on land served either in whole or in part from Government works are valued at $150,000,000. A still greater quantity was grown by Government water in 1920.

Valley Irrigators O. K. Marshall Plan.

The San Joaquin Valley Water Conservation and Development Association, said to consist of hundreds of members in seven counties, voted December 4 at its annual meeting in Fresno, to merge itself with the California State Irrigation Association, which was recently organized to boost the Marshall plan of saving all the water of the Sacramento-San Joaquin Valley for irrigation, except what is demanded for navigation. Only the engineering features of this plan are in doubt and a big campaign is on now to get State co-operation in an authoritative survey to eliminate this doubt. The plan proposes to co-ordinate all existing irrigation projects and develop new ones to the limit of water supply.

Imperial Valley Lettuce Going.

Imperial Valley shipped a car of lettuce and four cars of spinach December 2. The lettuce acreage appears to be reduced from 9,500 acres last season to 6,500 or 7,000 acres this season. This is due to the losses on last season's crop. The Florida crop also appears to be somewhat less than last season. Outside of Imperial Valley, Southern California lettuce shipments have ranged from 17 to 38 carloads daily since November 9.

Corn Value Lowest in 40 Years.

Indian corn is cheaper today than in 1896, when the price was 10 cents a bushel and a great deal of it was burned for fuel, if we measure its value by its power to purchase supplies needed by the farmers, as figured out by an agricultural college in the corn belt on the basis of present prices. Elevators are offering 30 to 40 cents per bushel there today. Prices of many supplies have much more than quadrupled since 1896.

Heavy Wheat Exports Continue.

It is notable that 6,435,000 bushels of wheat were exported from the United States in the week ending November 20, a little increase over the preceding week's exports, which totaled 5,100,000 bushels. Considering our already greatly depleted reserves, American wheat holders stand to win by holding yet a while; and the flurries of speculators in Chicago need not alarm us greatly.

Big Sudan Seed Crop.

Heavy acreage and big yield per acre of Sudan grass seed in the Southwest is given by the U. S. Bureau of Markets as the reason for a price to growers in principal producing sections of $2 to $4 per 100 pounds as compared with $9 to $10 last year and two years ago.

TRACTOR MANUFACTURING SLOWED UP.

A great many tractor and implement factories in the East are closed down or running only part time. This condition is not naturally uncommon at this season of the year; but the difference this year lies in the fact that since the manufacturers feel the need of offering more inducements to the public to buy tractors, and since the price of steel shows no likelihood of reduction, many of the tractor and implement factories will not resume full operations until labor can be secured at lower prices, as sketched by Secretary of the California Tractor and Implement Association, George Collins, who has just returned from various meetings in the East, including that of the National Implement and Vehicle Association at Atlantic City. There were price reductions in coal, coke, lumber, etc., which might have been reflected in the price of tractors and implements had not the freight increase counteracted all of them.

Some few of the large manufacturers aim to keep their factories running at least enough to pay interest on investment, figuring on selling more tractors by a return to the plan of giving tractor buyers considerable time to make the major part of their payments. That this or even price reductions might prove futile in stimulating more buying of power machinery is evidenced by the slump that occurred in the business of the Ford Motor Co. after a very short period of heavy sales following their price reductions.

Charts have been prepared by the National Implement and Vehicle Association, showing that the prices of tractors and implements did not rise anywhere nearly in proportion to the rise in prices of automobiles and motor trucks, or even of the common supplies used by farmers, or of the crops sold by them, and therefore with conditions as they are, tractor manufacturing could not proceed at reduced prices for the machines until labor costs or material prices shall have been reduced.

It is estimated that three weeks will close the orange packing business in Butte county. Oranges are now leaving Oroville two to three cars each day.

If You Want More Money-

Learn a Trade

AUTO machinists, auto repairmen, vulcanizers, ignition experts, draftsmen, garagemen, truck drivers, battery experts, oxy-acetylene welders and cutters—all these trades are in great demand and at good pay.

You can quickly learn any of these trades at HEALD'S big Automobile and Engineering School. You can go on and become a civil, mechanical or electrical engineer—with the world wide open with opportunity. Classes day and night the year round—no previous experience needed—actual practice on cars and machines from start to finish—the shortest and safest way to learn.

Check the course you are interested in.

—Auto Repairman
—Machinist
—Mechanical Engineer
—Draftsman
—Oxy Acetylene Welder
—Civil Engineer
—Mathematics
—Auto Ignition Expert
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—Electrician
—Gas Engine
—Estimating
—Lathe Work
—Vulcanizer
—Auto Course for Women
—Auto Truckman
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Name .....

Address .....

Mail this ad to

W. L. Butler, Lessee and General Manager Since 1916

Heald's Auto and Engineering School
1220 Post St., S. F.

TRACTOR POPULARITY INCREASES RAPIDLY.

Tractors manufactured in the United States in 1919 totaled 164,590 as against 132,697 in 1918, 62,742 in 1917, and 29,670 in 1916. Sales of tractors in the United States increased in corresponding ratio from 27,819 in 1916 to 49,504 in 1917, to 96,670 in 1918, to 136,162 in 1919 as summarized by the Bureau of Public Roads of the U. S. Department of Agriculture recently from reports of 80 firms who are figured to have produced 95 per cent of all the tractors made in the U. S. in 1919. Reports were received from 156 companies, but only about half of them made tractors during the year. No figures are available for 1920 production. Horsepower figures for the tractors manufactured in 1919 show that more than half of them were rated by their makers at 20 to 22 horsepower in the belt. The next most popular size was 16 to 18 belt horsepower and the third class was of 24 to 26 belt horsepower. About 150,000 of the 164,590 were rated between 16 and 32 horsepower on the belt. Five manufacturers reported 3760 machines of six horsepower and less.

NEW OATS FOR DELTA.

Fall planted oats in the Delta always rust; and spring planted oats do not fill. To secure a variety that will succeed here, the University Farm has selected the "Burt" oats from a hundred varieties on the Farm and is furnishing a quantity of the seed to the Sperry Flour Company for experimental planting in the Delta. At Davis this variety has made a rapid vigorous winter growth, an unusually stiff straw, and it ripens earlier than other varieties. The seed are gray. In 1920 these oats yielded at the rate of 74 bushels per acre at University Farm as compared with 60.7 bushels for red oats and 46 bushels for black oats. Experimental plantings at the Farm since 1907 have proved a consistently good performance especially in dry seasons. No seed are available for other distributors this season.

FARMERS BEAT LOW WOOL MARKET.

There are more ways of choking a dog besides on hot butter. The wool growers of North Carolina have found that out and are exercising their rights in a new-found remedy for disposing of their wool, being aided by the United States Department of Agriculture. They are having their wool manufactured into blankets. The bottom dropped out of the wool market for North Carolina. Three wool sales which were to be held at stated points were abandoned, due to the fact that there was no market for the wool acceptable to the farmers. A large manufacturing company, with establishments at Winston-Salem, was interested in the proposition to make up the wool of individual farmers into blankets. The blankets were made and the farmers are now arranging to place their blankets on the market, and it is estimated that their wool will average them something like 50 to 55 cents per pound. Other states had better follow suit.

FAGEOL

WALKING TRACTOR

Four years of successful operation has proven conclusively the exceptional qualities of this tractor: its dependability in every class of farm work under all conditions of soil is most unusual.

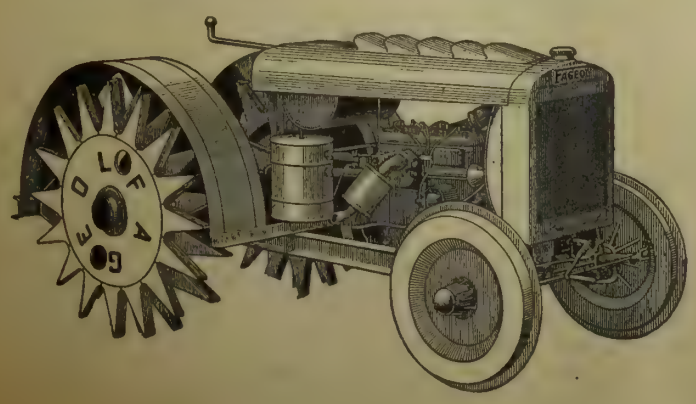
Because of its superiority, demand is far in excess of factory capacity, notwithstanding frequent enlargements.

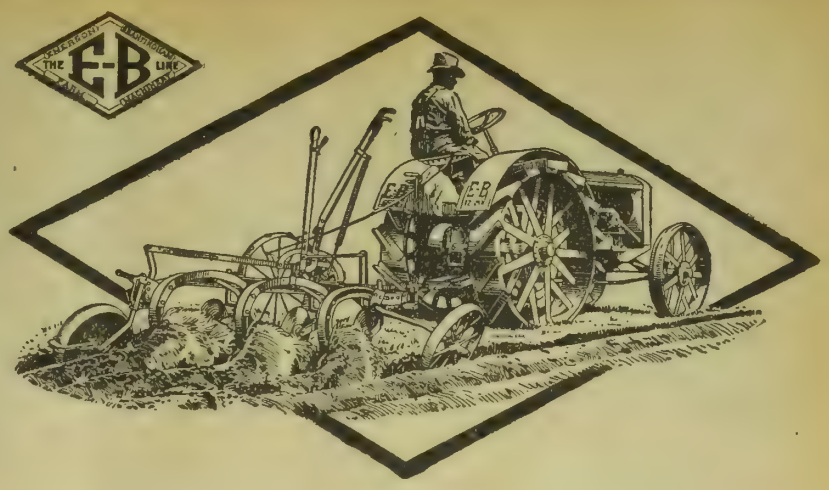
Exclusive Fageol Features
Increase their operating range
Reduce their operating cost

See your local dealer immediately. He has a new plan that will make delivery when you want it certain

Butler-Veitch
INCORPORATED
Sales Organization—Fageol Products

24th and Harrison Streets, Oakland — 1230 Market Street, San Francisco





Ten Acres a Day Plowed Right Soon Pays for Your E-B Outfit

An E-B plowing rig is built to show you steady, economical work in 1921 and a profit that you'll welcome. For tools that save time and money are the quickest way to cut down cost of farm production now.

With an E-B 12-20 Tractor and an E-B Tractor-plow you can break ten acres a day in stubborn soil. A good day's work, but the tractor never hesitates. And an E-B Plow always does a clean job because it has strength, light draft and the construction that 68 years of experience has taught us is right.

An E-B Outfit bought now will help you save all year.

Emerson-Brantingham Implement Co., Inc.
Rockford, Illinois
Established 1852
B. HAYMAN CO., Inc., Los Angeles, Calif.

A Complete Line of Farm Machinery Manufactured and Guaranteed by One Company

E-B Quick Detachable Shares are on E-B Tractor and Horse-Drawn Plows

WITTE

$54.95 F.O.B. K.C. 2 H-P. PULLS 22

Direct from Factory to You
ALL SIZES AND STYLES
2, 3, 4, 6, 8, 12, 16, 22 and 30 H-P.
at proportionately Low Prices. Above price for 2 H-P. is for engine complete on skids ready to use. From Pittsburgh add $5. Quick shipment. Write or wire for Big New Engine Catalog FREE.

WITTE ENGINE WORKS
2867 Oakland Ave. KANSAS CITY, MO.
2867 Empire Bldg. PITTSBURGH, PA.

40 Cords a Day

Easily Sawed by One Man with new OTTAWA. Get your own fuel at less than 2c a cord, then supply big demand for fire wood at $20 a cord up. Beat the Coal Shortage!

OTTAWA LOG SAW

Over 4 H-P. 310 strokes a minute. Wheel-mounted. Easy to move, cheap and easy to run. Engine runs other machinery when not sawing. New clutch lever starts and stops saw while engine runs. Cash or Easy Payments. 30 Days' Trial. 10-Year Guarantee. Send for Big FREE BOOK and Special Low Factory Price NOW. Write to

Ottawa Mfg. Co.
2719 Wood St.
Ottawa, Kansas.

Mechanical Power on the Farm

Prepared by J. E. Argus, Goodyear Tire and Rubber Co. of California, at request of California Tractor and Implement Association.

BELT REQUIREMENTS FOR FARM PUMPING.

Some people have been using a 50 H. P. engine and a pump capable of delivering "50 H. P. worth of water" with a belt that slips and stretches, wasting anywhere from 8 to 15 H. P. every hour.

It seems like a far cry from the days of old, with natives dipping the waters of the Nile, raising their bowls by the strength of their arms and pouring the water into crudely dug ditches to irrigate the Egyptian soil, to the modern centrifugal pump smoothly operating with electric motor or tractor and pouring hundreds of gallons per minute. But the same efficiency is present now, as then, if the delivery of power is by belts that do only a part of their allotted work and waste the energy for which the farmer is paying.

One of the difficulties to overcome in using ordinary belts on the pumping plant has been the question of temperature. Another is the exposure to weather conditions of all hours. Dampness and night air followed by hot sun and dry atmosphere of housinf sheds in the day time, cause cracked, shrunk and rapidly deteriorating belts when the usual types are used.

Careful study has shown that the question of strength is not as important in this work as in others, for the demand made on the belt is usually constant and even. However, the question of stretching is important, for unless a tractor is being used, it is not an easy matter to reset the power-plant often to take up the slack. And even when a tractor is used, resetting may mean a shut-down—and time, money and output are lost.

Characteristics of Good Belts.

1. The belt must be strong enough for the load.
2. It must be water-proof.
3. It must be factory stretched, so that it needs no breaking in and will not take a permanent stretch on the job.
4. It must be flexible enough to hug the pulleys and absorb the strains of rounding them without slippage or permanent distortion.
5. It must not shrink appreciably.
6. It should be as serviceable and trouble-free as the equipment it is used on—not in length of service, but in consistency of service during its life.

This may seem a formidable list of requirements but already ways and means have been devised to make belts which fill them. Long study has proven the "friction-surface" belt the proper one for such use. Its growing acceptance and the satisfactory service obtained constitute evidence that the irrigation field has found a solution of belt trouble, as has the farm field in its other power uses.

The strength of such a belt is as great as that of any sturdy cotton duck belt; and with a high-grade "friction" forced through and through the strands and all around them, it becomes water-proof. It has many advantages over a rubber-covered belt, for a rubber cover soon peels and rots away because of the oily spray that it is subjected to. And then the friction surface belt can be stretched while being cured by steam under pressure, taking out the greater percentage of the stretch. Such a belt can be sent into the field already broken in, without having impairment of its strength.

The friction also acts as an elastic bond between the strands and in the travel around the pulley so that the outside of the belt can spread and the inside squeeze together without being permanently pulled out of shape. It springs back and goes on its way. Shrinkage, another trouble experienced in using an ordinary belt, comes from dampness entering the fabric during rains or from night dew followed by the drying out in the next day's sun, which naturally draws up the strands of any fabric. With the friction surface belt, dampness is shed readily for it is water-proof.

The last requirement comes as a result of the other characteristics. The friction surface belt hugs the pulleys with an elastic grip, and can be set at a tension that respects tractor bearings, so that the burning by slippage cannot lessen the life of the belt.

SERVICE MORE DESIRED THAN RATES.

Poor service by public utilities caused more informal complaints to the State Railroad Commission in the year ending June 30, 1920, than dissatisfaction with rates. Of the 2,663 such complaints filed, 487 were against rates, 1,089 were classified as being on account of poor service, and 504 are charged against "installations, extensions, and cancellations" really a part of "service." In the last named class, 194 of the complaints were against electric companies; in the second class, 170 were against electric companies; and in rates, 104 were in regard to electricity.

TRUCK LINE TO CARRY EGGS.

Eggs are handled four times by the express company in delivering them from Santa Cruz to San Francisco, whereas a motor truck would handle them only once at Santa Cruz, or en route, and off at the buyer's store in San Francisco, thus greatly reducing danger of breakage and labor involved in transportation. This is the basis on which the State Railroad Commission on December 1 granted permission for establishment of a motor truck freight route to operate over the highway at night between the two cities, although such permission was opposed by the American Railway Express and the Southern Pacific Co.

An auto truck freight route in southern California was recently authorized by the State Railroad Commission on the express condition that nothing but eggs should be hauled into Los Angeles, and nothing but chicken feed carried on the back haul to various points in Los Angeles and Orange counties.

Allwork Kerosene Tractor

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NEW IRRIGATION PROJECT AT DIXON.

(Written for Pacific Rural Press.)

The proud boast of irrigation communities is their constant control of moisture conditions. Yet how many really can dry out their land when they want to do so for harvest or plowing or other purposes? The drainage problem of irrigation districts is generally neglected until so much damage has been done by high summer watertables and alkali that public sentiment is ready to loosen the cash required for drainage. Not so, in regard to a project just now being organized for the irrigation of 64,000 acres in the Dixon district of Solano county. A hundred square miles of hill country drains normally across this area spreading out over the land in winter and waterlogging it because natural drainage channels are too crooked or small to carry the water. But when irrigation shall be first applied to this land, the only water that will effect agriculture here is rain that falls on it and irrigation applied to it. The drainage system to carry all seepage and storm water from outside areas will be in working order to eliminate this otherwise uncontrolled excess of moisture. Of course it is impossible to forecast the particular location of laterals that will eventually be needed within the district to carry off surplus irrigation water, but these will be easily installed when needed, to drain into the main channels opened at the beginning.

As outlined by C. Rosenthal of Rosenthal & Davis, engineers making the surveys and estimates, the project will not be a public irrigation district but will be a mutual concern entirely managed by the land owners themselves. It will cost in the neighborhood of $2,000,000.

Preliminary plans and estimates have recently been completed for the land owners of that region. The tract lies in and to the west of the Yolo By-Pass and is traversed by the San Francisco & Sacramento Electric Railway. The portion lying within the by-pass will be protected against low floods by levees.

By means of a series of pumping plants the water will be raised to the necessary elevation to irrigate the entire acreage. A total of approximately 2700 H. P. will be necessary. The main canal will be about nine miles in length, there will be some 42 miles of main laterals and 158 miles of distributaries so located that individual 80 acres will be served.

ACCURATE PISTON-RING FITTING.

In putting new piston rings onto a piston it frequently happens that the ring is found slightly too wide to make a proper fit. The way to test it is to place the back of the ring into the newly cleaned groove and run it around the groove. If the outer point of the ring will wobble up and down while the back is in the groove, the ring is too narrow. But if the ring doesn't slip easily into the groove, it is too wide, and should be ground off with emery paper. The proper way to do this according to D. J. Thomas of the J. I. Case T. M. Co. is to lay a sheet of emery paper on a perfectly flat board and put the ring on another flat board of slightly greater diameter.

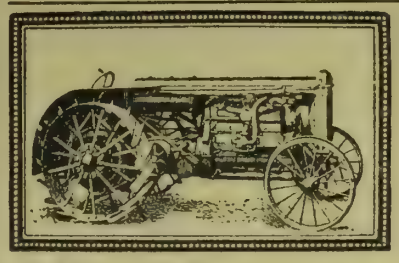
Fasten the ring in place with three tacks so placed that it must be squeezed in order to place it between them. Then the tension will hold it in position when the board is turned upside down. The tacks are driven in so their heads will not project beyond the edge of the ring. Now rub the ring carefully on the emery paper with even pressure at all points. Such even pressure is necessary for a good job; but it would be practically impossible if the ring were held in one's hand for the operation.

POWER NOTES.

R. E. Swigert, trustee for the proposed Klamath-Shasta Valley Irrigation District has applied to the State Water Commission for permission to use 750 second feet of water from the Shasta River in Siskiyou county to develop 25,500 horsepower of electricity.

About 6,000,000 barrels of oil, a million more than in normal years, were used during 1920 by California gas and electric power utilities. Use of oil in steam-electric plants is responsible for the increase. Oil prices increased 70 cents to $2 per barrel, according to location. New hydro-electric developments will reduce the oil used next season for this purpose.

Three army officers have recently been detailed to study Caterpillar tractors at the Stockton factory with a view to better preparation for future warfare. This involves not only tanks and self-propelled artillery, but also the hauling power for ordinary artillery and other battle equipment.



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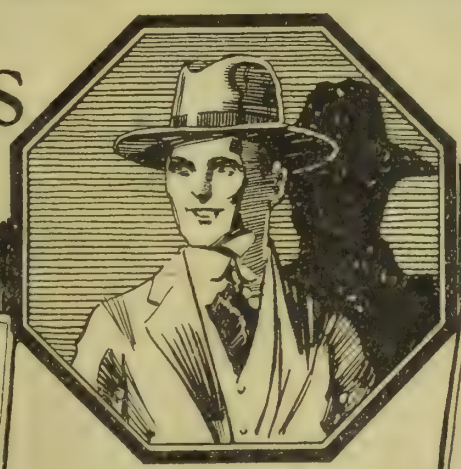

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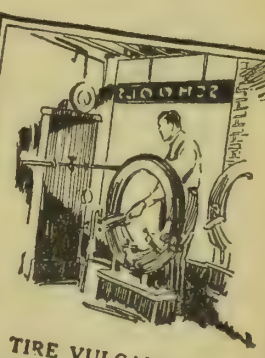

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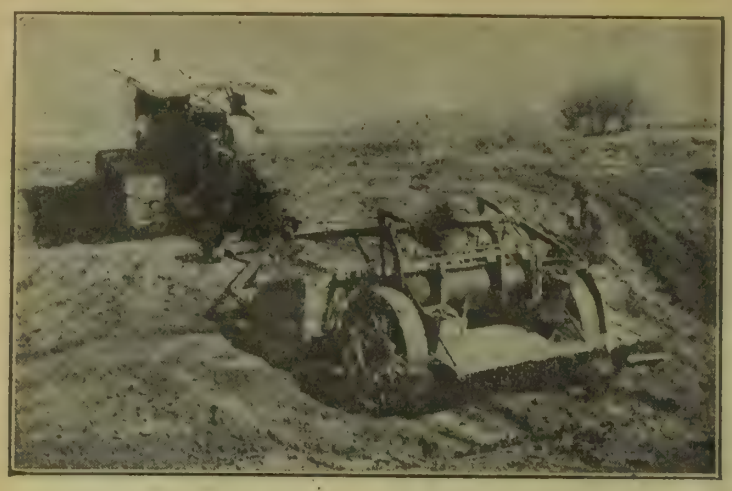

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Organized Farmers Ask National Laws

(Written for Pacific Rural Press by R. E. Hodges.)

Congress and the State Legislature will no longer ignore the propositions urged by farmers for enactment into law; nor will those propositions be quietly extinguished in committee with the smooth facility of "ye olden days". The farmers are organized into national organizations and national federations of State and local organizations. These have within the past two years been establishing legislative headquarters at Washington; and at their convention or by other means of learning the will of their members, they are formulating well-defined national policies with teeth in them. They are instructing their legislative representatives and their executive officers how the membership desires them to act with regard to propositions effecting agricultural interests favorably or unfavorably. They are talking through authoritative megaphones, with Congress and legislatures at the big end of the phones. The several national farmers' organizations and federations are themselves daily getting closer together and more nearly unanimous in their demands and condemnations of specific agricultural proposals. Congress will be glad to heed when Congressmen feel certain that the organization representatives really represent the farmers of the nation when they talk.

There are already agricultural organizations in the East enough to give a tolerably consistent and active support to the fight which has loomed up so vital to the California organizations and which has centered at Washington in the Capper-Hersman bill afterward changed to the Volstead-Capper bill with Congressman Hersman's active endorsement. The same fight has centered in California in the packer-instigated government persecution of the California Associated Raisin Co., which has already cost raisin producers thousands of dollars and bids fair to cost them and other co-operative associations some more because the Volstead-Capper Act did not get through Congress at its last session. As stated by Aaron Sapiro, counsel for various co-operative organizations in California and active in support of this bill at Washington, it "validates co-operative associations and places them under general supervision of the U. S. Department of Agricultural which is the most desirable arrangement that has a chance to go through." The American Farm Bureau Federation, the National Board of Farm Organizations, and the National Grange endorsed the Capper-Hersman bill and sent urgent appeals to their members last spring before Congress adjourned for them to personally urge their Congressmen to help get it through.

The National Board of Farm Organizations is a federation of the National Farmers' Union. The National Dairy Union, National Milk Producers' Federation, Farmers' Society of Equity, and a number of other farm organizations not so well known in California.

The California Agricultural Legislative Committee composed of executive officers of practically all the large co-operative associations unanimously endorsed the Volstead-Capper bill and issued a statement of principles in that connection which should appeal to every fair minded producer, consumer, and Congressman.

The idea of the Volstead-Capper bill is to express in unmistakable language the right of bonafide co-operative producers' organizations to organize as they have under California and other state laws and to do business on the system already adopted by those organizations. As expressed by the National Board of Farm Organizations under the anti-trust laws, "laborers are clearly permitted to make collective sales of their labor. Farmers only ask that they be permitted to make collective sales of the products of their labor." The bill passed the House of Representatives May 31 by the decisive vote of 234 to 58. It will come before Congress at its present session.

Easier Money for Productive Purposes.

Perhaps the next most vital subject discussed in Congress last session and held over for action at the present session is in regard to giving farmers proper opportunity to borrow money at equitable interest rates for production and economical marketing of their products. This suject is generally known as "rural credits"; and interest in it now relates to about four activities or institutions.

Federal Reserve Bank Rulings.

It has within recent weeks become acute by reason of the action of the Federal Reserve Board rulings which have had the effect of forcing many producers to sacrifice their products by selling to speculators. The latter found it easier to borrow money for their purposes than farmers could for the purpose of holding their crops until time for them to move into consumption without speculative delay enroute. The American Farm Bureau Federation recently issued a statement "The present commercial credit system furnishes credit mainly for the passing of farm products from the hands of the farmer into the hands of the dealer or speculator who ordinarily holds them until finally consumed. Little provision is made to enable the farmer to hold a certain portion of his crop and regulate the flow to market in proportion to the consumption demands." The Federation advocates amendments to the Federal Reserve Act giving the Board power to classify loans and vary rates on the basis of essentiality, making primary production a prior consideration, and (2) authority to issue and sell on the open market or to discount through the Federal Reserve system securities based on warehouse receipts. In making similar recommendations the joint agricultural conference at its meeting in Washington, October 28-29 stated, "It is further believed that of the total credit available the farmer has received but a pittance, while apparently those who traded in the farmer's products have been abundantly provided for."

Federal Farm Loans Held Up.

But before that action was taken, a more serious attack on rural credits resulted in the Federal Farm Loan banks almost ceasing to breathe. They were doing too big a business; as evidenced in the West by the fact that farmers, after they understood the system and its advantages, had in California, Nevada, Utah and Arizona borrowed from the Federal Loan Bank about $17,000,000. Cessation of new loans was caused by a law suit in the Federal Court at Kansas City in October 1919 contending that the act is unconstitutional. The case was appealed to the U. S. Supreme Court and is still in litigation. Since the suit was filed the Board has not tried to sell the bonds which would enable the banks to lend more money. Meanwhile a resolution was introduced in Congress to permit the Secretary of the United States treasury to buy $64,000,000 of such bonds; but the latter said he did not want over half that much. He is D. F. Houston, who discredited himself with the farmers of the nation while posing as U. S. secretary of agriculture. In September, 1919, there was a man on the board who was in sympathy with its agricultural object; but when his term expired, President Wilson appointed another in spite of the petition of the Washington representatives of the National Grange, the National Board of Farm Organizations, the Farmers' National council, and the American Farm Bureau Federation that he be retained.

Then last June the Board dismissed its secretary who had shown active sympathy with the objects of the law. Commissioner C. E. Lobdell of this misnamed Federal Farm Loan Board is advocating abolition of the National Farm Loan Association composed of the local units organized under the law to get loans from the Farm Loan

banks. The Board as a whole actively objected to organization of that Association, which grew out of the need of the borrowers for a concentrated way of expressing their wishes free from the financial or political pressure of the Board. Meanwhile various amendments to the original Farm Loan Act have already obstructed the possibility of its final co-operative working out as its framers intended. Pending the Supreme Court decision, however, Congress has not eliminated the co-operative features of the Act, though it will undoubtedly again be asked to do so. Likewise the effort that has been made by enemies of easy money for farmers to cripple or exterminate the Joint Stock Land Banks by divorcing them from the Federal Farm Loan system is likely to be revived.

National Agricultural Bank Proposed.

Friends of easy rural credits are also busy. The National Board of Farm Organizations is investigating "the advisability of inaugurating a great national agricultural bank financed by the co-operatives of the nation, and with directors chosen from all the great farm organizations of the nation." Congress may soon be asked to act on such a proposition.

Raising of the limit on Federal Land Bank loans to any one person from $10,000 to $25,000 has long been seen to be necessary and is still likely to receive approval in the near future.

Personal Security for Loans.

On February 21st, Representative L. T. McFadden of Pennsylvannia introduced a bill providing as he himself said, "for the establishment of a co-operative system of farm credit based on personal security as distinguished from land mortgage security." It provides a national banking organization composed of local units and strictly controlled by real farmers.

W. J. Spillman, formerly chief of the U. S. Office of Farm Management and now associate editor of one of the most prominent farm papers in the U. S., wrote to Mr. McFadden that he had made a careful study of the bill and was firmly convinced that it was constructed on right principles and will accomplish the desired purposes. Says he, "One of the most important features of the bill is the autonomy it gives the local organizations in determining the rate of interest on loans as well as the length of time loans shall run and the manner of repayment. The entire rural credit system provided in the bill is under the control of its members, all of whom must be farmers."

Immediate re-establishment of the War Finance Corporation was urged by the Joint Agricultural Conference October 29 to relieve the marketing situation by providing finances for foreign trade. This ignores the billion dollar bank provided for by the Edge bill of the last session and which is not yet fully organized.

Fertilizers More Easily Obtainable.

Fertilizers are ever becoming of more importance to California farmers as judged by inquiries we are receiving. A bill favoring continued operation of the Government air-nitrate plant in Alabama is urged by the National Grange and other organizations.

Other laws requiring the branding of fertilizers to show the forms as well as the percentage of plant foods in them are desired, also the removal of all obstructions to free importation of foreign fertilizers, regulations by which people desiring simple fertilizer materials may get them without first buying commercial mixtures and more equitable freight rates on fertilizers.

More Equitable Taxation is Urgent.

Taxation needs a lot of revision in the interests of farmers as recommended at the recent National Grange meeting. Exemption from taxation should not be permitted on any property not specifically exempted by State constitutions and exemptions on mortgages or by reason of other indebtedness should be made reasonable and equitable. Assessments should have a uniform basis as applied to all kinds of property of corporations, banks, and individuals in all districts with no seperate assess-

(Continued on page 775.)

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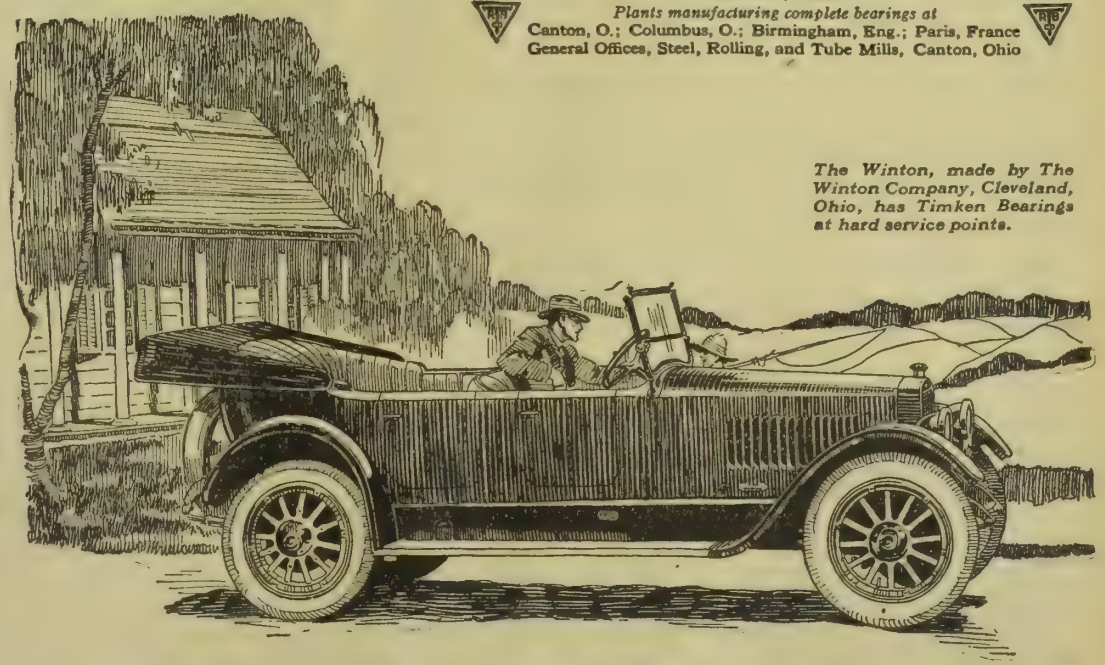

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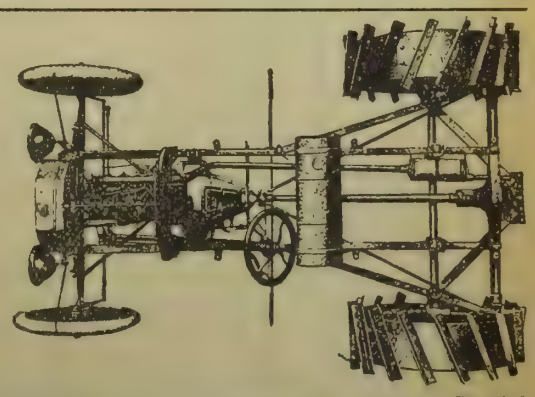

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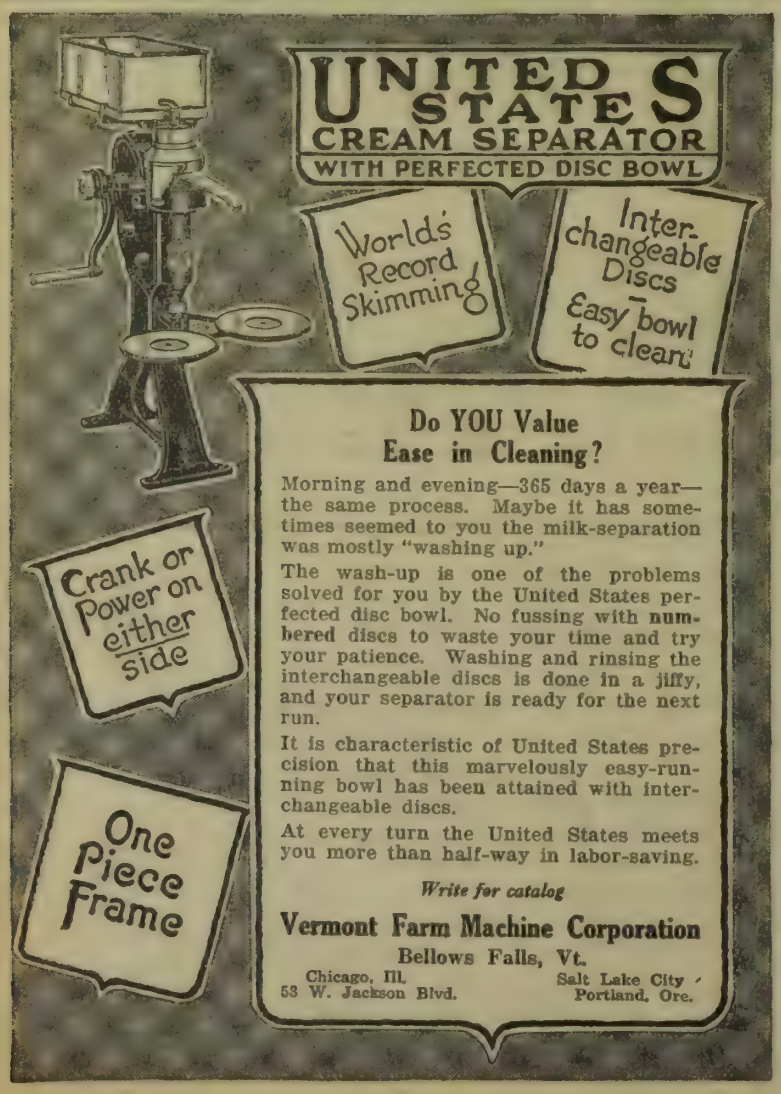

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See What Humboldt Dairymen Are Doing

(Written for Pacific Rural Press by Ralph Newman.)

I have before me a summary issued by the Central California Creameries in Humboldt County and entitled, "The Dairy Herds of Humboldt County Are Doing Their Share." It gives, for the year 1919, the number of cows, name of breed, pounds of butter fat per cow per year, and average income per cow per year as taken from the creamery books.

Before we go into the figures, bear in mind that the cows are those whose product goes to the Central California Creameries. I happen to know that the product from some of the heaviest producing herds goes elsewhere, so these figures are certainly a conservative average for the county. Furthermore, remember that the figures are for product actually delivered to and paid for by the creameries. They take no account of the milk used in the homes or fed to calves.

Ninety-two herds, totaling 2,977 cows, are included in the summary, divided into six groups.

Group one, with three herds and 105 cows, produced an average per cow of 432.2 pounds fat. The fat, plus the skim milk, brought an average gross income of $328.56 per cow.

Group two, with six herds and 192 cows, produced 387.1 pounds fat, average per cow, which, with the skim milk, brought an average per cow of $300.81.

Group three, 29 herds and 888 cows, made an average per cow of 313.9 pounds fat making, with skim milk an average income per cow of $257.28.

Group four, with 30 herds and 1173 cows, showed an average per cow of 274.3 pounds fat worth, plus the skim an average gross income of $218.75 per cow.

Group five had 15 herds, 406 cows, made an average of 225.9 pounds fat, and an average income per cow of $176.51.

The last group contained 9 herds and 213 cows. They averaged 169.7 pounds fat and brought an average of $113.68 per cow income.

Now put on your thinking cap and study this summary of groups. The first column represents the number of cows in the group, the second the average butter fat per cow annually and the third the average income from each cow:

Cows	B. F.	Income
105	432.2 lbs.	$328.56
192	387.1 lbs.	300.81
888	313.9 lbs.	257.28
1173	274.3 lbs.	218.75
406	225.9 lbs.	176.51
213	169.7 lbs.	133.68

Between the top and the bottom there is a difference in income of $194.88 per cow! What makes that difference? A complete answer would require a long and careful study on the ground. Many things go to make it up. Personality is a factor. Some men are better dairymen than others. One man can get far more out of a given herd than another man, even with the same feed. Feed is another factor. One dairyman may be more favorably located as to feed than another. One man may feed much heavier than another and so get a much larger gross income. The cows themselves are a large factor, and here the report we are studying throws some light.

The cows included in the summary are clasified as Jersey, mixed, Jersey and Guernsey, Guernsey and Durham. Just what is meant by "mixed" is not clear except that it is a hodge podge herd picked up at random. But get this. It is worth thinking over. Every herd in group one is Jersey. Four of the six herds in group two are Jersey. Fourteen of the 29 in group three are Jersey. Only 7 of the 30 herds in group four are Jersey, while in the poorest group, not one Jersey herd is listed. As the "mixed" herds increase production decreases. It isn't necessary to preach—but think it over.

How many of these groups went over the cost of production? That the showing as a whole is a mighty good one, no one will dispute. Almost 300 cows averaging 300 pounds fat per cow for a year, is an achievement. But for all that, and bearing in mind the fact that Humboldt has the edge on most of us when it comes to feed, you have got to go up through groups six, five, four and into group three before you find any real net profit. Figure all labor at the going price. Charge for all feed at its market value when fed. Figure in interest on investment, depreciation, taxes and insurance and even in Humboldt, there are a lot of dairymen who are barely breaking even and a lot more who are actually losing money. Indeed of the 2977 cows listed in this summary, 1185 are on the profit side of the line while 1792 are probably below that line. The top group is making a handsome profit. The bottom group is losing money hand over fist, and between the two are several degrees of profit and of loss. The moral is as plain as the nose on the face of the noblest Roman of them all. Even with other conditions as favorable as they may be, we have got to get cows that are capable of producing over 300 pounds of fat a year, and dairymen who can and will make them do it, before we begin to talk about net profit for the dairy industry.

[Should feed that is raised by the dairyman be charged at market value or what it cost him to raise it?—Livestock Ed.]

CONANT MAKES A NOTABLE PURCHASE.

(Written for Pacific Rural Press.)

D. F. Conant, the Jersey breeder of Modesto, is going to try something in the breeding line that will be of interest to all Jersey men. As those know who have visited Rancho Santa Margarita, Mr. Conant has some daughters and granddaughters of Victor's Kate, one of the 35 Register of Merit daughters of Lady Lettie's Victor. There are also in the herd a number of daughters of these cows sired by Goldie's Altama Interest. This bull is a son of the prize-winning Register of Merit sire, Altama Interest, and his dam is Goldie of Venadera, a first-prize official test cow with 704 lbs. of 85 per cent butter in a year. From the standpoint of both production and type I think no breeder who has seen them will dispute the statement that they are among the most promising young things in the state.

Now, then, bear in mind that Victor's Kate, the fountain head of these Conant females, was a tested granddaughter of Lady Lettie Lambert. And Lady Lettie Lambert, as you know, was that great foundation cow whose blood flows in the veins of many of the best Jerseys from one ocean to the other.

Mr. Conant has purchased, for use on these richly bred St. Lambert females, as soon as he is old enough for service, the royally bred young Waverly Victor.

Young Waverly Victor is a beautiful refined calf, with a skin like velvet, and if there is anything in heredity, there will be no coarseness or sloping rumps in his get. And see what is behind him! He carries a quadruple cross and nearly 35 per cent of the blood of Lady Lettie Lambert. More than 50 per cent of his blood is a combination of the pure St. Lambert cow, Lady Lettie Lambert and the imported bull, Eminent 69631. Another 18 per cent of his blood comes from two crosses of Rioter of St. Lambert Jr. The little that is left of his pedigree goes frequently to the St. Lambert family through other lines, making Waverly Victor a strongly line bred St. Lambert bull.

The three animals above mentioned, Lady Lettie Lambert, Eminent, and Rioter of St. Lambert Jr. were selected by A. M. Bowman for the foundation of the St. Lambert and Island bred herd established by him at Bowmant Farms twenty years ago. He paid $10,000 for Eminent, the first bull to sell for so high a price at auction;

and the other two, bought at private sale, brought quite as sensational prices.

The blood of these three great animals comes to our young Waverly Victor through great producers, and it is reasonably to be expected that, mated to the offspring of Victor's Kate, he will give an account of himself that will gratify not only his owner but all lovers of Jerseys.

His royal highness comes to the Rancho Santa Margarita from the old Waverly herd of Dr. Herbert Hoopes at Belair, Maryland.

ANOTHER HOLSTEIN OPPORTUNITY

From the number of sales and quality of stock sold, one not familiar with the territory might think that Stanislaus Holstein Breeders' Association could not eclipse their former achievements. However, a look at the Holmes-DeWolfe offering for December 15th will settle that notion.

Just note a few of De Wolfe's offerings. There will be several granddaughters of Hengerveld DeKol, Riverside Sadie DeKol Burke, and Colantha Johanna Lad. There will be a daughter of May Korndyke, sired by King Korndyke Sadie Vale and bred to a 27.52-lb. son of King Mead of Riverside. There will be a sister to Miss Aaggie Acme Burke, a state record 2-year-old, out of a three-quarter sister of Prince Gelsche Walker. There will also be offered two sons of Sir Skylark Ormsby Hengerveld, the only bull west of the Mississippi with 5 daughters above 31 lbs. and who now has 3 granddaughters above 31 lbs. Breeding like this is good enough for anybody.

Among the Holme's offering will be Aaggie DeKol Acme Segis, a 2-year-old, sired by Sir Aaggie DeKol Acme with 11 A. R. O. daughters. This bull's dam was Aaggie Acme of Riverside, world record cow with a strictly official record of 1,331.71 lbs. butter in a year. She is in calf to Segis Pontiac DeKol Burke with 25 A. R. O. daughters, and his dam was Changling Tidy Abbekerk Gem, a 35-lb. cow out of Changling Butterboy. There will be 14 of his daughters in the sale. Holmes will also offer two daughters and one granddaughter of Sir Pietertje Ormsby Mercedes, and to cap the climax he is putting in one heifer holding three junior championships and another with two of the same medals. Both of these beautiful heifers are fresh and bred to Segis Pontiac Abbekerk.

This is a sale that is sure to attract established breeders and that is always a good place for new breeders to break in.

MILK AND CREAM SAMPLES FOR CHEMICAL EXAMINATION.

Many samples of cream and some samples of milk are constantly received at the chemical laboratory of the State Department of Agriculture for butterfat testing. These samples are generally sent in by interested concerns or individuals who seek an accurate test by a disinterested party. Experience has shown that many of these samples come in such a condition that results of value cannot be obtained. Therefore, the following rules should be followed when samples of milk or cream are sent to this department for testing, because if they are not, consistent results cannot be obtained.

1. The milk or cream to be sampled should be well mixed by pouring from one can to another at least three times immediately before the sample is taken.

2. There should be sixty grams (about 2 ounces) or more in each sample.

3. The sample should be sent in a bottle provided with a good tight-fitting cork stopper—which should be tied in. No paper of cloth should be placed around the stopper. Round bottles with a rather large mouth are excellent for this purpose.

4. The sample should not be sent in a bottle with a metal screw cap. Nor in the ordinary milk bottle with paper cap. These bottles frequently leak and thus cause the test to be unreliable.

5. A sample of milk should fill the bottle to within about one-eighth of an inch of the stopper.

6. Two or three drops of formalin (not more) should be added to a sample of milk, and it may well be added to a sample of cream.

7. Address : To insure prompt delivery, address to, Official Testing Laboratories, State Department of Agriculture, Capitol Park, Sacramento, California.

8. If the percentage of solids in samples of milk or other values are desired a larger quantity of milk or cream should be sent. If any interested party so desires, he can obtain suitable sample bottles and shipping containers from the Department. These rules of course are not applicable to samples sent in for bacteriological examination.

SIX MILLION A GOOD MANY.

Six millions are a good many but Dr. J. P. Iverson of State Department of Agriculture is authority for the statement that the total number of all kinds of horses, cattle, sheep and swine in California at the present time. The total value of this enormous number is about $250,000,000 and the total investment in the livestock industry of the state approximates $750,000,000.

A Year in the Open

DURING the year just closing HEBE and its relation to the dairy industry has been brought to the forefront of dairying thought and has been made the subject of considerable discussion. This has resulted largely from the campaign of educational advertising which the Hebe Company has been conducting in this and other farm journals. This out-in-the-open discussion has demonstrated that the opposition to HEBE has been inspired largely either by prejudice, misrepresentation of the facts or misunderstanding of the nature and purposes of HEBE and the manner in which it is being advertised and marketed.

During this discussion many questions have been asked and answered and many charges reflecting against the product have been aired and refuted.

Although presented in a variety of forms the charges against HEBE, when reduced to fundamentals resolved themselves into these two points:—

1. The belief that HEBE will injure the dairy industry by being marketed as a substitute for evaporated and condensed whole milk.
2. The belief that in HEBE skimmed milk is used simply as a means of bringing cocoanut fat on the market in competition with butter fat.

In the advertising published in farm journals and in the correspondence resulting from this form of advertising these points have been answered frankly and fairly. In answer to the first it has been shown that:—

HEBE is *not* being advertised or marketed either as evaporated or condensed whole milk or as a substitute for it or a substitute for anything else —but that HEBE is produced, labeled, advertised and marketed as a new and distinctive product (a compound of evaporated skimmed milk and vegetable fat) for definite uses (cooking, baking, coffee) and as such is building its own market and thus increasing the general consumption of dairy products.

In answer to the second point it has been shown that:—

HEBE is *not* being used as a means of bringing cocoanut fat to the market but that the converse of this is true—that a small amount of cocoanut fat is merely the vehicle by which a large amount of skimmed milk is being brought to the market as a cooking medium. In the production of every hundred pounds of HEBE, two hundred and ten pounds of skimmed milk and only seven and eight-tenths pounds of cocoanut fat are used. This small amount of non-dairy ingredient is there merely to supply the large amount of dairy ingredient with the shortening and other elements necessary to make it desirable as a cooking medium. The cocoanut fat in HEBE serves a purpose similar to the purposes served by salt in butter and gelatine and flavoring extracts in ice cream—to make the dairy ingredient more readily salable for the uses intended.

As can be seen in this brief review of the year's development in the HEBE discussion the Hebe Company has diligently sought to give to the rank and file of the dairy industry all of the facts by which they may judge the product and know how it will affect their business. It has always been the belief of this Company that the dairymen should have these facts and that it is for the best interest of the dairy industry as well as the Hebe Company to give the broadest publicity to all matters that directly affect the industry.

It is only partial knowledge that is dangerous and that is why many dairymen and leaders of dairy thought, after learning all of the facts, have come to see HEBE in a different light in its relation to the dairy industry.

The HEBE situation is discussed at length in the booklet "The Missing Third"—a copy of which will be sent free on request to the Hebe Company, 3275 Consumers Bldg., Chicago.

THE HEBE COMPANY

CHICAGO SEATTLE

Livestock and Dairy Notes

Dairy

John Lemos an Alvarado dairyman has sold his dairy business for $27,000. The sale of this dairy makes available for market 350 tons of alfalfa hay and 500 bales of chaff and oat hay.

C. F. Lewis, who is credited with being the largest breeder of Guernseys in Stanislaus county, purchased yesterday another purebred, Imported Violets of Goodnesstone, of S. J. Strauss.

M. Fortini, owner of Tintagel Farm at Orland, announces that his grand champion herd sire, Dairymaid's Gay Prince has been leased by the University Farm at Davis for use in their herd. Mr. Fortini has come to the front very rapidly recently as a breeder of good Jerseys.

J. M. Campbell, of Escalon, is very proud, and justly so, of his Holstein heifer, Segis Johana Walker. She was sired by the Carnation Farms $25,000 bull Johanna McKinley and is a granddaughter of King Segis 10th whose daughter is the cow that has beaten Tilly Alcartra. Segis Johanna Walker was bred to King Sylvia and will soon freshen as a senior 2 year old.

The Summary of the Tuberculosis Eradication Work of the Federal Government in co-operation with the various states for the month of October shows 6151 herds containing 104,331 cows tested with tuberculin. Of this number 4284 proved to be reacters. Wisconsin headed the list with 18,285 cattle tested and 271 reactors.

A recent circular from the Extension Service Department of the College of Agriculture of the University of Wisconsin entitled "Profitable Cows" gives data of the Wisconsin Register of Production. Cows to the number of 421 qualified for enrollment by having produced 365 pounds of butterfat during the year she was under supervision by the cow-testing association and eligible for registration provided her owner is a member of the association for the following year. Either purebreds or grades are eligible.

The entire plant and property of the Carpenter Milk Products Co. at Tulare was bought by the San Joaquin Valley Milk Producers, the deal involving approximately $150,000. Announcement of the sale was made recently by E. H. Webster, secretary and general manager of the association. In connection with this sale, the association officers announced that arrangements are being made to establish a churning and separating plant at Fresno. Other important dairy plans are about to be perfected following the close of the litigation brought by opponents of the association to prevent the completion of the general merger started more than a year ago.

Beef.

Dressed beef in the wholesale markets did not decline as sharply in price as pork and the difference between the last quotations of November and October 1st was only 90 per cent. The disastrous drop in pork probably had some influence on the beef market.

H. W. Hanman, Superintendent of the Sierra Vista Vineyard Company at Minturn sold 20 young cows, 20 heifers and one bull out of their purebred Hereford herd to J. A. Fredson of Hollister. Their herd which is one of the largest in the state, still contains around 250 head of registered stock.

Joseph Talley, of Julian, San Diego county was arrested, tried and convicted of using an unrecorded branding iron. He was fined fifty dollars. M. J. Jacobs of the same place was charged with purchasing meat of a "bovine animal" from an unlicensed slaughterer. He was found guilty and fined fifteen dollars.

Swine.

H. M. Berglund, who breeds Duroc-Jerseys at Dixon, shipped two service boars this week, one going to the Petaluma Agricultural Club of the Petaluma High School and the other to a breeder at Rutherford in Napa county.

The Stanislaus County Duroc-Jersey Swine Breeders' Association at a meeting held in Modesto, November 30 decided to postpone indefinitely the consignment sale they had planned for January 19th next.

J. F. McSwain, Poland China breeder of Merced, has recently lost his Senior herd sire, Big Model Fellow. He was sired by Bassett's Model Fellow who was first prize senior yearling and reserve grand champion at Sacramento in 1919.

Although selling on a falling market the Durham hog auction sale committee realized 6 cents per hundred more by shipping four carloads of porkers to San Francisco than by accepting the highest bids made at the recent hog auction sale.

The Institute of American Meat Packers in their report on the meat and livestock situation for November note marked declines in the wholesale prices on the principal cuts. This drop ranged from 28 per cent on heavy loins to 6 per cent on lard. On light loins the drop was 45 per cent between November 29th and October 1st last.

A Buckland and Son, who breed Poland Chinas at Fresno, are beginning to plan on next year's shows. Their Hawkeye Maid, by Hawkeye Giout, out of Orahge Maid is a sow of considerable promise. She is a litter sister of Giant Maid, Grand Champion Sow at the National Swine Show this year.

One of the good herds of Durocs in Southern California will soon come under the auctioneer's hammer. The Falfadale herd will be dispersed on the first week in February. Included in the sale are 40 sows and gilts bred to Great Orion Sensation, Jr., grand-champion at Tulare, Los Angeles and Riverside and reserve grand champion at the California State Fair this year. This will be one of the best offerings of Durocs ever made in California.

Consumers will shortly receive the benefit of the recent declines in live hog prices, since both the packing concerns located in San Francisco announced a cut recently in the wholesale price of dressed pork. The Virden Packing Company dropped their previous price of hams two cents a pound, and are now offering bacon at from 1 to 2 cents a pound less. The Western Meat Company dropped the price of their hams 1 cent a pound but the price of bacon offered by them remained unchanged.

Sheep.

The British government will furnish capital for purchasing 20,000 bales of wool from Australia for the Austrian government in order that the latter people may again develop some of their ruined industries.

A rice grower of Yolo county is trying to salvage some of his damaged rice crop by turning a bunch of lambs into a field that was not worth harvesting. It is claimed that rice pasture of this kind makes wool and mutton very rapidly.

The National Sheep and Wool Bureau of America with headquarters in Chicago announced at a meeting held on November 30th that it would lend its entire support to the plan of Senator Reed Smoot of Utah to secure a year's embargo on the importation of wool which it seems to us should include woolen goods or the manufacturers would be obliged to compete with cloth made from low-priced wool.

The last of this year's lambs have been disposed of, according to local members of the Butcher's and Stockgrowers' Association of Livermore. More than 5000 head of lambs, bringing a price of from $7 to $8, were disposed of during the season just past, according to the report made by the association. James Gallagher, C. G. Owens, John McGlinchey, and John Kelley are the principal stockmen of the Livermore valley.

Horses.

A correspondent from Goleta noticing a reply to a query about a horse that fell asleep while standing in harness every time he was stopped relates a circumstance where a horse seemed afflicted in much the same way. In this last mentioned case it was found that the stall occupied was so small that the animal could not lie down while in it. When removed to more roomy quarters the sleepiness during the working hours disappeared.

A report by the Illinois Agricultural Association made public recently shows that the Sucker State is 100,000 horses short. The tractor and truck people think they will supply the shortage but many farmers are realizing that the tractor is not as cheap and efficient as it is supposed to be. And by the way livestock men it seems as though horses were bringing fully as good or better prices as any other class of farm animals at present.

TO THE HOLSTEIN BREEDERS OF CALIFORNIA

Gentlemen:

We have bought "Sir Ormsby Skylark Rauwerd" and will accept a limited number of cows for service.

To you who are well versed in Holstein pedigrees and records, we need say no other word. But to those of you who possibly may be young in the business or who are not fully aware of what the Ormsby strain has done and is doing, we would suggest that you do not waste valuable years by raising calves from inferior bulls.

Sir Ormsby Skylark Rauwerd is the best son of old Sir Ormsby Skylark, who sired amongst other notable cows, Dutchess Skylark Ormsby, 1506.36 lbs, butterfat in one year, which is the world's record for any breed.

The Dam of Sir Ormsby Skylark Rauwerd is Beauty Rauwerd Hengerveld 2nd, a 34½-lb. cow whose sire, Prince Segis Korndyke, had 59 A. R. O. daughters; and her dam was a 29-lb. cow.

Sierra Vista Ranch

Peter B. Kyne Perris, Calif. O. H. Cash

Winsor Ranch Guernseys

Herd headed by Veda's May King of Edgemoor, Grand Champion at L. A., he by ITCHEN MAY KING, Grand Champion at the National.

Some outstanding bull calves coming along.

MORRIS C. ALLEN, Mgr. FRANCIS BROWN, Herdsman.

Benita, Calif.

De Laval Cream Separators

last longer and therefore cost less per year of service. Over 2,500,000 in daily use.

De Laval Dairy Supply Co.

61 Beale Street San Francisco

Cuts Calf Cost

Calf AN-FO GRAND Meal

Raise sSturdy Calves

At Feed Dealers, or

ANIMAL FOOD CO., OAKLAND

PUREBRED JERSEY BULL

Dropped September 9, 1919

Sire—FINANCIER'S REMUS, 104,413

Dam—ROMULUS LEGACY LORENE, 294,130

Record 457 lbs. butterfat.

T. B. Purvine & Son

Petaluma, California

HOLMES STOCK FARM

MODESTO.

Registered Holstein Friesians

Prize winners at all the Shows. Inspection invited and satisfaction guaranteed. Write for prices.

R. L. HOLMES, Prop.

REGISTERED HOLSTEINS

Creamcup Herd offers service bulls and bull calves of 34-lb. breeding. Females offered for foundation stock. Tuberculin tested.

M. M. Holdridge, San Jose, Cal.

R. D. "A," Box 437.

Two miles out North First Street.

SALT LAKE CITY CATTLE CONFERENCE.

In a wire from D. J. Stollery an outline of the action taken and resolutions adopted are given. Thirteen resolutions were acted upon and approved. Committees one and two were merged. This recommends that U. S. Bureau of Crop Estimate receive and disseminate information relative to surplus cattle in 12 western states with a further note that the presidents of the associations of the various states be created a committee to act as a central board to consider prevailing conditions and arrangement of schedule. 3rd. Urging greater assistance by the government in financing the cattle business and deploring attack on Farm Loan Act. 4th. Recommendation to all western legislatures that action be taken to eliminate tubercular cattle with indenification on the fifty-fifty basis. 5th. Importance of fewer and better cattle and less half-fat, inferior cattle. 6th. State association secretaries to co-operate in exchanging information and determination of best outlets. 7th. Full co-operation with National Livestock Association. 8th. Bureau markets considered too expensive and benefits doubtful. 9th. Government aid in stimulating beef consumption through publications and officials, etc. 10th. Legislation to prevent publication of misleading quotations. 11th. Request Attorney General to investigate methods of slaughterers and retailers. 12th. Conference pronounced great success.

ORGANIZED FARMERS ASK NATIONAL LAWS.

(Continued from page 771.)

ments for cities. Income, inheritance, excess profits, luxury, and excise taxes were all endorsed and a general sales tax was denounced. The principle was announced that taxes should be so levied as to encourage home owning and to discourage tenancy and speculation.

National Highways, Nationally Built.

The Townsend Highway bill will be pressed again in this session if possible. It has many friends among prominent Californians because of its object which provides for Government construction of a comprehensive system of national highways at Federal expense, with the prompt execution and economical engineering which may prove a wonderful object lesson to many State Highway departments. It proposes to minimize one of the greatest taxes gouged out of producers and consumers, the "mud tax" as it is characterized by the National Automobile Chamber of Commerce Some of its details have encountered opposition among other prominent Californians, and perhaps some of these details can be extracted in the Congressional mill.

Protecting American Producers.

Tariff in which so many of our farmers are vitally interested is sure to be revised under an administration notably friendly to the protection of American producing industries of all kinds. It is now up to the farm organizations of the whole country to get together on a unified program

Better support of the United States Department of Agriculture, pure seeds, packer control, prohibition, reclamation, co-operative development of water power, honest labeling of cloth goods, wheat speculation, the All American Canal for Imperial Valley, and numerous other propositions affecting agriculture in California will be put up to Congress at the earliest practicable time.

LIVESTOCK DIRECTORY.

Rate, 4c. per word. Cash must accompany all orders.

SWINE.

Duroc-Jerseys.

FOR SALE — 3 Duroc-Jersey Junior yearling boars out of Ireland Joe Orion from a daughter of Cherry Volunteer 2nd; weight between 4 and 5 hundred, born September 22, 1919. Splendid type big-bone, high back. These boars will please you and are priced right. One was grand champion at Ventura county fair. Your pick, $125 F. O. B. Oxnard. They won't last long. Berylwood Stock Farm, Hueneme, Ventura Co., Cal.

DUROCS—BIG-TYPE—HIGHEST QUALITY —popular blood lines. Herd headed by Johnson's Defender, Jr., and Western Pathfinder. Bred sows and gilts and young boars for sale at moderate prices. Greenwood Farm, Witherow & Stafford, Live Oak, Cal.

BRED SOWS AND GILTS and young stock. Pathfinder and Great Wonder I Am breeding. Monthly payments, if you wish. Derryfield Farm, Capital National Bank Bldg., Sacramento.

BOYANNA BIG-TYPE DUROCS—Breeding stock; priced right for sale. Inquiries invited. Satisfaction guaranteed. J. Boyd Harrold, Dixon, Cal

BIG-TYPE DUROCS—Herd headed by California Orion King. Am offering excellent young boars at right prices. Inquiries invited. Harvey M. Berglund, Dixon, Calif.

GOOD SPRING AND FALL GILTS—Strong in Pathfinder blood, sired by Pathfinder Wonder. Hamlin Farm, Box 697, Sacramento.

WINSOR RANCH DUROCS—Young boars and some top gilts bred to WINSOR'S GIANT ORION—Morris C. Allen, Mgr., Bonita, Cal.

REGISTERED DUROCS — Choice gilts and weanlings, either sex. Breeding and satisfaction guaranteed. H. E. Boudier, Napa.

BIG-TYPE DUROCS — Gilts and boars of Great Orion Sensation breeding. Falfadale Farm, Perris, Cal.

FOR THE BEST in Durocs, write June Acres Stock Farm, Davis, Cal.

Poland-Chinas.

ELDERSLEY AND SHADY BROOK Farms big-type Poland-Chinas that make money for the Feeder, the Farmer and the Breeder. Prices reasonable. J. H. Ware, Brown's Valley, Calif.

TOHOQUA POLAND-CHINAS—A good tried boar and some choice young breeding stock for sale. Ferguson & McKaig, Orland, Cal.

WAUKEEN HERD POLAND-CHINAS — Home of King's Big Bone Leader. A few service boars for sale. Les McCracken, Ripon.

LAKESIDE STOCK FARM—Large, smooth and big-boned Poland-Chinas. Geo. V. Beckman & Sons, Lodi, California.

BIG-TYPE POLAND CHINAS—Stock of all ages for sale. Houck & Lewis, Winton, Calif.

POLAND-CHINAS—Strictly large type. J. F. Lehman, Lodi, Cal.

REGISTERED POLAND-CHINA SWINE — Prize-winners. Finest stock in the State. Bassett Bros., Hanford, California.

REG. BIG-TYPE POLAND-CHINAS—Service boars; weanling pigs. J. H. Cook, R. 4, Chico.

LIBERTY HERD—Service boars. January weanlings. J. W. Raymer, Soledad.

Berkshires.

ANCHORAGE FARM BERKSHIRES
Orland, Calif.

HERD BOARS—STAR LEADER, Junior and Reserve Grand Champion of the World. The Grand Champion carload of barrows, over all breeds, at the San Francisco Live Stock Show, was sired by a son of Star Leader, NATOMAS BARON DUKE, grand champion of California. For sale, bred gilts, open gilts, young boars and weanling pigs. Write for booklet, prices and list of sows.

BRED GILTS.

Sired by Mayfield Rookwood 2d, a Grand Champion Boar, out of 600-700 lb. sows, and actually bred to "ACHIEVER," our English Blood Boar, the Sire that puts more bone and pork-making qualities into his pigs.

Priced reasonably and absolutely guaranteed.

Castleview Ranch, Santa Rosa, Calif.

The only herd of English Berkshires in the West. Bigger, better, stronger litters. More pounds of meat for less feed. Weanling pig, $35. Satisfaction guaranteed or money refunded at once. Sandercock Land Co., 703 Market St., S. F. In charge Natomas Land Sales.

GRAPE WILD FARMS—Berkshires—Guernseys. Big-type Berkshire Boars of serviceable age, sired by Big Leader—greatest son of Grand Leader 2nd. Panama-Pacific Grand Champion. A. B. Humphrey, Prop., Escalon

BERKSHIRE BOARS—Real herd sires. We are offering these at sacrifice prices to move them quickly. Write for description and price. R. J. Merrill & Son, Morgan Hill, Cal.

QUALITY BERKSHIRES — Young stock, both sexes. Geo. P. Upham, Martinez.

REAL GOOD BERKSHIRES — Cholera immune. Frank B. Anderson, Sacramento, Cal.

Hampshires.

NO, YOU DON'T SEE many Hampshire hogs advertised. Look through this paper. Once in a while a breeder of Hampshires runs an ad for a few issues, then quits. Other breeds seem to be advertised continually. Count them up in this issue. Why is it? Well, I guess it is because a few ads quickly sells out the Hampshires. We have a few weanling pigs—three more litters coming next month. A few open and breds gilts from the best Hampshire blood lines in California, direct lineage from Gen. Tipton, Mose Messenger and Pat Maloy—sires of International renown. Write us. We like to tell about them. Rio Hondo Rancho, Route 1, Compton, Cal.

FOR SALE—10 Registered Hampshire hogs. These hogs are from some of the best blood in California. $75.00 buys 250-lb. bred sow; also exceptional boar for $75.00, and others that are the pick of litters for $50.00. Eagle Ranch, Atascadero, Calif.

Miscellaneous Swine.

WHAT DO YOU KNOW about hogs? Probably more than we do, but if you will give us your address on a postal we will be glad to send you a little book—"Hampshire History," which tells you all about this breed in America since the year 1830. Rio Hondo Rancho, Compton, Cal.

FOR SALE—Car of good stock hogs. All sizes. Most of them are purebred Durocs. L. R. Adams, Island Mountain, Trinity County, Cal.

YORKSHIRE SWINE — Registered Boars, Sows. Young stock. Mahajo Farm, P. O. Box 597, Sacramento, Calif.

DAIRY CATTLE

Holsteins.

HOLSTEINS

THE LEWIS COMPANY

Registered Holstein Cattle
Bulls, Heifers and Calves
of Ormsby breeding
Tuberculin tested
Lewis Building, San Jose

ASEVEDO BROS. CO.
Patterson, Cal.
Breeders of
REGISTERED HOLSTEINS
For Sale

Young bull, sired by King Abbekirk Johanna 24th, and out of a dam making 24 lbs. as a 4-year-old

CREAMCUP HERD — Registered Holsteins. Pontiac bull calves. M. Holdridge, Rt. A, Box 437, San Jose.

REGISTERED HOLSTEIN-FRIESIANS — Both sexes choice stock; tuberculin tested. Sunnybrook Ranch, H. H. Sisson, Mgr., Willits.

REG. HOLSTEINS, both sexes. World's record backing. Kounias Reg. Stock Farms, Modesto, Cal.

REG. HOLSTEINS—A. W. Morris & Sons Corp., Importers and Breeders, Woodland, Cal.

F. H. STENZEL, SAN LORENZO—Breeder of Registered Holsteins. High test producers.

REGISTERED HOLSTEINS — Best blood lines of the breed. R. L. Holmes, Modesto, Cal.

CHOICE HOLSTEIN bulls for sale. No females. Millbrae Dairy, Millbrae, California.

GOTSHALL & MAGRUDER — Breeders of registered Holstein-Friesians. Ripon, Calif.

SIX BROTHERS DAIRY—Registered Holsteins and Duroc Jerseys. Turlock, Calif.

EL DORADO HERD OF REG. HOLSTEINS Alex. Whaley, Tulare, California.

Milking Shorthorns.

REGISTERED MILK AND BEEF SHORTHORNS, bulls and heifers for sale; catalogue free. Thomas Harrison, Santa Rosa Stock Farm, Santa Rosa, California.

INNISFAIL HERD MILKING SHORTHORNS—Young stock for sale; both sexes. Owned by Alexander & Kellogg Leased by J. D. Rowe & Son, Davis, Cal.

WILLOW BROOK HERD—Milking Shorthorns. A few registered bulls and heifers for sale. W. T. Roberts, Penn Grove.

BREEDERS OF REGISTERED SHORTHORNS—Milk strain; choice young stock for sale. John Lynch Ranch, Box 321, Petaluma.

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SERVICE JERSEY BULL, bull calves Financial King blood, Chester White boars, prize winners. Best blood, type, production. N. H. Locke Co., Lockeford, Cal

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REGISTERED JERSEY HEIFER—One year old. Price, $85.00. L. Nielsen, Sunnyvale.

SUNSHINE FARM JERSEYS—"Production counts." E. E. Greenough, Merced, Cal.

PUREBRED JERSEYS from Register-of-Merit dams. Purvine & Son, Petaluma.

REGISTERED JERSEYS—E. F. Smith, Route 1, Box 424, Hayward, Cal.

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PENOBSCOT FARM AYRSHIRES—Long-lived, hardy, good "rustlers." High butterfat producers. Registered. Choice individuals; all ages; reasonable prices. Cool, El Dorado Co., 9 miles from Auburn, Cal.

STEYBRAE AYRSHIRES — Registered; all ages. E. B. McFarland, 414 Claus Spreckels Building, San Francisco.

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PUREBRED GUERNSEY HEIFERS—Heifer calves and bull calves for sale at reasonable prices and on terms, if necessary. The mothers are wonderfully bred, and with high milk and butterfat yields. The sires have made Guernsey history. Also a few purebred Holstein cows, heifers and a herd sire for sale. Prices and terms on application. If you desire to start with purebreds, now is your opportunity. S. J. Strauss, P. O. Box 62, Modesto, Cal.

BEEF CATTLE.

STRATHMORE STOCK FARM—Registered and purebred Shorthorn bulls, suitable for range or registered herd sires, some ready for service. Turney Bros., Strathmore, Tulare Co., Cal.

SHORTHORNS—The foremost beef breed—Have a limited number of stock for sale, both sexes. If you wish to start a small herd I can probably supply your needs. T. T. Miller, Hollister, Cal.

RANCHO SAN JULIAN SHORTHORNS—Purebred range bulls, unregistered, for sale. Estate Thos. B. Dibblee, Santa Barbara, or Lompoc, Calif. John Troup, Supt.

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ALAMO HERD REGISTERED HEREFORDS (founded by Governor Sparks). Herd and range bulls. Reasonable prices. W. D. Duke, Gazelle, Siskiyou county, California.

THE NEVADA HEREFORD RANCH—Jno. H. Cazier & Son Co., Prop., Wells, Nevada. Reg. Hereford cattle. Breeding stock for sale.

CARRUTHERS FARMS, Live Oak, California. Shorthorn cattle and Berkshire swine of quality and select breeding.

WANTED.—Fifty head of grade Angus heifers. State price, ages and all particulars. Peter Gastorf, Atascadero, Cal.

WM. BRIGGS & SON, Dixon, Cal. Breeders of Hereford cattle and Rambouillet sheep.

SIMON NEWMAN CO., breeders of Registered Herefords, Newman, California.

HEREFORDS — Mission Hereford Farm, J. A. Bunting, Prop., Mission, San Jose, Cal.

REGISTERED HEREFORDS—H. H. Gable, Diamond G Ranch, Esparto, California.

GEORGE WATTERSON — Breeder Registered Herefords. Bishop, California.

REGISTERED SHORTHORNS — Fair Oaks Ranch, Willits, Calif.

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FOR SALE—100 Idaho imported registered Hampshire ewes, three and four years old, bred to lamb in January and February; also 50 last spring lambs. Can be seen at Palo Alto. Reason for selling—coyotes. Chance to get into registered sheep at rock bottom, as no reasonable offer refused. Address 515 American National Bank Bldg., San Francisco.

F. A. MECHAM ESTATE, Petaluma, Cal—Breeders and importers of Shropshire, Rambouillets and American Merinos, both sexes. Also Red Polled cattle. Take electric car at Petaluma or Santa Rosa for Live Oak Ranch.

FOR SALE—Rambouillet rams and ewes—purebred; the very highest grade of large smooth body; heavy shearers; the wool and mutton type. Immediate delivery of individual or carload lots. You can find none better or of higher grade. Address Glenn, Cal. Location, 8 miles south Hamilton City, 1 mile west Ordbend. Windell Orchards Co.

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HARVEY S. VAN VLEAR, Lodi, Breeder and importer of registered Hampshire sheep.

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BUTTE CITY RANCH
SHORTHORN CATTLE, SHROPSHIRE Sheep, Berkshire Hogs, Shetland Ponies, Bronze Turkeys, White Plymouth Rocks. Stock for sale at all times. W. B. Dwyer and W. S. Guilford, Box P, Butte City, Glenn county, California.

FOR SALE OR TRADE—Percheron stallion reg. (weight 2000). Will exchange for work horses or cattle. Address Ralph L. Clark, R. F. D. 2, Box 74, Lodi, Cal. Phone 24F4.

REGISTERED BROWN SWISS, carrying best blood of the breed. M. J. Pedrotti, San Rafael, Calif.

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Everything will be sold. Included in the offerings is the "Sensational Boar"

GREAT ORION SENSATION JUNIOR

He was Grand Champion at Tulare, Los Angeles and Riverside, and Reserve Grand Champion at Sacramento.

40 40 Sows and Gilts Bred to the Grand Champion 40 of his best spring pigs first week in February 40

B. H. WILKINSON, Mgr. PERRIS, CAL.

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Made where the cocoanuts grow.
Sun-dried—not smoky or rancid.
Carried in modern ventilated steamers. Shipped in solid cakes.
Inspected and ground in San Francisco

Has your past experience in feeding cocoanut cake meal been satisfactory?

We particularly request a trial of our meal by those who in the past have been disappointed.

Your feed dealer may not have our brand in stock but can obtain a large or small lot promptly.

Trade INSULINDE Mark

Look for it on the sacks

Java Cocoanut Oil Co., Ltd.
Dept. 10
16 California St., San Francisco
Largest manufacturers cocoanut products in the world.

GUASTI BERKSHIRES
Weaned pigs, both sexes, from sows that farrow large litters and raise them. Priced reasonable — they are money-makers.
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for Milk Cows and Chickens and Young Pigs and Hogs. Cheapest food in the market today. If your dealer doesn't carry it, address
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POLANDALE FARM gives you a number for the asking if you are a grower of Poland Chinas. Write today and get it. We mean what we say. You may draw them from our 500 head of purebred Poland Chinas.
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Won at Sacramento Both Championships
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Single or in Carload Lots
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BLATCHFORD'S CALF MEAL
has been known since the year 1900 as the complete milk-substitute. Costs less than half as much as milk—prevents scouring—promotes early maturity. Sold by dealers, or direct from us.
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FAIRFAX and REPEATER Stock
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On Highway 16 miles south of Merced.

CATTLE RANCH PROVIDES WINTER FEED.

(Written for Pacific Rural Press.)

One who seeks an up-to-date beef breeding and fattening establishment on the mountain range can find it on the Rancho San Julian in the hills south of Lompoc, Santa Barbara county. Twenty-five thousand acres there are, but a great deal of the farm land is leased to thirteen tenants. All of the pasture land and some of the farm land, as well as the headquarters outfit are reserved by the owners, the Thos. B. Dibblee estate, for beef cattle. The entire range is fenced into comparatively small pastures, for even the registered breeding stock is kept in three separate herds, each with only one bull. This breeding stock produces cattle for three classifications: Show stock, which includes the white junior champion Shorthorn bull of the 1919 State Fair and his white dam. The bull has been working hard this year and was not shown at the fairs. He is thin and rough, but shows his championship type distinctly. This is Bashan Augusta. The dam of the 1920 State Fair grand champion bull is another show animal owned on this ranch and producing show stock. Their senior yearling bull, Baron Lancaster, won first at Los Angeles, and like the rest of their show stock this year, was raised on the ranch. The second class of animals produced by the registered breeding herd is stock to be sold for use in other registered breeding herds. The third class is purebred bulls to be used on the San Julian ranges or sold to other range people. All bulls used on the San Julian rancho are registered, but many of the cows are unregistered purebreds from which unregistered purebred bulls are sold to other range cattlemen.

All bulls are taken away from cows on the range in September to prevent calves from coming during the season of scant feed when milk production for them would be low. The bulls will be put with the cows again in March. Breeding stock keep their horns, but all steers are dehorned to make better feeders. Many steers are bought to feed on this ranch; for an abundance of silage and hay are put up every year, and the range is not overstocked. The barns contain 1,000 tons of oat and barley hay this season; and six silos were filled with 1,350 tons of corn grown near headquarters. This, with other feed grown on the ranch, is ample insurance against the dry winters which have terrorized many stockmen.

THE VOGEL SEMI-DISPERSAL SALE.

Before we pass on to the figures on the semi-dispersal of the H. E. Vogel Holsteins at West Lawn Farms, Dec. 1st., this reporter wants to hand Mr. Vogel, a medal won on three counts. First, the sales pavilion, improvised on the ranch, left nothing to be desired either for convenience in handling the stock or comfort of the audience. Second he introduced an innovation for this state by having a black-board in plain sight where the number of the animal to be sold was written as it came in. This is something that everybody appreciated and that should be universally adopted. Third, he served a really excellent lunch and actually provided tables and seats for his guests.

But now to business. Sixty-nine head, all females except six, sold for an average of a bit better than $407.

This was good but not as good as the owner had a right to expect, quality of the offerings considered. Vogel has been years building up this herd and there were a number of fine ones that should have brought more than they did.

Of course Betsy Lamb Prilly topped with a rush. She went to A. W. Morris and Sons for $4000. The wonderfully bred heifer, not yet named, by Sir Aaggie DeKol Mead, came next at $1000. She also went to A. W. Morris and Sons.

Frank M. Helm paid $976 for a six year old cow, followed closely by H. A. DeWolfe of Ripon, who paid $960 for the six year old Lady Jane Burke. Mr. Helm was the heaviest buyer, taking 14 for a total of $5675. The Pottenger Sanitorium of Monrovia, paid $2635 for five females in milk. The balance were scattered out among a number of buyers.

Thanks to Helm and a number of others the bulk of the herd will remain in Upper San Joaquin territory, a goodly proportion of it going to strengthen established herds or found new ones.

A NEW JERSEY HERD OR TWO.

Mr. Hugh F. Richards of Denair, Stanislaus county, is laying the foundation of a high-class herd of Jerseys. He recently bought a number of registered animals, including the herd sire from the noted Jersey Queen Farm at San Jose, owned by Dr. L. J. Belknap. These cattle are of the well-known St. Lambert family, noted for butterfat production. To mate with the heifer calves from these females Mr. Richards has purchased from Guy H. Miller of Modesto the bull calf Almonoll Jap Owl, sired by Japs Perfection Owl dam, the noted cow Pearl of Venadera, with a register of merit record of 702 lbs. of butter fat in a year. With such breeding this calf should give a good account of himself anywhere.

H. H. Wallis of Crow's Landing is another dairyman who haes just purchased of Mr. Miller the yearling heifer, Sapphire of Venadera, a full sister of the above-mentioned bull calf sold to Mr. Richards. Mr. Wallis has a herd of high-grade Holsteins, but has decided to try registered Jerseys.

POST CARD STOCK FARM.

Roy M. Filcher, manager of the Post-Card Stock Farm at Corcoran, hasn't a tractor on the ranch of 640 acres. The farm carries about 400 head of cattle (including a big dairy herd), 600 hogs and a lot of horses and mules. All the feed, including grain is raised on the place. Alfalfa, corn silage and barley are the main crops. A number of good mares do the work and, every year, bring a nice class of colts. Enough of the colts are reserved to keep up the working force and the rest sold. Filcher says he doesn't believe in hauling alfalfa to town at the other fellow's price and hauling gasoline back, also at the other fellow's price. He prefers to put the alfalfa into the mares and sell their colts at his own price. A fine Tennessee Jack used on some of the mares is getting a beautiful lot of young mules. One two year old Jennet it about the prettiest thing in the mule line this man ever saw—and he knows Missouri too. Filcher expects to show her at the next state fair.

BULLS TO PROTECT RANGE COWS.

A bull with every bunch of cows on the range is worth much for his influence in preventing the cows from running off a lot of their flesh, according to Romie C. Jacks of Monterey county. Cows are less timid than steers, but they are likely to run if a stick breaks in the woods nearby. Another cow coming through the brush, or some wild animal or a cowboy will frighten them so they would run if they were alone. But a bull, though often willing to run, generally waits to investigate and the cows wait until he decides whether to run. This means something in saving young calves, too, though cows do not readily abandon their calves, whatever the danger.

ORMONDALE RANCH
SHORTHORNS
REDWOOD CITY, CAL.
HERD SIRES
BOQUHAN GUINEA STAMP, the great imported young Broadhooks bull.
GOLDEN GOODS JR., sire of LITTLE SWEETHEART, Grand Champion International Show, Chicago, 1919.
Bulls and Heffers for sale.
Duroc-Jersey Hogs for sale.
JAMES McDONNELL, - Supt.

HEALTH for SOW and PIGS

When the sow is with young, then is a most important time that her system be free from worms or disease. The bodily condition of the sow is readily transmitted to her young sucklings. LACTEIN Condensed Buttermilk, through the highly developed LACTIC ACID, enables perfect digestion to the sow; enables perfect and thorough assimilation of all foods; keeps the system clean; aids in production of MORE milk for the young.

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Growing Food

LACTEIN Condensed Buttermilk furnishes the weanling with the stimulus of proper, easily digested food; acts as a thorough cleanser; soothes the delicate digestive organs and imparts a strength of healthy, sturdy growth. You'll quickly see the result of profit in feeding LACTEIN.

START MAKING YOUR HOGS PAY MORE BY FEEDING LACTEIN—ASK YOUR DEALER FOR LACTEIN TODAY—GIVE THE PIGS THE RIGHT START.

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DUROC-JERSEYS

At Bargain Prices

5 April Boars out of Taxpayer Sows and sired by Western Pathfinder, a half-brother of Queen of Pathfinders, the Grand Champion Duroc sow at Sacramento and Los Angeles this year. As desirable in type and size as in breeding.

HIND RANCH CO., Atwater

J. H. HERNDON, Supt.

3 miles south of Station.

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LIVESTOCK AUCTIONEERS
915 I St., Modesto, Calif.
Registered Hog Sales a Specialty

IMMUNIZATION AGAINST HOG CHOLERA.

In dealing with hog cholera the California Department of Agriculture finds that there is a different of opinion among veterinarians regarding procedures to prevent the further spread of a given outbreak.

Some hold that by injecting serum alone into the exposed animal it will inhale from the air and eat with the food sufficient virus to produce a permanent immunity. This contention is met by others with the argument that there is a possibility of the animal not inhaling and ingesting sufficient virus to produce an immunity over an extended period. There are others who prefer the single treatment in all exposed animals whether they do or do not show a rise in temperature.

In those already infected it is well to consider the consequences arising from the production of a negative phase when virus is injected. Then again there is the danger that the cells in the body of an infected hog may have become so debilitated by the infection that an injection of serum alone will not save its life.

It has been contended that small pigs are not capable of developing a permanent immunity and only those exposed to cholera should receive serum and six weeks later be given the double treatment. Government experiments demonstrate that small pigs are capable of developing a permanent immunity.

When administering the double treatment to exposed animals they should not show any symptoms of cholera such as arise in temperature, loss of appetite, cough, or a staggering gait.

The question is frequently asked, "Will anti-hog cholera serum protect a hog exposed to swine plague." This can only be answered by stating that when an exact differentiation can be made between the two diseases this question may be definitely answered. Until then we must content ourselves with weighing and determining the value of arguments founded on theory or certain observations or experiments which do not, as yet, make it possible to state that swine plague is a disease frequently occuring entirely independent of hog cholera.

DUROC-JERSEYS CHANGE HANDS.

The Hind Ranch Co. has purchased from O. W. Weidler of Winton his entire herd of Duroc-Jerseys. The herd is made up of some Taxpayer sows, some year-old gilts sired by a son of Great Orion, and some April boars and gilts sired by the herd boar, Western Pathfinder, who is a half brother to Queen of Pathfinders, the Grand Champion Duroc sow at Sacramento and Los Angeles this year.

This is their first purchase of purebred livestock but it is their plan to eventually specialize on purebred hogs and cattle on their 3,000-acre tract south of Atwater.

POLAND CHINAS TO SELL AT FRESNO.

The Fresno County Poland China Breeders' consignment sale, which is to be held in Fresno January 19th will offer a real opportunity to those who can use a few first class sows and gilts. The offerings are being selected by A. Buckland from the best herds in Fresno county and will show not only good breeding but unquestionable individual merit. The following breeders are consigning to the sale. A. Buckland and Son, A. J. Van Cleef, Z. M. Dicky, Chas. Dack, Ira L. Mason, Walter C. Ficklin and Chas. McNeil.

A clergyman had taught an old man in his parish to read, and found him an apt pupil. When he called at the cottage some time after, only the wife was at home. "How's John?" he asked. "Very well, thank you." "I suppose he can read the Bible comfortably now?" "Bible, sir? Bless you, he was out of the Bible and into the sporting papers long ago."—Everybody's.

Our Champion Duroc-Jerseys

Heading the great Diamond Bar herd of Duroc-Jerseys is the famous sire, Ace of Pathfinders, Grand Champion boar at the Los Angeles Livestock Show, 1919, and head of the World's Champion Aged Herd at the National Swine Show, 1919.

His pigs have made phenominal records, winning an extensive list of "Firsts" at all the large California stock shows.

In short, the Diamond Bar herd with its 1,200 head of purebred Duroc-Jerseys, has set a new standard for the hog breeding industry of the West.

For greater pork production and breeding profit, build up your herd with this blood.

Place your order this week for registered bred sows and gilts and registered herd boars, sired by the Ace of Pathfinders and our other renowned sires.

SPECIAL

Unregistered purebred gilts in carload lots or less, $35 a head
We guarantee every animal sold to be exactly as represented

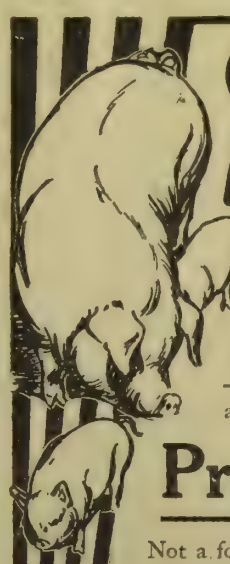
Act promptly. Address Department D.

Full information sent upon request.

DIAMOND BAR RANCH

SPADRA, Los Angeles County, California

F. E. LEWIS, Owner & Manager
R. K. WALKER, Hog Department



Good Hogs Made Better

All hogs that grow fast and produce pork at a profit are good hogs. And the difference between good hogs and poor hogs—*between profit and loss*—is largely the difference in their health and vigor. You can hurry your hogs to market weight in shorter time—cash-in on them quicker—make good hogs better—make poor hogs profitable, by adding to their ration a small amount of

Pratts Hog Tonic

Not a food—does not actually grow bone and flesh—but a tonic and regulator, that tones up the system and puts hogs in tip-top condition. Helps keep disease away, makes hogs healthy and hearty. Then they stand up under the strain of heavy feeding and turn *all* their feed into pork. If you've never used Pratts Hog Tonic you don't realize how fast a hog can grow if given a fair chance.

Here's what we know about Pratts Hog Tonic—and our money-back guarantee backs this statement: It makes hogs healthy—it keeps hogs healthy—its use brings more pounds of pork from each bushel of feed—it brings hogs to full market weight 30 days quicker—it improves breeding stock so big litters of strong pigs are the rule.

"Your Money Back if YOU Are Not Satisfied"

Make the test *at our risk*. Every day you delay means a loss to you—so start today.

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For Poultrymen

A TRIUMPH OF AMERICAN INVENTIVENESS.

Master Minds invented the telephone, the electric light, wireless telegraphy, etc., but now comes the

Crowning Achievement of Modern Times

the absolute annihilator of all previous scientific research — **THE SEX-DETECTOR.** Priceless as an Amusement Device. **INVALUABLE TO POULTRYMEN FOR DETERMINING THE SEX OF EGGS.**

The Sex-Detector instantly determines the sex of humans or animals, whether dead or alive. A scientific discovery, the result of twelve years of patient research and experiment now made public for the first time. Doctors are dumb-founded and students of sexology are bewildered at the unfailing accuracy of this miraculous device. A wire can be passed through a keyhole into another room—the Sex-Detector will instantly indicate whether a man or woman is holding the other end.

It is not necessary to describe in detail the many uses to which the Sex-Detector can be put, but the discerning will readily realize its far-reaching possibilities. Each Sex-Detector is absolutely guaranteed to do everything that the Inventor claims for it. The directions, which can instantly be followed by a child, must be observed.

We have letters from men of authority who have made tests with the Sex-Detector on file in our offices and are open to the public to be read.

POULTRYMEN WHO HAVE USED THE SEX-DETECTOR IN THE TESTING OF EGGS HAVE FOUND IT TO BE INFALLIBLE AND CAN BE RELIED ON TO DETECT THE SEX OF EGGS FROM THE TIME OF LAYING. A Sex-Detector should be in every home and will last forever.

BEWARE OF IMITATIONS — This is the only original SEX-DETECTOR in the World and the first to be put on the market, and we guarantee all of ours—none original unless they come from the **SEX-DETECTOR LABORATORIES.**

Sex-Detector Mailed Prepaid upon Receipt of $2.00. Make Express or P. O. Money Orders payable to

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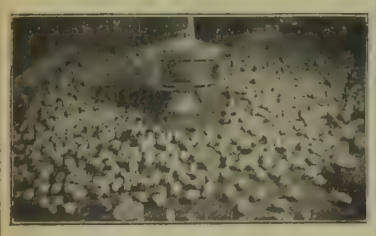

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Baby Chicks and Hatching Eggs

From 227-egg strain of heavy winter layers. Book your order now for 1921 delivery of guaranteed chicks.

MEYER POULTRY FARM,
Route A, Box 17A, Modesto, Calif.

Poultry for Profit

THE POULTRY MARKET.

The egg market has been sharply on the upgrade the early part of this week, extra pullets taking the lead in the upward movement, advancing 3½ cents in 24 hours. Extra fancy eggs were quoted at 87½ cents wholesale on Monday last. The balance in cold storage in this city on December 7 was 8,445 cases only, as against 28,687 this time last year.

Private advices received in San Francisco by a prominent poultry firm indicate a big break in the New York live poultry market, one result, it is reported, being the diversion of 14 or 15 carloads from that point to Western markets.

BUCKWHEAT FOR CHICKEN FEED.

To the Editor: I recently have noticed considerable buckwheat in commercial scratch feed. Our chickens seem not to like it very well. Is it unpalatable, or do they object to the shape? What feed value does it have? Where does it come from?—R. E. H., San Mateo county.

Buckwheat is very desirable for poultry feeding at any time, but has unusual value for feeding in cold or wet weather. Under average conditions its net feed value for egg production exceeds that of the sorghums, such as white Egyptian corn, etc.; about eighty pounds of buckwheat of good quality contains the feed value—for egg production — of one hundred pounds of Gyp. corn. Under certain conditions the difference in relative value may be still greater. This would occur particularly in winter with flocks that are yarded in wet or muddy runs, or whose sleeping quarters were faulty. Because of the thick hull and high fiber content (over 11 per cent) inexperienced feeders naturally consider that there must be much waste and indigestible material in buckwheat, but the results of actual feeding tests demonstrate that a very large part of all portions is available for egg production, inculding the hulls. According to Professor Henry, twenty-four per cent of the fibre is digested by mammals, which indicates that fowls would secure more than that value from this source. Fowls do not readily eat any sort of grain which is strange to them. They are no more disinclined to eat buckwheat than wheat or corn when they have had no previous experience with those grains. It requires a few days for them to learn its value. Buckwheat was introduced into western Europe from western Asia during the Crusades. It is extensively grown in the northeastern states and in a limited way in California.

SORT YOUR TABLE SCRAPS BEFORE FEEDING.

Feed your chickens scraps from the kitchen but first take the time and trouble to sort that which is adaptable for feeding purposes. Such waste as moldy bread or cake, together with decomposed other waste material, should never be fed to your chickens. This sort of procedure has been found harmful from the fact that it causes severe bowel trouble. Why add banana and orange peel to scraps for the flock when they have little or no food value? Among those scraps or wastes from the kitchen which are profitable to feed are fresh trimmings from vegetables, ground eggshells thoroughly dried, meat scrap and cut green bone, while skim milk and cottage cheese also add variety to the daily dietary of this feathered family.

USES KNIFE AND IODINE.

To the Editor: Notice in issue of November 13th, your article on "Swell Head" and would like to tell you of my experience with this trouble. Had several years of losses until I learned to cut the puffed swelling with a disinfected razor or knife. Press out the jelly-like substance and then paint with iodine and you are seldom troubled further, but if necessary repeat the operation. I have had them so that they could not see to eat, and they would eat greedily after being operated on.—C. T. T., Sunnyvale.

We appreciate comments and suggestions regarding items that appear in this department, and wish more of our readers would send us similar letters for publication.—Editor Poultry Department.

SONOMA CO. FARM BUREAU EGG-LAYING CONTEST.

At the end of the first four weeks' period, November 28th, of the Sonoma County Farm Bureau Egg-Laying Contest at Petaluma, the standing of the ten highest pens, composed of ten hens each, was as follows:

Owner	No. Eggs
V. H. Guthrie, Petaluma	170
T. G. King, Petaluma	162
Ray Cole, Petaluma	153
S. P. Nielson, Petaluma	149
J. F. Kohnke, Kenwood	144
J. J. King, Petaluma	142
M. D. McLeod, Sebastopol	141
C. C. Boysen, Petaluma	139
C. E. Fuller, Petaluma	132
T. B. Púrvine, Petaluma	128

Never ship market fowls so crowded in the coops that they cannot be comfortable, for if uncomfortable they lose weight rapidly and therefore, packing in crates so closely that they cannot adjust themselves properly is both cruel and unprofitable.

Poultry Breeders' Directory

Rate, 4c. per word. Cash must accompany all orders.

THE MISSION HATCHERY
Planning for your early chicks? We are, and booking orders for R. I. Reds, Barred and White Rocks, Black Minorcas, White, Brown, Buff Leghorns; delivery January and later. Write for prices and particulars, stating your needs. Eggs from Breeding Stock of Quality. Chicks hatched right and carefully packed for safe delivery—express or parcel post, at reasonable prices. We aim for the good will of satisfied customers; will you try us out? The Mission Hatchery, Campbell, Cal.

BUFF ORPINGTONS—Sullivan's Commonwealth Strain; we originated and have bred in line for 20 years. If you want eggs and finest type of this breed, one of our males at this time. $7.50 and $10.00 each; exhibition birds. Write for prices. Book for eggs for February delivery, $3.00 and $5.00 for 15. Mr. and Mrs. W. S. Sullivan, 100 Market Road, Agnew, Santa Clara Co., Calif.

BARRED PLYMOUTH ROCKS — "Nothing Better in Poultry." Wonderful layers. Choice hens and pullets for sale; also fine cockerels that will improve your flock. Now booking orders for hatching eggs. I have made a specialty of Barred Rocks for over twenty-two years. That's why our birds win at all the leading shows. Catalog free. Chas. H Vodden, Box 3, Los Gatos, Calif.

SUPERIOR WHITE LEGHORNS — WE BREED THEM.—Order your spring chicks now to insure desirable delivery date. We raise all chicks from our proven producers from OUR OWN YARDS and guarantee them vigorous heavy layers. A card brings full information and catalogue. Bolfing Poultry Farm, Gilroy, Calif.

TURKEYS—"Goldbank," "Copper King V" strain. Selected Giant Bronze Toms, sired by son of famous "Copper King V," first prize yearling N. B. T. Club Show, Madison Square, N. Y., January 1919. Bred to 20-lb. hens. Egg orders taken. Prices reasonable. Address: Bronze King Mountain Farm, P. O. Box 308, Calistoga, Calif.

PEERLESS WHITE WYANDOTTES — Our 200-egg strain, bred for years for show qualities and high-egg production. Fifty cockerels, 100 pullets for sale. Trios and mated yards. Eggs for hatching. Catalogue free. J. W. Atkinson, Box 8, 130 Willard St., San Jose.

WHITE LEGHORN BABY CHICKS—We are now booking orders for spring delivery from two and three-year-old hens that have the laying qualities well established. We give extras. Send for free folder and price list. Tacker's Poultry Ranch and Hatchery, Escalon, Calif.

BABY CHICKS—Stop! Look! Listen! Before you place your order for Single-Comb White Leghorn Baby Chicks, write for my booklet telling you about my large, heavy-laying stock, etc., and price and terms. H. A. Schlotthauer, Exeter, Calif.

BABY CHICKS from good layers. Booking orders now for 1921 delivery: R. I. Reds, Barred Rocks, White Rocks, White Leghorns, Brown Leghorns. Safe arrival guaranteed. Write for circular. Stubbe Poultry Ranch and Hatchery, P. O. Box 67, Palo Alto, Calif.

SANTA CRUZ CHICKS—White, Brown and Buff Leghorns, Anconas, Minorcas, Barred Rocks, Reds, Buff Orpingtons, White Rocks and White Wyandottes. Write for 1921 folder with price list. B. W. Archibald, Soquel, Santa Cruz Co., Calif.

MAMMOTH BRONZE TURKEYS—"Stafford strain" from eastern stock. Extra large bone and frame and beautiful plumage. Money back guarantee. Send for circular. R. M. Dodge & Son, Stafford Farm, R. D. 2, Box 129, Bakersfield, Cal.

DARK CORNISH Breeding Trios, $25. Our own "Victor" strain, with importations of England's best, bred successfully twenty-six years. W. S. Templeton, Route A, Box 25, Santa Clara, Calif.

WHITE LEGHORN BABY CHIX from heavy-laying Hoganized Stock. Safe arrival of full count, live, strong chix guaranteed. Price list and interesting literature on application. The Pioneer Hatchery, 408 Sixth St., Petaluma, Cal.

CHICKS — EGGS — Hoganized White Leghorns, Brown and Buff Leghorns, Black Minorcas, Rhode Island Reds, Barred Rocks, Anconas, Blue Andalusians. Free circular. Order early. McDonald Poultry Ranch, King Road, San Jose, Calif.

BABY CHIX
We specialize in Rhode Island Red and Black Minorca chix from stock bred for eggs, vigor, color. Any number at popular price. Secure date early. Denton Poultry Yards, Campbell, Cal.

PRUSSIAN HILL POULTRY RANCH—Superb Barred Rock, Black Minorca and Blue Andalusian cockerels. March hatch at $5.00 each. A few extra at $7.50. Pullets at $2.00 each. Geo. I. Wright, Mokelumne Hill, Cal.

WATCH US GROW—"Quality Chicks." We are now booking orders for the season of 1921. White and brown Leghorns, R. I. Reds and Barred Rocks. Order early. E. W. Ohlen, Campbell, Cal.

MAMMOTH BRONZE TURKEYS—Prize winning eastern strain; large bones, vigorous, well marked. Hens, $10; toms, $15 and $20. Mrs. W. S. Adams, Rt. 2, Box 73, Petaluma, Cal.

FOR SALE—Purebred Bronze young toms, $15.00; hens, $10.00. Satisfaction guaranteed. Purebred Buff Orpington cocks and cockerels, $5.00, $7.50; hens, $3.50 to $5.00. Mrs. M. L. Trewhitt, Route B, Box 47, Fresno, Cal.

S. C. WHITE LEGHORN Baby Chicks from our own Bred-to-Lay stock. Now booking for January to July delivery. Our prices are right. Model Poultry Farm, W. C. Smith, Prop., Corning, Cal.

NEWTON POULTRY FARM—White Leghorn Baby chicks from our well-known, carefully selected stock. Best strain. Big plant. Order now for spring delivery. Any number. Los Gatos, Calif., Dept. 1.

FOR SALE — Toulouse Ganders—the large kind; fine large Pekin drakes; fawn Indian Runner drakes. One, two-year-old Giant Bronze Tom Turkey, a beauty. Mokelumne Poultry Ranch, Lockeford, Cal.

GOLDCROFT BUFF ORPINGTONS. Columbian Wyandottes and White Leghorns. Heavy laying strains. Breeders and young stock. Samuel Abrams, Box 13, Los Altos.

TURKEYS — Mammoth Bronze, limited number of fine young cockerels for breeding stock, $10 and $15. Claremont Ranch, Calistoga, Calif.

MAMMOTH WHITE HOLLAND TURKEYS for sale. Choice hens and Toms from our famous breed of large vigorous turkeys. Earl V. Smith, Loma Vista Ranch, Willows, Calif.

VIGOROUS WHITE PLYMOUTH ROCK Cockerels, farm raised, May hatch; weight 6 to 8 lbs., $6.00, $7.50, $10.00. L. A. Bryan, Planada, Calif.

BARRED ROCKS, WHITE ORPINGTONS—heavy layers; winners at leading shows. Special prices on old and young stock. R. P. Lutzi, 1450 23d Ave., San Francisco.

LARGE NUMBER of Choice Stock Toms and hens; also Geese and Herding Collie Dogs. Stock shipped from St. Helena and San Miguel. John G. Mee, San Miguel, Calif.

HART'S MAMMOTH BRONZE TURKEYS—Large, well-marked, year-old hens. Thrifty young stock of both sexes. Albert M. Hart, Clements, Cal.

FOR SALE—7 Cyphers incubators (400-egg size), all in first-class hatching condition. Meyer Poultry Farm, Rt. A, Box 17A, Modesto, Cal.

BABY CHICKS—Thoroughbred White Leghorns, Hoganized. No dead or weak ones charged for. Schellville Hatchery, Schellville, Sonoma Co., Cal.

FOR SALE—300 S. C. White Leghorn pullets, 5 months old, from 227-egg strain. Meyer Poultry Farm, Route A, Box 17A, Modesto, Cal.

CHICKENS, DUCKS, GEESE, GUINEAS, Pea Fowl, Pigeons. Wm. A. French, 545 W. Park St., Stockton, California. Stamps.

PLACE YOUR ORDER NOW for chicks for 1921. Standard varieties. Prices right. Send for circular. Madera Hatchery, Madera, Calif.

WHITE LEGHORN Baby Chicks—Pure Tancred strain. Honest-to-goodness layers. Circular. Henry Tarratt, Corning, Calif.

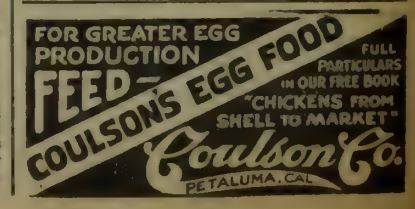
FINE ROUEN DRAKES—$5.00 each. Black Cochin bantams. Prize stock. Emma Miller, R. R. 2, Box 534, Santa Cruz, Cal.

BOURBON RED TURKEYS—Buff Orpingtons. The Ferris Ranch, R. 2-144D, Pomona Calif.

WHITE HOLLAND TURKEYS — Breeding stock. H. H. Buhring, Concord.

BOURBON RED TURKEY TOMS for sale. J. W. Renwick, Burrell, Calif.

BOURBON RED TURKEYS—Mrs. Geo. F. Smith, Hardwick, Calif.



Oh, You Tex!

By William MacLeod Raine.

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SYNOPSIS OF PRECEDING CHAPTERS: Jack Roberts, known as Tex, a young line-rider in the cattle country of the Texas Panhandle, discovers rustlers at work. He is prevented from getting a close view of the culprits because of a barrier in the form of a Winchester rifle. However, he gathers what clues he can at long range, one of the clues being a sorrel horse with a white nose and white stocking. Roberts is planning a coup on the rustlers when a Mexican boy rides up and informs him that his employer, Clint Wadley, owner of the A T O ranch, desires his presence at the ranch house. Wadley informs the line-rider that he is to be assigned to service as a trail herder, to move a band of cattle to market. During his interview with the ranch owner, Roberts meets, for the first time, his employer's daughter, Ramona, who has just returned from attending school in the East.

CHAPTER III.

Tex Takes an Interest.

Jack Roberts was in two minds whether to stop at the Longhorn saloon. He needed a cook in his trail outfit, and the most likely employment agency in Texas during that decade was the bar-room of a gambling-house. Every man out of a job naturally drifted to the only place of entertainment.

The wandering eye of the foreman decided the matter for him. It fell upon a horse, and instantly ceased to rove. The cow-pony was tied to a hitching-rack worn shiny by thousands of reins. On the nose of the bronco was a splash of white. Stockings of the same color marked its legs. The left hind hoof was gashed and broken.

The rider communed with himself. "I reckon we'll 'light and take an interest, Jack. Them that looks for, finds."

He slid from the saddle and rolled a cigarette, after which he made friends with the sorrel and examined carefully the damaged foot.

"It's a li'l bit of a world after all," he commented. "You never can tell who you're liable to meet up with." The foreman drew from its scabbard a revolver and slid it back into place to make sure that it lay easy in its case. "You can't guess for sure what's likely to happen. I'd a heap rather be too cautious than have flowers sent me."

He sauntered through the open door into the gambling-house. It was a large hall, in the front part of which was the saloon. In the back the side wall to the next building had been ripped out to give more room. There was a space for dancing, as well as roulette, faro, chuckaluck, and poker tables. In one corner a raised stand for the musicians had been built.

The Longhorn was practically deserted. Not even a game of draw was in progress. The dance-girls were making up for lost sleep, and the patrons of the place were either at work or still in bed.

Three men were lined up in front of the bar. One was a tall, lank person, hatchet-faced and sallow. He had a cast in his eye that gave him a sinister expression. The second was slender and trim, black of hair and eye and mustache. His clothes were very good and up to date. The one farthest from the door was a heavy-set, unwieldy man in jeans, slouchy as to dress and bearing. Perhaps it was the jade eyes of the man that made Roberts decide instantly he was one tough citizen.

The line-rider ordered a drink.

"Hardware, please," said the bartender curtly.

"Enforcin' that rule, are they?" asked Roberts casually as his eyes swept over the other men.

"That's whatever. Y'betcha. We won't want no gay cowboys shootin' out our lights. No reflections, y'understand."

The latest arrival handed over his revolver, and the man behind the bar hung the scabbard on a nail. Half a dozen others were on a shelf beside it. For the custom on the frontier was that each rider from the range should deposit his weapons at the first saloon he entered. They were returned to him when he called for them just before leaving town. This tended to lessen the number of sudden deaths.

"Who you ridin' for, young fellow?" asked the sallow man of Roberts.

"For the A T O."

The dark young man turned and looked at the cowboy.

"So? How long have you been riding for Wadley?"

"Nine months."

"Don't think I've seen you before."

"I'm a line-rider—don't often get to the ranch-house."

"What ground do you cover?"

"From Dry Creek to the rim-rock, and south past Box Canyon."

Three pair of eyes were focused watchfully on Roberts. The sallow man squirted tobacco at a knot in the floor and rubbed his bristly chin with the palm of a hand.

"Kinda lonesome out there, ain't it?" he ventured.

"That's as how you take it. The country is filled with absentees," admitted Roberts.

"Reckoned it was. Never been up that way myself. A sort of a bad-lands proposition, I've heard tell—country creased with arroyos, packed with rocks an' rattlesnakes mostly."

The heavy-set man broke in harshly. "Anybody else run cattle there except old man Wadley?"

"Settlers are comin' in on the other side of the rim-rock. Cattle drift across. I can count half a dozen brands 'most any day."

"But you never see strangers."

"Don't I?"

"I'm askin', do you?" The voice of the older man was heavy and dominant. It occurred to Roberts that he had heard that voice before.

"Oh!" Unholy imps of mirth lurked in the alert eyes of the line-rider. "Once in a while I do—last Thursday, for instance."

The graceful, dark young man straightened as does a private called to attention. "A trapper, maybe?" he said.

The cowboy brought his level gaze back from a barefoot negro washing the floor. "Not this time. He was a rustler."

"How do you know?" The high voice of the questioner betrayed excitement.

"I caught him brandin' a calf. He waved me round. I beat him to the Box Canyon and saw him ridin' through."

"You saw him ridin' through? Where were you?" The startled eyes of the dark young man were fixed on him imperiously.

"From the bluff above."

"You don't say!" The voice of the heavy man cut in with jeering irony. The gleam of his jade eyes came through narrow-slitted lids. "Well, did you take him back to the ranch for a necktie party, or did you bury him in the gulch?"

The dark young man interrupted irritably. "I'm askin' these questions, Dinsmore. Now you, young fellow—what's your name?"

"Jack Roberts," answered the cowboy meekly.

"About this rustler—would you know him again?"

The line-rider smiled inscrutably. He did not intend to tell all that he he did not know. "He was ridin' a sorrel with a white splash on its nose, white stockin's, an' a bad hoof, the rear one—"

"You're a damn' liar." The words, flung out from some inner compulsion, as it were, served both as a confession and a challenge.

There was a moment of silence, tense and ominous. This was fighting talk.

The lank man leaned forward and whispered some remonstrance in the ear of the young fellow, but his suggestion was waved aside. "I'm runnin' this, Gurley."

The rider for the A T O showed neither surprise nor anger. He made a business announcement without stress or accent. "I expect it's you or me one for a lickin'. Hop to it, Mr. Rustler!"

Roberts did not wait for an acceptance of his invitation. He knew that the first two rules of battle are to strike first and to strike hard. His brown first moved forward as though it had been shot from a gun. The other man crashed back against the wall and hung there dazed for a moment. The knuckles of that lean fist had caught him on the chin.

"Give him hell, Ford. You can curry a li'l' shorthorn like this guy with no trouble a-tall," urged Dinsmore.

The young man needed no urging. He gathered himself together and plunged forward. Always he had prided himself on being an athlete. He was the champion boxer of the small town where he had gone to school. Since he had returned to the West, he had put on flesh and muscle. But he had dissipated a good deal, too, and no man not in the pink of condition had any right to stand up to tough Jack Roberts.

While the fight lasted there was rapid action. Roberts hit harder and cleaner, but the other was the better boxer. He lunged and sidestepped cleverly, showing good foot-work and a nice judgment of distance. For several minutes he peppered the line-rider with neat hits. Jack bored in for more. He drove a straight left home and closed one of his opponent's eyes. He smashed through the defense of his foe with a power that would not be denied.

"Keep a-comin', Ford. You shore have got him goin' south," encouraged Gurley.

But the man he called Ford knew it was not true. His breath was coming raggedly. His arms were heavy as though weighted with lead. The science upon which he had prided himself was of no use against this man of steel. Already his head was singing so that he saw hazily.

The finish came quickly. The cowboy saw his chance, feinted with his left and sent a heavy body blow to the heart. The knees of the other sagged. He sank down and did not try to rise again.

Presently his companions helped him to his feet. "He—he took me by surprise," explained the beaten man with a faint attempt at bluster.

"I'll bet I did," assented Jack cheerfully. "An' I'm liable to surprise you again if you call me a liar a second time."

"You've said about enough, my friend," snarled the man who had been spoken to as Dinsmore. "You get away with this because the fight was on the square, but don't push yore luck too far."

The three men passed out of the front door. Roberts turned to the barkeeper.

"I reckon the heavy-set one is Pete Dinsmore. The cock-eyed guy must be Steve Gurley. But who is the young fellow I had the mix-up with?"

The man behind the bar gave information promptly. "He's Rutherford Wadley—son of the man who signs yore pay-checks. Say, I heard Buck Nelson needs a mule-skinner, in case you're lookin' for a job."

Jack felt a sudden sinking of the heart. He had as good as told the son of his boss that he was a rustler, and on top of that he had given him a first-class lacing. The air-castles he had been building came tumbling down with a crash. He had already dreamed himself from a trail foreman to the majordomo of the A T O ranch. Instead of which he was a line-rider out of a job.

"Where can I find Nelson?" he asked with a grin that found no echo in his heart. "Lead me to him."

CHAPTER IV.

Tex Grandstands.

Clint Wadley, massive and powerful, slouched back in his chair with one leg thrown over an arm of it. He puffed at a corncob pipe, and through the smoke watched narrowly with keen eyes from under heavy grizzled brows a young man standing on the porch steps.

"So now you know what I expect, young fellow," he said brusquely. "Take it or leave it; but if you take it, go through."

Arthur Ridley smiled. "Thanks, I'll take it".

The boy was not so much at ease as his manner suggested. He knew that the owner of the A T O was an exacting master. The old cattleman was game himself. Even now he would fight at the drop of the hat if necessary. In the phrase which he had just used, he would "go through" anything he undertook. Men who had bucked blizzards with him in the old days admitted that Clint would do to take along. But Ridley's awe of him was due less to his roughness and to the big place he filled in the life of the Panhandle than to the fact that he was the father of his daughter. It was essential to Arthur's plans that he stand well with the old-timer.

Though he did not happen to know it, young Ridley was a favorite of the cattle king. He had been wished on him by an old friend, but there was something friendly and genial about the boy that won a place for him. His smile was modest and disarming, and his frank face was better than any letter of recommendation.

But though Wadley was prepared to like him, his mind held its reservations. The boy had come from the East, and the standards of that section are not those of the West. The East asks of a man good family, pleasant manners, a decent reputation, and energy enough to carry a man to success along conventional lines. In those days the frontier West demanded first that a man be game, and second that he be one to tie to. He might be good or bad, but whichever he was, he must be efficient to make any mark in the turbulent country of the border. Was there a hint of slackness in the jaw of this good-looking boy? Wadley was not sure, but he intended to find out.

"You'll start Saturday. I'll meet you at Tascosa two weeks from today. Understand?" The cattleman knocked the ashes from his pipe and rose. The interview was at an end.

Young Ridley nodded. "I'll be there, sir—with the six thousand dollars safe as if they were in a vault."

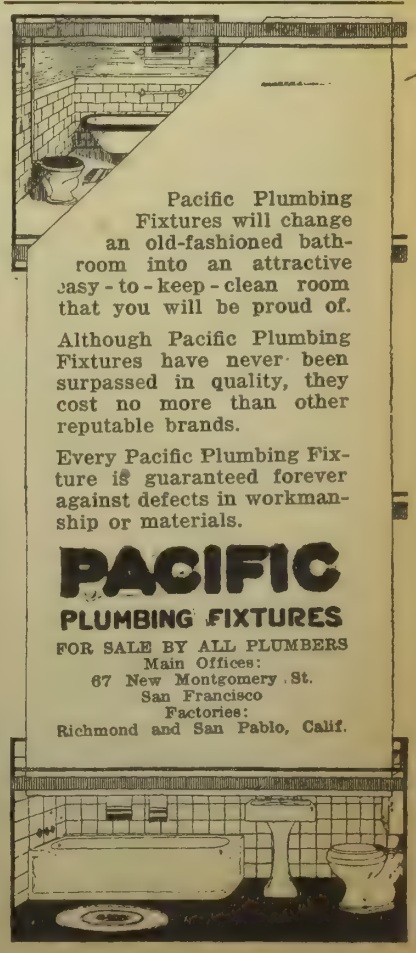
"H'm! I see you carry a six-shooter. Can you shoot?" Wadley flung at him abruptly.

Arthur Ridley had always fancied himself as a shot. He had belonged to a gun-club at home, and since coming to the Southwest he had practiced a good deal with the revolver.

"Pretty well, sir."

"Would you if it was up to you?"

The youngster looked into the steel-gray eyes roofed by the heavy thatch



of brow. "I think so. I never have had to yet. In the East—"

Wadley waved the East back to where it belonged. "Yes, I know. But we're talkin' about Texas. Still, I reckon you ought not to have any trouble on this trip. Don't let anybody know why you are at the fort. Don't gamble or drink. Get the money from Major Ponsford and melt away inconspicuous into the brush. Hit the trail hard. A day and a night ought to bring you to Tascosa."

The cattleman was leading the way with long strides into an open space back of the house. A pile of empty cans, symbol of the arid lands, lay beside the path. He picked up one and put it on a post. Then he stepped off fifteen paces.

"Ventilate it," he ordered.

The boy drew his revolver, took a long, steady aim, and fired. The bullet whistled past across the prairie. His second shot scored a clean hit. With pardonable pride he turned to the cattleman.

"Set up another can," commanded Wadley.

From the pile of empties the young man picked another and put it on the post. Wadley, known in Texas as a a two-gun man, flashed into sight a pair of revolvers almost quicker than the eye could follow. Both shots came instantly and together. The cattleman had fired from the hips. Before the can had reached the ground the weapons barked again.

Ridley ran forward and picked up the can. It was torn and twisted with jagged holes, but the evidence was written there that all four bullets had pierced the tin. The Easterner could hardly believe his eyes. Such shooting was almost beyond human skill.

The owner of the A T O thrust into place his two forty-fives.

"If you're goin' to wear six-shooters, learn to use 'em, son. If you don't, some bad man is liable to bump you off for practice."

As the two men stepped around the corner of the house a girl came down the steps of the porch. She was dressed in summer white, but she herself was spring. Slim and lissome, the dew of childhood was still on her lips, and the mist of it in her eyes. But when she slanted her long lashes toward Arthur Ridley, it was not the child that peeped shyly and eagerly out from beneath them. Her heart was answering the world-old call of youth to youth.

"I'm going downtown, Dad," she announced.

Ridley stepped forward and lifted his hat. "May I walk with you, Miss Ramona?"

"Stop at the post-office and see if the buckboard driver is in with the mail, 'Mona," her father said.

The boy and the girl made a couple to catch and hold the eye.

They went down the street together chattering gayly. One of the things young Ridley knew how to do well was to make himself agreeable to girls. He could talk nonsense charmingly and could hold his own in the jolly give-and-take of repartee. His good looks were a help. So, too, was the little touch of affectionate deference he used. He had the gift of being bold without being too bold.

It was a beautiful morning and life sang in the blood of Ramona. It seemed to her companion that the warm sun caressed the little curls at her temples as she moved down the street light as a deer. Little jets of laughter bubbled from her round, bird-like throat. In her freshly starched white dress, with its broad waistband of red and purple ribbon, the girl was sweet and lovely and full of mystery to Ridley.

A little man with a goatee, hawk-nosed and hawy-eyed, came down the street with jingling spurs to meet them. At sight of Ramona his eyes lighted. From his well-shaped gray head he swept in a bow a jaunty, broad-brimmed white hat.

The young girl smiled, because there were still a million unspent smiles in her warm and friendly heart.

"Good-morning, Captain Ellison," she called.

"Don't know you a-tall, ma'am." He shook his head with decision. "Never met up with you before."

"Good gracious, Captain, and you've fed me candy ever since I was a sticky little kid."

He burlesqued a business of recognizing her with much astonishment. "You ain't little 'Mona Wadley. No! Why, you are a young lady all dressed up in go-to-meet-him clothes. I reckon my little side-partner has gone forever."

"No, she hasn't, Uncle Jim." the girl cried. "And I want you to know I still like candy."

He laughed with delight and slapped his thigh with his broad-brimmed ranger hat. "By dog, you get it, 'Mona, sure as I'm a foot high."

Chuckling, he passed down the street.

"Captain Jim Ellison of the Rangers," explained Ramona to her companion. "He isn't really my uncle, but I've known him always. He's a good old thing and we're great friends."

Her soft, smiling eyes met those of Arthur. He thought that it was no merit in Ellison to be fond of her. How could he help it?

"He's in luck," was all the boy said.

A little flag of color fluttered in her cheek. She liked his compliments, but they embarrassed her a little.

"Did you fix it all up with Dad?" she asked, by way of changing the subject.

"Yes, I'm to go to Fort Winston to get the money for the beeves, and if I fall down on the job I'll never get another from him."

"I believe you're afraid of Dad," she teased.

"Don't you believe it—know it. I sure enough am," he admitted promptly.

"Why? I can twist him round my little finger," she boasted.

"Yes, but I'm not his only daughter and the prettiest thing in West Texas."

She laughed shyly. "Are you sure you're taking in enough territory?"

"I'll say south of Mason and Dixon's line, if you like."

"Really, he likes you. I can tell when Dad is for any one."

A sound had for some minutes been disturbing the calm peace of the morning. It was the bawling of thirsty cattle. The young people turned a corner into the main street of the town. Down it was moving toward them a cloud of yellow dust stirred up by a bunch of Texas longhorns. The call of the cattle for drink was insistent. Above it rose an occasional sharp "Yip yip!" of a cowboy.

Ramona stopped, aghast. The cattle blocked the road, their moving backs like the waves of a sea. The dust would irreparably soil the clean frock fresh from the hands of her black mammy. She made as if to turn, and knew with a flash of horror that it was too late.

Perhaps it was the gleam of scarlet in her sash that caught the eye of the bull leading the van. It gave a bellow of rage, lowered its head, and dashed at her.

Ramona gave a horror-stricken little cry of fear and stood motionless. She could not run. The fascination of terror held her paralyzed. Her heart died away in her while the great brute thundered toward her.

Out of the dust-cloud came a horse and rider in the wake of the bull. Frozen in her tracks, Ramona saw with dilated eyes all that followed. The galloping horse gained, was at the heels of the maddened animal, drew up side by side. It seemed to the girl that in another moment she must be trampled underfoot. Nothing but a miracle from God's blue could save her.

For what registered as time without end to the girl's fear-numbed brain, horse and bull raced knee to knee. Then the miracle came. The rider leaned far out from the saddle, loosened his feet from the stirrups, and launched himself at the crazed half-ton of charging fury.

His hands gripped the horns of the bull. He was dragged from the saddle into the dust, but his weight deflected the course of the animal. With every ounce of strength given by his rough life in the open the cowboy hung on, dragging the head of the bull down with him toward the ground. Man and beast came to a slithering halt together in a great cloud of dust not ten feet from Ramona.

Even now terror held her a prisoner. The brute would free itself and stamp the man to death. A haze gathered before her eyes. She swayed, then steadied herself. Man and bull were fighting desperately, one with sheer strength, the other with strength plus brains and skill. The object of the animal was to free itself. The bull tossed wildly in frantic rage to shake off this incubus that had fastened itself to its horns. The man hung on for life. All his power and weight were centered in an effort to twist the head of the bull sideways and back. Slowly, inch by inch, by the steady, insistent pressure of muscles as well packed as any in Texas, the man began to gain. The bull no longer tossed and flung him at will. The big roan head went down, turned backward, yielded to the pressure on the neck-muscles that never relaxed.

The man put at the decisive moment his last ounce of strength into one last twist. The bull collapsed, went down heavily to its side.

A second cowboy rode up, roped the bull, and deftly hogtied it.

The bulldogger rose and limped forward to the girl leaning whitely against a wall.

"Sorry, Miss Wadley. I hadn't ought to have brought the herd through town. We was drivin' to water."

"Are you hurt?" Ramona heard her dry, faint voice ask.

"Me;" he said in surprise. "Why, no, ma'am."

He was a tall, lean youth, sunburned and tough, with a face that looked sardonic. Ramona recognized him now as her father's new foreman, the man she had been introduced to a few days before. Hard on that memory came another. It was this same Jack Roberts who had taken her brother by surprise and beaten him so cruelly only yesterday.

"It threw you around so," she murmured.

"Sho. I reckon I can curry a li'l ol' longhorn when I have it to do, ma'am," he answered, a bit embarrassed.

"Are—are you hurt?" another voice quavered.

With a pang of pain Ramona remembered Arthur Ridley. Where had he been when she so desperately needed help?

"No. Mr. Roberts saved me." She did not look at Ridley. A queer feeling of shame for him made her keep her eyes averted.

"I—went to get help for you," the boy explained feebly.

"Thank you," she said.

The girl was miserably unhappy. For the boy to whom she had given the largesse of her friendship had fled in panic; the one she hated for bullying and mistreating her brother had flung himself in the path of the furious bull to save her.

Captain Ellison came running up. He bristled at the trail foreman like a bantam. "What do you mean by drivin' these wild critters through town? Ain't you got a lick o' sense a-tall? If anything had happened to this little girl—"

The Ranger left his threat suspended in midair. His arms were round Ramona, who was sobbing into his coat.

The red-headed foreman shifted his weight from one foot to another. He was acutely uncomfortable at having made this young woman weep. "I ain't got a word to say, Captain. It was plumb thoughtless of me," he apologized.

"You come to my office this mo'nin' at twelve o'clock, young fellow. Hear me? I've got a word to say to you."

"Yes," agreed the bulldogger humbly. "I didn't go for to scare the young lady. Will you tell her I'm right sorry, Captain?"

"You eat yore own humble pie. You've got a tongue, I reckon," snorted Ellison, dragging at his goatee fiercely.

The complexion of Roberts matched his hair. "I—I—I'm turrible sorry, miss. I'd ought to be rode on a rail."

With which the range-rider turned, swung to the saddle of his pony without touching the stirrups, and fairly bolted down the street after his retreating herd.

(To be continued.)

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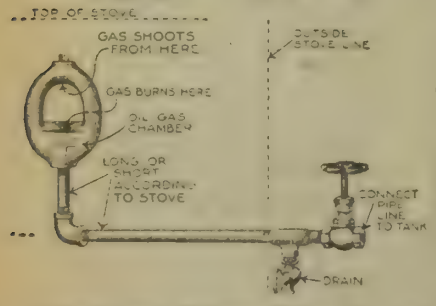

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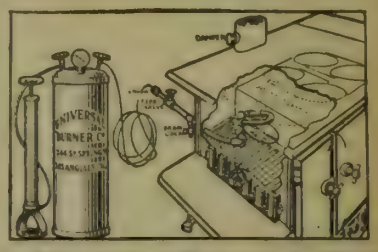

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CLEAR THE WAY.

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night and day:
Sow the seed—withdraw the curtain—
clear the way!
Men of action, aid and cheer them, as
ye may!
There's a fount about to stream,
There's a light about to beam,
There's a warmth about to glow,
There's a flower about to blow;
There's a midnight blackness changing
into gray
Men of thought and men of action,
clear the way!

Once the welcome light has broken,
who shall say
What the unimagined glories of the
day?
What the evil that shall perish in its
ray?
And the dawning, tongue and pen;
Aid it, hopes of honest men;
Aid it, paper; aid, it type;
Aid it for the hour is ripe.
And our earnest must not slacken
into play,
Men of thought and men of action,
clear the way.

Lo! a cloud's about to vanish from
the day;
And a brazen wrong to crumble into
clay.
Lo! the right's about to conquer:
clear the way!
With the right shall many more
Enter smiling at the door;
With the giant throng shall fall
Many others, great and small,
That for ages long have held us for
their prey.
Men of thought and men of action,
clear the way!

Charles Mackay.

A NEW SLANT ON AMERICANIZATION.

(Written for Pacific Rural Press.)

Mrs. Frank A. Gibson, chairman of the Americanization Committee of the California Federation of Women's Clubs, has recently issued the outline of a program for this year's Americanization work. It is prefaced by the statement: "If each club will assume its share in the work as outlined, the C. F. W. C. will be able to render an unique and valuable service to the State." The outline runs as follows:

Clubs will be asked to secure statistics as to number, nationality, location, occupation, recreation, etc., of at least their dominant local race-groups. These statistics to be placed upon local maps and later transferred to county maps. The county maps to be finally assembled for the preparation of a State Nationality Map.

In gathering statistics local Americanization problems in education, industry, housing, recreation, assimilation, etc., will present themselves for careful consideration. Brief papers on such subjects will make practical club programs of intense interest and, collected, may throw new light upon questions that are now perplexing the state.

In the line of original research, nothing will prove of more value than a study of the lives of foreign-born men and women, residents of California, who have rendered distinguished state or world service.

Beginning with Junipero Serra, many counties will be able to collect data as to their own monuments and history and, incidentally, to learn something of the methods of the earliest vocational work on the Pacific Coast. Following Junipero, without regard to sequence, come such immigrants as Portola, Sutter, Muir, Modjeska, Sienkiewitz, Sutro, Lubin, Murray, Morse, Stephens, Paderewski, Ricard, Furusuth, Tetrazzini, Mulholland of aqueduct fame, and McLeran, who built the Golden Gate Park. Each county can add worthily to this group of wonderful men and women who, coming from other lands, have given of their genius to the land of their adoption.

Exhibits of Arts and Crafts.

Each county is asked to secure an exhibit of the arts and crafts, the folk-songs and dances peculiar to its foreign-born groups. These should be shown, perhaps, in the County Chambers of Commerce. Later, the more valuable part of each county collection should be assembled at the State Fair in 1921, where, with the State Nationality Map, it should be designated as The Foreign Arts and Crafts Exhibit of the C. F. W. C.

We have given the program in full because it is worthy of careful consideration by every Californian. There has been a lot of loose talk about Americanization; a lot of energy has been wasted in desultory effort, and a lot of near crimes (to be conservative) have been committeed in its name because we have been blazing away without knowing what we were shooting at.

What Is Americanization and Why and How?

Honest, now, when it comes right down to business, isn't our answer to the above query rather vague? During the spasm of hysteria that has now about spent its force, the answer seemed easy. To sentimentalize, and fumble, and bungle about in this slum and that shop and the other playground, teaching a bit of English here, taking an auto apart and putting it together again there, or giving a bum motion picture show in the other place—that was Americanization. To make everybody talk United States whether they had learned to speak it or not; to insist that everybody shout himself hoarse every time the picture of an American flag floated in Freedom's breeze across a movie screen; to smash phonograph records that had a foreign twang, and rip leaves from text books that made reference to obnoxious facts of history, and bar the doors of our temples of art to masters who happened to be born in a country whose name was anathema; to preach the gospel of unreason and hate, that was Americanization.

Thank goodness, that is about past and gone. We are getting back to "Normaly," as the advertisements say. We are beginning to realize that before we shoot, we need to locate the target and decide what ammunition will achieve the best results. Funny somebody didn't think of that before, but then a person throwing fits doesn't do much thinking and neither does a nation. Somebody in the California Federation of Women's Clubs has been thinking and thinking straight. That program faithfully carried out will show us (something we do not now know) just what our job is. "Statistics and Maps"—Original research"—a year of that and we will have the target located. "Biography" (go back and read that list of names)—a year of that ought to clarify our vision wonderfully. "The Foreign arts and crafts exhibit"—a view of that at the next State Fair may tempt some of us to hand the gun over to the other fellow. Anyway, a year of all this and we will go at our task in the spirit of the greatest apostle's masterpiece—"Now abideth faith, hope and love, but the greatest of these is love."

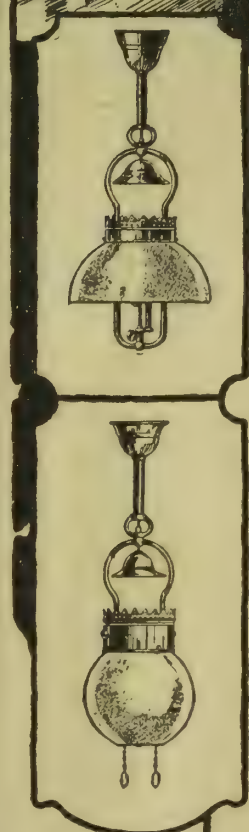
Rural Americanization.

When they get down to making the maps for the counties, and conducting the researches, and digging out the local biographies, I wonder if they are not going to make a discovery. No claim to knowledge of city conditions is here made, so we cannot say that the problem in the country differs from that in the city. Maybe it doesn't though we are inclined to believe it does, and that different methods will be needed according as we deal with urban or rural conditions. Probably the proposed survey will settle that. What we started to say, however, was when the country is reached it will be found that most desirable form of Americanization is already well under way. We don't call it Americanization; we don't call it at all—but we are doing it!

We want a study made of the various boys' and girls' calf, pig, cow and other clubs being fostered by the Agricultural Extension force and the various breed associations. I know a "foreigner" who is now scurrying around for seven purebred calves for his seven boys. Call it what you will—that is building Rural American Citizenship!

We want a study made of the co-operative farmers' organizations that, on a supposedly cold-blooded business basis, are making brothers of us all. I know a "foreigner" (you have to listen carefully to understand him) who is the acting manager of a large co-operative plant that teems with the spirit of mutual helpfulness. Call it what you will—that is building safe and sane citizenship. We want a study made of the Home Demonstration work, a department of Agricultural Extension. I know a "foreigner," a woman who can't talk English, who is showing her sisters in a whole county how to cull poultry; another who has shown a county how to can mushrooms; another who has taught many of her neighbors the art of home cheese-making. And just recently these columns recorded the fact that, in the Livingston school lunch campaign, the foreign-born mothers were the most eager of all to carry out every last detail of the program. I mingled with the women of that community for several hours, drawing out the story of their fine work. Never once did I hear the word Americanization, but verily I say unto you, these women, with their scales and tape and hot soup, are developing genuine American Citizenship!

If we are not badly mistaken, what is quietly going on right now through the various branches of Agricultural Extension, Breed Associations and Co-operative Movements, is what Americanization should mean in the country and is the why and the how thereof. And no doubt the program of the California Federation of Woman's Clubs when carried out will find it and help it along.



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WHEAT.

Locally there has been a downward pressure lately in the wheat market, but it is said that to buy in the country asking prices are relatively higher than quoted in the local market. The price is about the same.

Wheat, spot ..... $2.50@2.65

OATS.

The market for oats is quiet and weak with quotations down. Buyers seem to be holding off for further developments.

Red Feed, ctl. ..... $1.90@2.00

BARLEY.

Trading in spot barley has been reduced to a minimum and the price along with the rest of the grains is lower. Call board business is also very dull.

Feed Barley, ctl. ..... $1.60@1.70

CORN.

Corn prices are steady. While the visible supply of corn in California is much greater than heretofore, more activity prevails than in the grain market.

Egyptian, white ..... Nominal
do, brown ..... $2.25@2.30
California yellow ..... $2.10@2.25

FEEDSTUFFS.

The feedstuffs market is weaker than had been anticipated and very little buying was done last week. Prices are generally considerably lower, Cocoanut Meal Cake having taken a slump. Still lower quotations may take place.

Rolled Barley, per ton ..... $40.00@42.00
Rolled Oats ..... $55.00@56.00
Alfalfa Products ..... $31.00@33.00
Cracked Corn ..... $56.00@57.00
Bran ..... $52.00@54.00
Mill Run ..... $50.00@52.00
Poultry Scratch, ctl. $3.55
Cocoanut Meal Cake ..... $28.00@30.00

HAY.

Hay prices have all dropped. Lack of demand is responsible for the lower quotations as receipts have not been overabundant. During the week 1,161 tons were received. For the week previous 1,193 tons arrived in the local market. The receipts of the last week, however, greatly exceeded the demand and the market now is in a very weak condition.

Hay buyers as well as purchasers in other lines are not buying as they are not satisfied that the hay prices have reached their permanent low level. The general business depression is also having its effect on the hay market. Farmers, however, seem to be still holding tightly to their product and evidence no desire to cash in at present prices. No trading in any volume is reported in any grade of hay, but alfalfa is perhaps weakest of all now. Price quoted f. o. b. San Francisco less $1.00 per ton commission charges.

Wheat hay, new ..... $27.00@28.00
Tame oat, new ..... $23.00@26.00
Barley ..... $15.00@19.00
Wild oat, new ..... $15.00@19.00
Alfalfa ..... $20.00@24.00

RICE.

The rice market is very quiet and all grades of rice are moving slowly. Some price declines are noted this week. Further declines are probable.

California Fancy, ctl $5.50
do, Choice $5.25
Southern Honduras, long grain $9.25
China, No. 1, double mat $8.50
Blue Rose, fancy $7.00
Fancy Head (Philips & Co.) $10.00
California Japanese, No. 1 ..... $5.50
do, No. 2 ..... $5.25

FRESH FRUITS.

Newtown Pippins and Bellflowers are arriving in large quantities, but the demand for apples is holding up well. Wagner's are quoted at a slight increase. Cranberries are still coming in heavy quantities. White grapes are arriving in only very small lots with no demand. The pear market is steady. Casabas are almost done, but Honeydews are doing well.

Apples: Wagner's, 40-lb. box ..... $2.00@2.25
do, Spitzenberg, Oregon ..... $2.50@3.00
do, Jonathan ..... $2.50@3.00
do, Bellflowers, Watsonville ..... $1.50@2.00
do, Newtown Pippins ..... $2.00@2.25
Pears (52-lb. box) ..... $2.00@3.50
Strawberries, 6 12-oz. boxes ..... $1.25@1.50
Casaba, crate $1.00
Honeydew Melons, crate $1.50
Grapes, crate (20 lbs. net) ..... $1.25@2.00
Cranberries, box ..... $5.00@5.50
do, bbl. ..... $20.00@21.00

FERTILIZER MATERIAL.

There is practically no trading in fish meal and the price is nominal with very little on the market. The same situation applies to meat scrap. Green bone is worth $20 per ton.

POULTRY.

The market is still glutted and poultry of all grades continues to arrive in large quantities. Despite the heavy receipts of the past week, however, the market prices are holding steady and no decline is expected. The demand, however, is not over strong.

Broilers, small, alive, per lb. ..... 50@55c
do, large ..... 47@50c
Hens, mixed color ..... 30@35c
do, Leghorns ..... 30@35c
Roosters, young ..... 30@35c
do, old 23c
Friers ..... 40@42c
Squabs ..... 70@80c
Geese ..... 35@40c
Ducks ..... 35@40c
do, old ..... 35@38c
Belgian Hare, live ..... 20@25c
do, dressed ..... 24@30c
Jack Rabbits ..... Nominal
Turkeys, young, large, lb. ..... 45@50c
do, old, lb. 40c
do, dressed, lb. ..... 50@55c

BUTTER.

With prime firsts again on the market and butter prices down after steady declines throughout the week, the market is considered in a very poor condition with further declines likely. Buyers seem to be waiting for lower prices and imports and increased production seem to be causing some uncertainty.

	Thu.	Fri.	Sat.	Mon.	Tu.	Wed.
Extra	51	49½	..	49	48½	47½
Prime 1sts	..	..	..	..	..	43½
Firsts	..	..	..	..	..	..

CHEESE.

There has been some demand for California. Flats and trading has been fairly active. Toward the end of the week dealers showed a willingness to make concessions and a few sales have been made below quotations. Receipts show on increae this week.

California Flats, fancy, lb. 27c
do, Firsts 21½c
Oregon Triplets 26c
California Y. A. fancy 31c
Oregon Y. A. fancy 31½c
Full Cream Jack 27c

EGGS.

The Eastern markets are still very high. $1.12 is being quoted in one market. High Eatern prices are now, however, on the wane. In the local market receipts are increasing steadily with a large stock of pullet eggs on hand.

	Thu.	Fri.	Sat.	Mon.	Tu.	Wed.
Extra	77½	79½	..	82½	83	81½
Ex. Pullet	64½	64	..	65	68½	66
Undersized	61½	61½	..	61½	63	63
Extra firsts	..	77½	..	77½	80½	80½

HONEY.

With no demand receipts have fallen somewhat, but the market is now weaker than ever and no trading is reported. Prices, although nominal, are the same.

Water White (extracted) ..... 11@13
White ..... 13@15c
Amber Alfalfa ..... 10@12c
Light Amber (comb) ..... 25@30c

POTATOES, ONIONS, ETC.

With potato and onions prices down slightly, heavy shipments of the former are arriving and moving well at the new quotations. Oregon Gems are coming in freely together with a quantity of Idaho stuff. Vegetable receipts from the South are all moving well.

Turnips $1.00
Beans, green ..... 8@10c
Carrots, per sack ..... $1.00@1.25
Lettuce, local, doz. ..... 25@30c
Cucumbers, Alameda, large box ..... $1.00@1.75
Tomatoes, Alameda, large box ..... 75c@1.50
Summer Squash, box 35-40 lbs. ..... $1.25@1.75
Potatoes, New River, cwt ..... $1.50@1.75
Onions, yellow, sack ..... 50@65c
do, Red ..... Nominal
Green Onions, box, 25 lbs. ..... $1.50@1.75
Celery, crate ..... $3.00@3.25
Cauliflower, doz. ..... 60@65c

BEANS.

The market is quiet with a weak demand. Prices have declined on some varieties. Recent rains have irretrievably damaged whatever beans were out.

Red Kidneys ..... $ 9.50@10.00
Bayos ..... $10.50@10.75
Blackeyes ..... $5.75@6.00
Cranberries ..... $6.00@6.25
Red Mexican ..... $5.75@6.50
Pinks ..... $5.50@5.75
Large Whites ..... $4.25@4.50
Small Whites ..... $4.40@4.60
Limas, S. F. prices ..... $6.90@7.00
Garbanzoes ..... $4.90@6.50

DRIED FRUITS.

The market is very poor and a paucity of demand is still in evidence. Prices are unchanged.

Apricots.

Extra fancy Moorpark, lb. 30c
Fancy Moorpark, lb 23c

Growers Quality.

Growers' quality—Fancy, lb. 26½c
do, lb. 24½c
do, Choice lb. 22½c
do, Slabs, lb. 20c
do, Standards, lb. 18c

Raisins—The following prices have been established as the opening prices of the California Associated Raisin Company for the 1920 crop of raisins.

Muscat, Sun Maid, seeded, pkg, 36-16s, 20½c
do, Fancy ..36-16s, 20½c; 48-12s, 15¾c
Bulk, seeded, Baker's Sun Maid, 25-lb. 19½c
do, Fancy Sun Maid, 25-lb. boxes 20c
do, 4-crown, recleaned, lb. 23½c
Loose, 1-crown, recleaned, lb. 19½c
Layers, 3-crown, flat pack, 5-lb. box $1.30
do, 3-crown, flat pack, 5-lb. box $1.30
Clusters, 4-crown, flat pack, 20-lb. box $4.70
do, 4-crown, flat pack, 5-lb. box $1.40
Sun Maid, 100-lb. boxes $20.50
Thompson Seedless, Sun Maid, recleaned, lb. 20c
do, Sun Maid, bakers, lb. 21c
Sultanas, Sun Maid, recleaned, lb. 19¾c
do, Sweat-box, layers, lb. 18½c

Figs—Following prices have been established as the opening prices for the 1920 crop of dried figs.

White Adriatic, 12-10 oz. $1.25; fancy, $1.30
do, 12-8 oz. ..... $2.00; fancy, $2.05
do, 50-6 oz. ..... $3.10; fancy, $3.20
do, 70-4 oz. ..... $3.30; fancy, $3.40
Adriatic, bulk, Standard, 50-lb. boxes, lb. 9c
do, bulk, fancy, 50-lb. boxes, lb. 13c
Black Mission, Standard, 50-lb. boxes, lb. 7c
do, Fancy, 50-lb. boxes, lb. 12c
Prices f. o. b. Fresno.

(Peach Growers, Inc., prices f. o. b. Fresno.)

Peaches.—Following prices have been established as the opening prices of the California Peach Growers for the crop of dried peaches.

Yellows, Standard, lb 15½c
do, Fancy, lb. 17½c
do, Extra fancy, lb. 18½c
do, Slabs, lb. 15¼c
Muirs, Standard, lb. 15¾c
do, Fancy, lb. 18¼c
do, Extra fancy, lb. 19½c
The above prices are bulk basis.

Shipment: September, October, November. Seller's option. The above prices are guaranteed against Association decline until January 1, 1921.

Prunes—Following prices have been established as the opening prices of the California Prune and Apricot Growers, Inc., for the 1920 (Calif. Prune and Apricot Assn., f. o. b. California.)

Sunsweet Brand, 20-30s, flat, lb. 25c
do, 30-40s, bulk, lb. 16c
do, 40-50s, bluk, lb. 15c
do, 50-60s, bulk, lb. 12c
do, 60-70s, bulk, lb. 11c
do, 70-80s, bulk, lb. 10c
do, 80-90s, bulk, lb. 9c
do, 90-100s, bulk, lb. 8½c

First half September shipment, ½c premium; last half September shipment, ¼c premium. The above prices apply only to contracts already issued.

Pears.

Standard 10c
Choice 12½c
Extra Choice 14c
Fancy ..... 16@17c

SPECIAL CITRUS REPORT.

The market on new crop navel oranges is unsettled. The Eastern trade have been holding back on orders in anticipation of a rush of early fruit from Southern California district, but from all indication there will not be over 150 cars of southern navels shipped in time for Christmas use. The fruit is coloring up, but does not come up to test. The heavy percentage of small sizes is also causing shippers to go slow as Central California districts are now working full shifts in all packing houses and are getting out over 125 cars daily. F. o. b. quotations are on a basis of $4 to $4.50 per box on Central California navels, depending upon size. The market on lemons shows no change. There is no consumptive demand and in spite of the fact that daily shipments are less than actual sales, there seems to be no life to the situation. F. o. b. quotations are on a basis of $2 to $2.25 per box.

CALIFORNIA FARM BUREAU MARKETING ASS'N.

REPORT OF SALES.

Modesto, November 30, 1920 — 89, 190, $11.30, J. S. Jones; 84, 205, $11.00, Wilkinson Bros; 6, 281, $10.50, J. S. Jones; 18, 164, $10.50 J. S. Jones; 20, 144, $9.50, J. S. Jones; 11, 442, $8.50, J. S. Jones; 3, 133, $8.50. Three cars sold, 26 consignors.

Tegner, December 1, 1920—72, 197, $10.60, Virden Packing Co.; 8, 275, $9.60, Virden Packing Co.; 21, 131, $9.50, Siem & Son; 6, 338, $8.60, Siem & Son. One and one-half cars, 17 consignors.

Chowchilla, December 2, 1920—87, 183, $11.55, Joe D. Biddle; 26, 175, $11.50, Joe D. Biddle; 70, 145½, $10.50, Joe D. Campbell; 5, 310, $9.50, Joe D. Biddle. Two cars, 17 consignors.

Fresno, December 3, 1920—48, 198, $11.65, W. E. Pbalt; 23, 200, $11.40, W. E. Pbalt; 3, 320, $10.65, W. E. Pbalt; 63, 208, $10.00, M. L. Patterson; 23, 153, $9.10, M. L. Patterson; 22, 141, $8.60, M. L. Patterson; 18, 390, $7.60, M. L. Patterson; 4, 450, $7.50, M. L. Patterson. Three cars, 17 consignors.

Wasco, December 4, 1920—93, 199, $11.00, Wilson & Co.; 91, 177, $10.50, Wilson & Co.; 14, 337, $8.00, Joe D. Biddle; 16, 121, $8.00, Joe D. Biddle; 17, 226, $8.00, Joe B. Biddle; 47, 137, $8.00, Joe D. Biddle. Two cars, 19

LOS ANGELES

Los Angeles, December 7, 1920.

BUTTER.

While a very good consumptive demand for extras was had the past week, the market again worked lower. Not only is the production on the coast slowly increasing, but a lot of foreign butter is now coming in and being offered on the Eastern markets. San Francisco went off 1¾ cents on extras up to Monday, and Chicago and New York declined 5 cents on extras for the week. The market here broke 1 cent in sympathy. Receipts for the week 327,500 pounds. We quote:

California extra creamery 52c
do, prime first 50c
do, first 48c

These prices are 15c lower than this time last year.

EGGS.

Receipts continue to run light by rail—only 718 cases for the week. The Christmas demand springs up and supplies light. The market here advanced 3c on extras and 5c on pullets up to Monday. San Francisco for the same time advanced 6c on extras, and Chicago and New York 6 and 7c on first and demand fairly good at the advance. We quote:

Fresh ranch, extras 78c
do, case count 73c
do, pullets 70c

These prices are 12c higher on extras and 8c higher on case count and 9c higher on pullets than this time last year.

POULTRY.

Market the past week was very quiet. Dealers are buying sparingly of broilers, friers and hens, they having good carry-over stocks on hand from Thanksgiving. Ducks and turkeys in fair demand and steady. Geese slow sale.

Broilers, 1 to 1¼ lbs. 38c
do, 1¼ to 1¾ lbs. 47c
Friers, 2 to 3 lbs. 40c
Hens 32c
Roosters (soft bone), 3 lbs. and up 32c
Ducks ..... 28@32c
Turkeys ..... 43@45c
Geese 25c

FRUITS.

The past week developed nothing new in this market. As the week before apples made up most of the offerings aside from cold storage stock. Best apples in fair demand, but poor stock slow sale and the market for all below choice weak. We quote from growers:

Bellfleurs, 3¾@4 tiers ..... $1.40@1.50
do, Newtown Pippins, 3½@4 tiers ..... $1.75@2.00
do, C grades ..... $1.25@1.40
do, Banana, lb. ..... 7@9c
do, Jonathan, lb. ..... 5½@6½c
do, Delicious, lb. ..... 6@7c
do, Black Twigs, lb. ..... 4@6c
do, Winesaps, lb. ..... 5@5½c

VEGETABLES.

There was less life in this market the past week. Receipts were light and there were a number of price changes and this unsettled condition caused buyers to do much picking around. Receipts of potatoes were heavy and the demand light and the market is sharply lower. Onions slow sale but steady. Peas coming in less freely and are higher and demand fair. String beans are getting scarce and market is sharply higher. The same may be said of cucumbers. Offerings of tomatoes lighter and market higher, and No. 1 in very good demand. Low grades slow sale. Lettuce flower in good demand and higher. Lettuce steady and selling fairly well. Summer squash steady and in fair demand. Green peppers higher and selling very well. Celery dull and lower. We quote from growers:

Potatoes, local, cwt ..... $1.65@1.85
do, Northern, cwt. ..... $1.60@1.75
do, Idaho Russett, cwt. ..... $1.50@1.60
Sweet Potatoes, lb. ..... 3@3½c
Cauliflower, local crate ..... 25@40c
Celery, pony crate ..... $1.50@2.00
do, Northern, crate ..... $2.75@3.00
Onions, Stockton, white, cwt. ..... $1.25@1.50
do, yellow, cwt. ..... 90c@1.00
do, Australian Brown, cwt. ..... $1.05@1.10
do, local, crate ..... 40@50c
Lettuce, crate ..... 40@50c
Rhubarb, per 30-lb. box ..... $1.15@1.25
Peas, lb. ..... 12@14c
Carrots, bunches ..... 30@35c
Summer Squash, local, lug ..... $1.00@1.25
String Beans, green, lb. ..... 12@14c
do, wax, lb. ..... 12@14c
do, Kentucky, lb. ..... 16@17c
Cucumbers, lug ..... $3.00@3.50
Tomatoes, home-grown, No. 1 lug $1.00@1.25
do, No. 2 ..... 35@40c
Bell Peppers, lb. ..... 5@6c
do, Chile, lb. ..... 5@6c

BEANS.

Tere is no change to note in this market from a week ago. Demand is still very light. There was some little doing in mixed lots, but there was no demand for straight cars of anything. Limas, blackeyes and whites made up the mixed cars and they brought last week's prices. We quote from growers:

Limas, per cwt. $6.00
Large white, per cwt. ..... $4.50@5.00
Small white, per cwt. ..... $3.00@3.25
Pink, cwt. ..... $5.35@5.50
Blackeyes, cwt. ..... $5.30@5.35

HAY.

This market continues very dull. Receipts the past week were light, yet ample for the demand. Buyers are still holding back, expecting lower prices, only taking a single car here and there for immediate use. What few sales made, however, were at steady prices. We quote f. o. b. Los Angeles:

Barley hay, ton ..... $20.000@23.00
Oat hay, ton ..... $24.00@26.00
Alfalfa, Northern, ton ..... $24.00@25.00
do, local, ton ..... $27.00@30.00
Straw, ton ..... $ 8.00@ 9.00

Special Livestock Market Report

San Francisco, December 8, 1920.

CATTLE — While buying has been fairly general during the past week, there is no snap to the market. Some maintain it is the demoralized condition of the Eastern cattle market which is responsible for this lack of activity.

Steers, No. 1, 1000-1200 lbs.	9	@10c
do, 2nd quality	7½	@ 8½c
do, thin	6	@ 6½c
Cows and Heifers, No. 1	7½	@ 8c
do, 2nd quality	6	@ 7c
do, thin	3	@ 4c
Bulls and Stags, good	4½	@ 5½c
do, fair	3½	@ 4c
Calves, lightweight	9½	@10c
do, medium	8	@ 9c
do, heavy	7	@ 8c

HOGS—Receipts and demand broke about equal during the week, but this did not have a tendency towards hardening prices. This is only in keeping with the general tendency of values throughout the country.

Hard, fat, grain-fed, 100-150 lbs. 11c
do, 150-225 lbs. 12c
do, 225-300 lbs. 11½c
do, 300-400 lbs. 10½c

SHEEP AND AMBS.—Mutton sheep are in demand, but offerings show a corresponding falling off as the result of feed conditions throughout the entire coast. The price situation is one of strength and is ruling as high as last year, less the price of pelts, which go begging on the local market.

Lambs, milk ..... 9½@10½c
do, yearling ..... 8 @ 8½c
Sheep, wethers ..... 7½@ 8c
do, ewes ..... 4 @ 5c

Los Angeles, December 7, 1920.

CATTE—There continues a scarcity of good fat steers, but there are plenty of medium and cheap cattle being offered. The best steers are in good demand at quotations, but lightweights are slow sale. Cows are plantiful and slow sale and market weak. Canners very dull.

Per cwt. f. o. b. Los Angeles.

Steers, prime to choice, 1050-1000 lbs. ..... $10.00@10.50
do, good to prime steers, 900-1000 lbs. ..... $ 8.00@ 8.50
Prime cows and reifers ..... $7.50@8.00
Good cows and heifers ..... $6.50@7.00
Canners ..... $3.25@3.50

HOGS—There is no change in this market from a week ago. Offerings continue fairly good and the fresh meat men made fair purchases the past week at last week's decline, curers, however, taking but few, as they are having to compete with cheaper meat from the Central West.

Heavy, averag'g 275@350 lbs. $ 9.00@10.00
do, 225@275 lbs. ..... $10.00@11.00
Light ..... $11.00@11.50

Rough docked 20 lbs. piggy sows 40 lbs. and stags 40 per cent.

SHEEP—Lambs and yearlings continue to meet with a very good demand at old prices. Offerings fairly good but not excessive. Wethers and ewes as dull as ever.

Prime wethers ..... $6.00@ 7.00
Yearlings ..... $6.00@ 7.00
Prime ewes ..... $5.00@ 6.00
Lambs ..... $10.00@11.00

WALNUTS.

The market continues steady and the association says the demand holds up fairly well. There are but few more walnuts back in the country to come forward. The Association's shipments have now fallen off to two and three cars a day. The Association's prices aer:

No. 1 ..... 22c
No. 2 ..... 16½c
Fancy Budded 25½c

Buyers from independent growers are paying 12@14c a pound for orchard run, but the demand for them has slackened up and the tone of the market weak.

WEEKLY BUTTER AVERAGES.

Cents per pound for Extras.

Week Ending	San Francisco 1919	San Francisco 1920	Los Angeles 1919	Los Angeles 1920
Jan. 2	66.19	62.80	63.16	65.00
" 9	61.00	63.70	64.00	65.00
" 16	61.70	62.58	64.16	66.00
" 23	55.83	55.50	62.16	61.00
" 30	44.91	62.50	49.00	66.00
Feb. 6	43.58	64.75	47.33	68.60
" 13	46.80	60.75	47.60	64.00
" 20	51.58	60.80	63.16	64.00
" 27	53.90	59.40	55.00	66.00
March 6	56.16	58.66	59.00	62.00
" 13	55.58	57.50	58.00	59.00
" 20	54.41	59.50	56.00	59.00
" 27	56.41	58.58	58.00	62.00
April 3	54.23	56.00	55.50	56.00
" 10	57.16	55.41	56.00	55.00
" 17	52.41	55.76	54.00	56.00
" 24	52.41	55.00	54.00	55.00
May 1	52.41	54.66	54.00	55.00
" 8	52.91	52.90	54.00	55.00
" 22	57.91	52.83	59.00	54.00
" 29	57.91	51.41	59.00	54.00
June 5	54.12	50.90	57.00	54.00
" 12	53.58	51.25	57.00	54.00
" 19	53.16	53.66	57.00	55.50
" 26	52.83	55.75	55.00	57.00
July 3	52.37	56.91	55.00	57.00
" 10	52.13	57.70	54.00	58.00
" 17	52.71	56.80	56.00	58.00
" 24	54.24	55.91	57.00	58.00
" 31	55.08	56.58	57.00	....
August 7	55.50	56.10	59.00	58.00
" 14	52.33	57.08	57.00	58.00
" 21	52.66	57.50	56.00	59.00
" 28	52.66	59.70	58.00	61.00
Sept. 4	56.20	63.90	59.00	63.00
" 11	58.70	65.87	61.00	65.00
" 18	59.70	65.62	62.00	67.00
" 25	60.58	64.20	66.00	67.00
October 2	62.70	62.90	67.00	65.00
" 9	63.41	63.80	67.00	65.00
" 16	62.90	61.75	65.00	63.00
" 23	62.00	56.20	65.00	59.00
" 30	62.25	54.60	64.00	54.00
Nov. 6	62.66	52.21	64.00	55.00
" 13	64.50	52.90	66.00	55.00
" 20	63.83	54.25	66.00	56.00
" 27	63.83	54.00	67.00	56.00
Dec. 4	76.30	50.37	67.00	53.00
" 11	63.91	49.10	67.00	52.00
" 18	64.60	....	67.00	....
" 26	65.66	....	68.00	....

WEEKLY EGG AVERAGES.

Cents per dozen for Extras.

Week Ending	San Francisco 1919	San Francisco 1920	Los Angeles 1919	Los Angeles 1920
Jan. 2	75.60	62.50	69.50	60.00
" 9	69.91	61.20	66.66	58.00
" 16	58.70	62.66	62.41	58.00
" 23	52.58	57.66	54.66	55.00
" 30	48.75	58.00	52.33	55.00
Feb. 6	42.00	48.16	43.00	47.00
" 13	40.90	45.41	37.80	45.00
" 20	36.41	44.10	39.33	43.00
" 27	37.40	45.60	33.60	42.00
March 6	37.58	41.33	37.00	38.00
" 13	37.16	37.41	37.00	38.00
" 20	38.41	39.66	39.33	41.00
" 27	40.41	41.91	42.00	40.00
April 3	42.41	40.83	45.00	39.00
" 10	42.91	40.83	45.00	40.00
" 17	45.10	39.41	46.00	40.00
" 24	45.00	39.33	46.00	39.00
May 1	45.00	42.91	44.00	42.00
" 8	46.50	42.60	42.00	44.00
" 15	47.91	42.91	50.00	44.00
" 22	49.16	43.50	51.00	44.00
" 29	47.58	41.33	49.00	43.00
June 5	45.50	41.30	46.00	42.00
" 12	47.60	42.08	47.00	43.00
" 19	45.91	43.66	47.00	45.00
" 26	49.66	42.75	50.00	47.00
July 3	43.97	45.91	51.00	48.00
" 10	47.60	47.70	51.00	50.00
" 10	47.66	51.00	51.00	51.00
" 24	49.33	54.58	51.00	52.00
" 31	53.16	56.25	52.00	52.00
August 7	55.50	54.50	56.00	52.00
" 14	55.00	54.50	56.00	54.00
" 21	51.80	53.66	52.50	56.00
" 28	53.91	56.10	52.00	58.50
Sept. 4	56.70	62.60	53.00	61.00
" 11	61.50	64.50	61.00	61.00
" 18	61.83	67.00	58.00	67.00
" 25	62.75	67.60	68.00	67.00
October 2	68.70	71.70	68.00	70.00
" 9	69.91	77.20	69.00	75.00
" 16	67.70	83.50	71.00	78.00
" 23	72.25	79.60	73.00	78.00
" 30	70.08	74.20	73.00	75.00
Nov. 6	81.25	77.50	75.00	79.00
" 13	80.20	82.70	76.00	85.00
" 20	76.86	87.62	75.00	88.00
Nov. 27	76.66	82.00	75.00	76.00
Dec. 4	80.90	77.12	77.00	75.00
" 11	79.16	80.80	77.00	78.00
" 18	71.16	....	69.00	....
" 26	68.91	....	65.00	...

MARKET COMMENT.

Lemon Situation Precarious.

California lemon growers are experiencing an unfavorable condition in the markets of this country. Present f. o. b. prices are quoted at $2.75 per box, and according to authorities in the citrus business packers' costs amounts to $3 per box, not including interest on investment, to which add $1.40 cents freight and the cost of laying down a box of lemons in New York city is $4.40, not including the cost of selling. Demand is scarcely sufficient to hold the current market. Shipments continue to go forward, although at a loss to the growers. However, it is deemed necessary to keep California lemons before consumers, and to offer competition to the Sicilian product, which has flooded the Atlantic markets for months.

Decline in Livestock Values.

The U. S. Department of Agriculture, Bureau of Markets, of November 27 has this to say on the subject of livestock and meats: Drastic declines in values marked the trade in livestock at leading primary markets during the third week of November. The slump at Chicago ranged from $1 to $2 on most beef and butcher cattle, $1 on hogs and 50 cents to $1 on sheep and lambs compared with the week previous. The break carried values on most classes to new low levels for several years past. Beef cattle sold at the lowest average price recorded since late in 1917. Hogs sold at lower prices than at any time since January, 1917, while fat lamb values descended to lower levels than at any time since November, 1916. Fat sheep sold at the lowest average prices since the latter part of 1913. The week found all important markets fairly glutted with medium and low grade cattle and trade conditions bordering on demoralization. The largest run of cattle in the history of the Chicago market arrived during the week, the official count totaling 111,966 head, exclusive of 15,281 calves. Receipts of hogs at Chicago and 10 of the principal markets was the largest total since June 5 last. Although sheep receipts were moderate for this season of the year, values were on the down turn. Bad condition of the woil and hide market acted as a wet blanket on the trade. Sheep was the lowest in six years. Fat lambs sold lower than at any time since 1916.

Leather and Hide Market Stagnant.

The Sawyer Tanning Company of Napa report that the market for leather and hides is stagnant, therefore they cannot guarantee any prices ahead, but will buy at prevailing market prices all goods shipped them on consignment. Will pay market prices the day the goods arrive. They quote as follows: No. 1 heavy hides, 60 lbs. up, 6 cents; No. 1 light hides, 30 to 45 lbs. 7½ cents; No. 1 native bulls, 5 cents; No. 1 wet salt kip, 15 to 30 lbs., 8 cents; No. 2 wet salt kip, 15 to 30 lbs., 7 cents; No. 1 wet salt calf trimmed, 10 cents; No. 1 wet salt calf untrimmed, 8 cents; Dry hides, 16 lbs. and up, No. 1, 12 cents; Dry kip, 7 to 15 lbs., No. 1, 15 cents; Dry calf, under 7 lbs., No. 1, 16 cents; Pelts, long wool, 9 to 12 months' growth 75 cents and up; Medium, 6 to 9 months up, 50 to 70 cents; Lambs, large, long wool, 25 cents and up; Wet salt horse hides, No. 1, large, skinned to hoof, $3; medium, $2 to $2.50; Goat skins, No. 1 large, not matted, Angora, 30 cents and up; all long-haired hides, 1 cent less.

Dutch Butter Imports Stop.

The movement of butter from Holland to the United States, which assumed considerable volume during the earlier part of 1920, has ceased for the time being, according to the American Consul at Rotterdam. Lower prices in the United States and increased demand in adjacent countries, as well as in Holland itself, have made further shipments to this country difficult. Imports of butter and butter substitutes from Holland into the United States for nine months ending September 30, 1920, amounted to 3,008,530 pounds. As to the butter situation in the East, following is a report issued by the Bureau of Markets. The policy of dealers towards the close of last week was to sell at any price that would interest buyers, resulting in net declines from 3 to 6½ cents from Friday to Friday, with prospects of further losses. Two boat loads of Danish butter arrived at New York and increased pressure on that market. The storage situation is much worse than fresh. Storage extras sold down to 48 cents. The money situation is adding to the difficulties and the situation is serious for weaker concerns.

Wheat Soars on Chicago Board.

The farmers had their inning last week in the Chicago grain market—the first time in a long while. Instead of continuing to smash downward to a new low record, values went soaring, especially for wheat, largely as a result of traders awakening to the fact that export buying of wheat at heavily reduced prices had gone way beyond ordinary limits and might mean future serious shortage of domestic breadstuff supplies. Compared with one week ago wheat was up 16 to 18 cents a bushel, corn showed an advance of 4 to 7⅜ cents a bushel. Danger of a possible coming deficiency in domestic breadstuff material was emphasized by estimates that actual export shipments of wheat to date since July 1 had been about 50,000,000 bushels greater than for the corresponding period last year.

It is estimated that the volume of business handled by the Poultry Producers of Southern California for 1920 will approximate $1,900,000.

Classified Advertisements.

Rate, 4c. per word. Cash must accompany all orders.

COUNTRY LANDS.

IMPROVED VEGETABLE and Dairy Ranch near Lafayette, Contra Costa Co.—93 acres—30 acres bottom, balance pasture; 6 acres alfalfa. Good house, barn and outbuildings. Fine springs, concrete reservoir; family orchard. $22,500; easy terms; might sell part. N. H. Bennett, owner, Walnut Creek, Cal.

320 ACRES—Mostly improved to fig, peach and almond orchards; fenced into several departments hog tight; fine set of buildings near paved highway, town and railway. Price, including the farming machinery, $250.00 an acre on liberal terms. For particulars, address Harry Miner, Madera, Calif.

MEXICAN LANDS—400 acres in American colony near Hermosillo and Southern Pacific Railway. Rich river bottom land; will grow anything; two crops each year. Investigate this opportunity to start big farming at small cost. Owner, 329 Ochsner Bldg., Sacramento, Cal.

2200 ACRES—Improved stock ranch, $20 per acre. 160-acre dairy, complete equipment, $50,000. 1245 acres, fine grain ranch, $75 per acre. Have other attractive bargains. Harry Miner, Madera, Calif.

$20.00 TO $25.00 PER ACRE.—Fine level irrigable fruit and alfalfa lands, abundant water, fertile soil, ideal climate, close to railroad. Write Chamber of Commerce, Willcox, Ariz.

FOR SALE—85 acres near Vacaville on State Highway. $17,500.00. House and barn, 20 acres orchard. R. S. Lurvey, Vacaville.

MISCELLANEOUS.

DON'T NEGLECT TREE WOUNDS.

Neglected tree wounds lead to wood-rot or wood decay which is responsible for an appalling loss of valuable producing trees. Protect pruning cuts or other wounds on your trees with Pabco Pruning Paste. Ask your dealer. Manufactured by the Paraffine Companies, Inc., San Francisco, Calif.

TENNESSEE
WINTER BARLEY
Recleaned seed for sale.
Grown from State Universiay Farm Stock
W. A. BEARD
Marysville, Calif.

BERRYDALE GARDENS, Berries and Roses. "DeRoo's Mary Lewis," new everbearing Red Raspberry. The finest, largest and best flavored berry grown. Can ship 500 miles in perfect condition. Plants strong and need no support. Plants ready for delivery now. Price per 12, $3.00; 100, $20.00; 1,000, $150.00. Sample plant, 30c parcel post. Write for catalogue, sent on receipt of 5 cents in stamps. Salesmen wanted. Berrydale Gardens, Dept. C, 1715 Webster St., San Francisco, Calif.

WANTED TEN THOUSAND GOOD DAIRY Cattle to consume our surplus alfalfa hay. Dairy opportunities unexcelled on the Newlands Irrigation Project. Never failing water supply. Adequate storage. Mild climate. Good dairy market. Great variety of crops. Our alfalfa hay unexcelled in feeding value. Supplements not essential. Orders handled. Leasing or feeding contracts available. Address Alfalfa Project Alfalfa Association, Fallon, Nevada.

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Protect pruning cuts and wounds against infection with Pabco Pruning Paste. Ask your dealer. Manufactured by the Paraffine Companies, Inc., San Francisco, Calif.

SALESMEN WANTED—In California, Oregon and Washington, to sell the most recently introduced Blackberries, Raspberries and Strawberries and other kinds of Berries and Roses. Our salesmen are making good up to $600 per month. We have a large and select stock and can fill orders as fast as you can send them in. Write us at once. Berrydale Gardens, Dept. 2, 1715 Webster St., San Francisco, Cal.

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All sizes standard pipe and wrought iron screw casing. All kinds of fittings. Guaranteed good as new. Write for prices. Weissbaum Pipe Works, 160 Eleventh street, San Francisco.

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Your orchard is a valuable investment. To make sure that every tree produces a maximum return, protect pruning cuts or other wounds from infection with PABCO PRUNING PASTE. Ask your dealer. Manufactured by the Paraffine Companies, Inc., San Francisco, Calif.

NEW GAS ENGINE FOR SALE — Have several engines from 6 H. P. to 16 H. P. equipped with oil burners. Attachment for sale at cost. Installing motors and cannot use. Address Box 2300, Pacific Rural Press.

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ALL SIZES OF PIPE and screw casing, both new and second-hand, dipped and undipped. Guaranteed. Prices right. Shecter Pipe Works, 304 Howard St., San Francisco.

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CROLEY'S BALANCED HOG FEED—The cheapest feed to fatten hogs. Write Geo. H Croley, Townsend St., San Francisco, Calif.

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Tree cuts or wounds, if left exposed, are very likely to become infected. Prevent infection by prompt application of PABCO PRUNING PASTE. Ask your dealer. Manufactured by the Paraffine Companies, Inc., San Francisco, Calif.

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We sold fancy dressed turkeys for our customers during Thanksgiving week as high as 65c per pound. We shall need at least 25,000 for the Christmas and New Year's trade. Get yours in best condition possible and ship them to us for highest market prices and immediate cash returns and full weights guaranteed. See that each case is plainly addressed to the old and reliable firm of

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Write us how many head you will ship. Established over 40 years.

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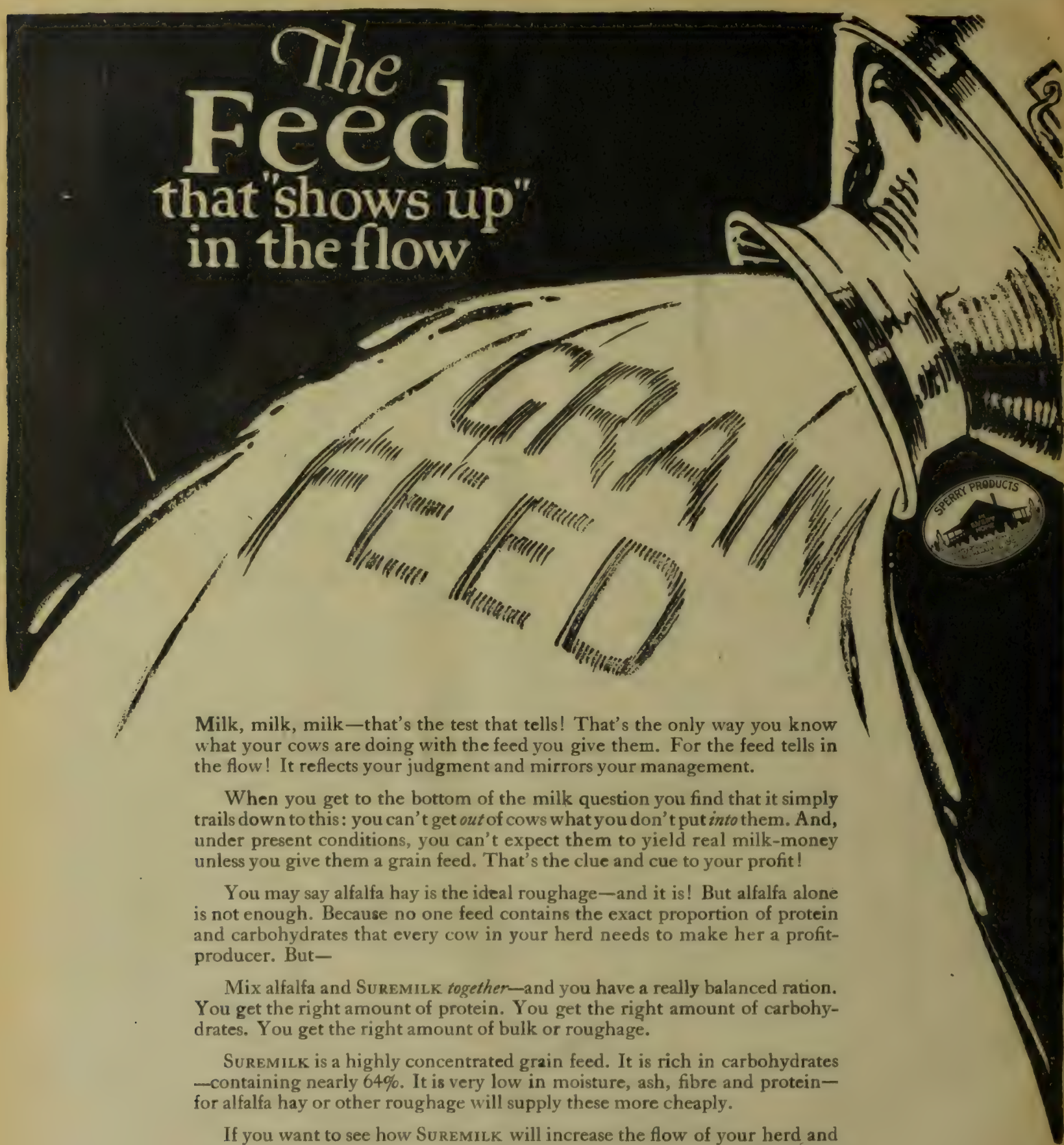

Milk, milk, milk—that's the test that tells! That's the only way you know what your cows are doing with the feed you give them. For the feed tells in the flow! It reflects your judgment and mirrors your management.

When you get to the bottom of the milk question you find that it simply trails down to this: you can't get *out* of cows what you don't put *into* them. And, under present conditions, you can't expect them to yield real milk-money unless you give them a grain feed. That's the clue and cue to your profit!

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"A Sperry Product"

VOL. C—No. 25 Fiftieth Year

THE PACIFIC RURAL PRESS

SAN FRANCISCO DECEMBER 18, 1920 LOS ANGELES

California State Lib 1-1-22

CALIFORNIA DAIRY DEVELOPMENT.

We present the stirring picture on this page as expressive of California diary development. It is particularly interesting perhaps because the dairy is an original contribution by the American pioneers to the diversified agriculture which is making California famous. The Spanish missions had fruits and fruit products which passed over into the American regime for amplification: the Missions and the Ranchos had products of wool, hides and meats which laid the foundation in animal industries upon which the Americans built a fine industrial superstructure; they had also grains which served a good pioneer purpose. But of the dairy industry our predecessors had practically nothing: of the highest type of domestication of the genus bos they cared little and knew less. Our picture points the contrast we would make between Spanish and American farming in California and shows the advancement which ranks California high in the list of dairy states and countries. To the general reader engaged in other industries it should suggest the high standards to which the breeding of dairy cattle has attained, the excellence of the architecture which provides the care and shelter which such highly organized animals deserve and require to do their best and the provision of rich and succulent food in continuous amplitude. California dairying is great because California dairying is good, up to date and progressive.

Federal Reserve Bank Speaks for Itself

(Written by Fred M. Pickering.)

The sound advice in your editorial columns of December 4th to undertake "to master the fundamental principle which will affiliate finance and farming for the good of both," encouragingly invites further discussion that might be of help to both.

In talking publicly to a group of business men a few days ago, John Perrin, chairman of the Federal Reserve Bank Board of San Francisco, made the position of the Federal Reserve Bank so clear that it would seem that his analysis might be of help to clarify the situation. The points he calls attention to are suggested by a communication which recently appeared in the Pacific Rural Press, which began as follows: "I am nearly out of patience with the recent action of the Federal Reserve Board in forbidding member banks to make loans to farmers on any terms whatsoever."

Mr. Perrin states that the facts in this connection are:

1. The Federal Reserve Board has taken no such action, either recently or remotely.

2. The Federal Reserve Board has no authority either to forbid or require member banks to make loans.

3. Federal reserve banks also have no authority to forbid or require member banks to make loans.

4. Member banks have the unrestrained right to lend their funds to whatever extent they desire and in any way permitted by the laws under which they are chartered.

5. The Federal Reserve Board interprets the Federal Reserve Act, guides the general policies of Federal reserve banks, including review and determination of their discount rates, but has no authority to forbid or require Federal reserve banks to rediscount for, or to make loans to member banks.

6. The sole authority of the Federal Reserve Board in requiring loans to be made is that upon an affirmative vote of five members of the Board, it may require one Federal Reserve Bank to rediscount for another.

7. More than fifty per cent of the present rediscounts of the Federal Reserve Bank of San Francisco are in support of agricultural and livestock interests."

Question—Now, who told who that the Federal Reserve bank would not do thus and so?

Bearing in mind the laws governnng the Federal Reserve Bank and the above authoritative statements, it should not be difficult to understand that our unit of the system is, on its face at least, 50 per cent "good to the farmer" because over 50 per cent of the notes, it has advanced money on, are for the benefit of agricultural and livestock interests, and God knows what would have happened to us in the last few years if we had not had the present system, and I am thinking that something that shows 50 per cent good on its face would in the process of undertaking "to master the fundamental principle," prove that it approached 100 per cent.

One thing more: tell your subscribers that at the close of business, December 7, 1920, the Federal Reserve Bank of San Francisco held 20,389 pieces of paper (i. e., rediscounted notes from national and state banks) of which 11,584 were given by livestock and agricultural people.

Over Another Threshold

SOON you will put the calendars of a new year up on your walls. You have weathered the labors of the past four seasons—with what benefits and damages you recall full well. Now the cycle of a new year looms ahead, and we must prepare to gather the fruits of 1921.

It is a time when conservative manufacturing enterprises and business houses are reviewing the past, taking stock of resources, and building future campaigns. Leaks are stopped, needs are reckoned with, and plans are made with extreme care.

Winter is the best time in most sections for complete farm inventory, for overhauling machines and making repairs, for accurate reckoning of profit and loss, for planning crop changes, for discarding old habits and considering new methods.

Every farmer knows this. It is good to see that there is more and more definite planning of full year's work at the close of every December, on the farms of America. It is so easy a matter to slide through the comparative resting period of Winter, and then Spring with its hundred duties bursts forth and finds many important matters and details unattended to.

We are glad to note this trend toward business-farming because we hope to be allied with Agriculture many more years and because our interests are so closely mingled with the interests of the farming world. So then, while we are setting our own house in order for 1921, we pause to publish the hope that you, the reader, may set forth into a new year of farming enterprise with all plans laid for a most profitable twelve-month.

INTERNATIONAL HARVESTER COMPANY
OF AMERICA
(INCORPORATED)

Billings, Mont. Cheyenne, Wyo. Denver, Colo. Helena, Mon.
Los Angeles, Cal. Portland, Ore. Salt Lake City, Utah
San Francisco, Cal. Spokane, Wash.

NEVADA NEWS NOTES.

Hay is now quoted at $18 f. o. .b. station. With a cost for baling of $4 and hauling $2, this price nets the grower $12 in the stack.

A heavy wool shipment is reported from Winnemucca. A considerable amount of the Nevada clip is routed west and thence via boat through the Panama Canal.

William Lewis, a fox farmer of the Lake Tahoe section, has been notified of his election to the board of governors of the American Fox Breeders' Association.

Washoe Lake, which was at its lowest mark during the late summer, is now rapidly filling, insuring an abundance of water for the farms using water from this source.

About seventy-five carloads of potatoes have been shipped to California points from the Truckee Meadows near Reno. About twenty-five cars more will be shipped before the first of the year.

Dr. and Mrs. W. H. Brennen have received permits from the Elko land office to proceed with the development of the underground waters for 5,120 acres of land in Diamond Valley, under the Pittman Land Act.

Leo Springmeyer, well known Carson Valley rancher, has leased the A. Jensen ranch near Gardnerville. This is one of the finest ranches of the section and adjoins the town of Gardnerville. The period of the lease extends over a period of years.

The County Commissioners of Lyon county have appointed a board of drainage supervisors for a new drainage district organized in Mason Valley. The following are the supervisors selected: C. W. Hyatt, three years; C. A. McLeod, two years; John Snyder, one year.

Elko county leads in the numbers of farms in the state, according to the census report, with 543. Churchill county is second and Washoe county third. Storey county has but fourteen. The state as a whole has 3,164 farms in 1920. In 1910 there were 2,689 farms reported.

California buyers of range horses to be used for chicken feed have recently made an eight-car shipment from Lander county. Prices have been around $5 for this class of horses. Many worthless horses have been eliminated from the ranges during the past few years.

F. L. Bixby of the Bureau of Public Roads, U. S. D. A., in company with Joseph Wilson, Jr., County Agent, has completed test wells in Mason Valley to show the location of the water table. Their report shows the level to be about three feet during the summer and about four and one-half feet during the winter.

General Agricultural and Horticultural Review

AGRICULTURAL NOTES.

Vegetable shipments from Imperial and Coachella Valleys from December 7 to 12 inclusive were spinach 57 cars; tomatoes, 12.

A hundred and forty thousand lbs. of beans arrived from Yokohama in San Francisco, December 12, on the steamer Nile.

California is using flour from Washington State. A cargo of about 10,000 centals arrived in San Francisco, Dec. 13, on the Admiral Dewey.

The visible supply of wheat in the United States and Canada, November 30, 1920, was practically 60,000,000 bushels less than on the same date last year.

The big four railroads of California recently published minimum carload rates of 60,000 pounds for grain and 48,000 pounds for grain products. This may help relieve the car shortage.

According to U. S. Department of Agriculture Bureau of Census, cotton ginned to December 1, amounted to 10,144,921 running bales, 48,268 bales of American Egyptian and 1111 bales of Sea Island.

California is importing beans from the East as well as from the Far East which is really West. The steamer Effingham brought 436,000 pounds to San Francisco from New York, December 7. Perhaps this is part of the navy order mentioned in a recent issue.

The Sutter Basin Company is exporting its barley crop direct to England where a premium is being paid by the British malting trade for California barley. Four thousand tons comprise the latest shipment which went by rail direct to New Orleans, thence to Liverpool.

According to the California Vegetable Union, California still leads in celery production for the season of 1920-21. California acreage this season is 5627, New York 3388, Michigan 2920, Florida 1406. California production this season is predicted in excess of 3000 carolads. Movement is now heavy for the Christmas trade.

With the Yolo county rice crop a failure because of the continued rains, B. A. Nordyke, stockman has arrived at a plan to save rice crop from total loss. He imported 550 lambs, turned them into a 60 acre rice field owned by him but was not worth the cost of harvesting. An accidental experiment last year indicated that rice-fed sheep produced a heavier coat of wool.

The carlot shipment of celery from the Delta Section is now at its height and the yield and quality were never better. The Shipping Point Inspection Service is receiving many orders for examination of cars, especially from Antioch and Walnut Grove. Carlot inspection of celery, with a certificate of inspection is available to shippers and other interested parties upon request.

J. P. Howard of Clemons, Iowa, was re-elected president of the American Farm Bureau Federation at the closing session of the second annual convention held at Indianapolis last week. Howard has been mentioned for secretary of agriculture in President-elect Harding's cabinet. W. H. Walker of California was elected a member of the execution board.

The transportation tax does not apply on grain moved from interior points for immediate export nor on grain which is put into a seaboard elevator for cleaning, drying, grading, or mixing, as an incident in its journey abroad; but it does apply on grain sent to such an elevator to accumulate or to be cleaned, graded, dried, or mixed before sale to an exporter. Exporters seem to have the right of way.

A committee of six growers from Marin and Sonoma counties, representing potato interests controlling 20,000 acres of potatoes, met last week at the office of Gilbert B. Daniels, State Marketing Director, and took the first steps towards organizing an association for collecting and marketing potatoes. The organization will be known as the Northern California Potato Grower's Association.

J. J. Hardy of Modesto, was re-elected president of the Farmer's Educational and Co-operative Union of America at the annual state convention held at San Jose last week. R. V. Garrod of Saratoga was elected vice-president; Fred Millard of San Jose, was re-elected treasurer and secretary and Allen Talbot of Modesto and J. C. Moore of Keyes were elected to the State Executive Committee.

Negotiations are already under way looking toward the establishing of a state shipping point inspection service of fruits and vegetables on Imperial Valley lettuce, which will begin moving in volume about the first of the year. On December 18, L. J. Weishaar, will meet with all the main factors in Brawley at which time inspection for the ensuing season will be discussed in detail.

The control committee of the Pacific Rice Grower's Association have fixed the price of clean rice for January delivery on the basis of $5.25 per hundred for fancy head, f.o.b. mills, San Francisco. A canvass disclosed the fact that there are in first hands, after deducting all requirements for seed. 1,350,000 sacks of paddy rice of which only a small proportion is fancy grade.

Since bountiful rains have fallen in the Byron-Tracy-West Side sections, thousands of acres of valley and hillside barley and wheat are showing up splendidedly. Also, is a large acreage planted to alfalfa in November. Several thousand additional acres will be planted to alfalfa in the spring, all under the ditches of the Byron-Bethany irrigation district. Feed in the hills is excellent and sheep and cattle are assured of a good winter.

The value of crops grown on lands within government reclamation projects for the single year 1919 was $25,000,000 greater than the total of $125,00,0000 expended on all projects constructed up to the close of the last fiscal year according to the annual report of the reclamation service just made public. A total of 2,648,000 acres supplied by water from government projects the report shows, include 1,636,000 acres relying entirely on such projects and 1,012,000 acres receiving a supplemental supply from private irrigation systems.

HORTICULTURAL JOTTINGS.

Calif. Co-operative Cannery business for the 1920 crop will total between $3,000,000 and $4,000,000 as stated by president Albert Haentze.

The Lindsay orange shipping season is pretty well along, more than 1000 cars have been shipped. All fruit is either up to test or sufficiently colored to admit of its shipment. Prices are below expectations around $3.75 f.o.b.

Forty-two thousand pounds of dried prunes were taken last season from twelve acres of trees mostly 22 years old near Morgan Hill, formerly owned by Luther Cunningham, but now owned by Lynden.

California can goods, so states J. K. Armsby, chairman of the board of the California Packing Corporation, go to practically every country in the world. The State is the main source of supply for canned aspargus, ripe olives and apricots.

E. O. Orpet, former plant propagator at the U. S. Plant Introduction Station at Chico, has been named president of the Santa Barbara Horticultural Society. Since leaving Chico Orpet has been superintendent of the parks in Santa Barbara.

The Porterville district has shipped 637 cars of Navel oranges, or about one-third if the crop. The fruit is being picked and packed as fast as ripening permits in order that it may reach the Eastern markets in time for the Christmas trade.

A great deal of dead wood is being cut out of the prune and cherry trees of Santa Clara Valley this season according to Horticultural Commissioner L. R. Cody. This is largely due to the drouth. Apricots stood the test in better shape apparently.

The California Associated Raisin Company have just issued checks aggregating $132,604. The dividend is paid on a basis of 8 per cent on an outstanding capital stock of $1,657,553, however this does not include stock issued since November 14.

One of the biggest real estate transactions to take place in Santa Clara county for months has just been made public with the filing of a deed with the County Recorder. The transaction was the sale of 389 acres of vineyard and fruit on the Monterey road consideration being $200,000.

Agreement on a motion of the defense to set aside a stipulation in the case of the Government against the California Associated Raisin Company of Fresno, charged with violation of the Sherman Anti-trust Act, has been set for December 20, by Judge B. F. Bledsoe, of the U. S. District Court.

Orange packing at Oroville is practically at an end. The crop has been exceptionally heavy this year, while in other sections of Butte county it has been below the average. There is no complaint as to the topnotch prices that have been received by the growers.

Thirty-two cars of oranges have been shipped from Terra Bella so far this season, and there are approximately 12 carloads left. Thirty-nine cars have been shipped from the Grand View house, with 9 carloads yet to be packed. Many of the orchards have been cleared of fruit.

In the recent annual conference of Australia fruit growers held at Lecton, a resolution was carried in favor of asking the Government to send a representative to America and the East to study the fruit industry, with special attention to marketing and distributing fruit.

The California Peach Growers Association have just issued checks upon a dividend of 16½ per cent which aggregated for the grower members, $140,250. This represents the regular annual dividend of 8 per cent, plus a surplus dividend of 8½ per cent paid to equalize the incoming stockholders with the old

Housing conditions for fruit workers at Lindsay, are of rather a serious nature. E. O. Brown, director of the State Commission of Immigration and Housing, has just attended a meeting of all packing house managers at Lindsay. One thousand fruit workers require accommodation, five hundred of whom are camped in the City's free camping ground.

H. V. Ruddy who purchased the 1000 acre tract five miles east of Clovis, known as the old Griffin place, is transforming this once great grain acreage into orchards and vineyards. Mr. Ruddy has changed the name of the property to the "Perfection Farms" due to the perfect manner in which all the work on the place is carried on. Aside from the orchards and vineyards quite an acreage will be devoted to grain.

As a step in the plan of the California Fruit Grower's Inc. to obtain control of price fixing in the green fruit markets in this state, an organization meeting has been held with splendid results. The field forces have been increased to 36 agents and 40 per cent of the acreage marketing green fruits has been signed. Seventy five per cent is sought in the present campaign.

J. K. Armsby, chairman of the board of California Packing Corporation in a report made to the Chamber of Commerce, stated that California canned last year fruits and vegetables worth $108,096,875, equal to the total pack of all other states in the Union combined. Fruit canning commenced in California in 1873, when the total pack was 7000 cases. Now the output is 20,000,000 cases or 480,000,000 cans annually.

The days of the old time "fruit shark" are numbered. There was a time when the scheme was worked early, late and often. The latest candidate for prospective arraignment is one Thos. G. Kennedy, who was an associate of W. F. McShave, under indictment charged with frauds involving sums aggregating $300,000. Through their schemes they worked the People's Trust and Savings Bank of Riverside, a number of the stockholders were practically ruined financially. Their scheme was to issue and forge false bills of lading fictitious fruit shipments and deposit the bills in the bank as collateral for drafts.

WANT SHEEP RANCH
TO CARRY
3000 HEAD

CASH BUYER WAITING.

LOCATION—Anywhere in the following counties—
Sacramento—Placer—Sutter—Yolo.
How much summer range available and on what basis?
How close to property?
Kind of feed on winter range.
When—if at all—was winter range last plowed?
How many sheep previously carried?—Water conditions—
Improvements—Shipping point—Price?

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EDITORIAL

OUR DISCORDANT SUPPORTERS

To the Editor: I have just read your editorials of November 27. I disagree with you in toto on the "Indispensability of Protection." I approve your advice to "The Benign Brotherhoods" and your correction of misconception respecting co-operation, and I say amen to your interrogation respecting wheat, but I would jump at the chance to live for a while where the sky does not "leak every time you look at it."—R. T. S., Wooster, Ohio.

To the Editor: Referring to your issue of the 27th ult.: I have read with interest your editorial, "The Season's Outlook." The forecast, in so far as based on season's rainfall, is a good "jolly." (See weather report.) What you say as to the duty of the farmer to produce staple products in the fullest abundance would be very much more convincing if you could give assurances of the kind-heartedness of the financier in financing and of the open-handedness of the buyer in buying.—E. I. H., Concord.

To the Editor: I read with interest your editorial of November 27th, entitled, "Indispensability of Protection." I am a native of California, but in looking back it seems to me that there has been a mistake in the viewpoint of many people in that State in wanting protection only in spots, due, more than likely, to either misunderstanding or lack of understanding. Because of your evident interest in this essential I believe you will find much of interest in the enclosed pamphlet, which was handed me sometime back.—B. T., Kansas City, Mo.

When we started house gardening in what was then a California village, we had a neighbor who owned two cows, which he staked out on vacant lots and brought up by the ropes to his dooryard at milking times. One cow was young and progressive and the other was old and contemplative, and usually he twisted the ends of the ropes and all he had to do was to walk along and carry rope while one cow towed the other to destination. One morning he was thinking about something else, and instead of hitching the ends of the ropes to each other he carelessly coiled them around himself, so he could have his hands free to roll a cigarette. The head cow was plunging on towards home; the hind cow was striking a good gait, and the cigarette was rolling all right. Then the hind cow thought she saw a good bite at the roadside, and a loud call for help brought us running out to find our neighbor rolling over and over in the road as the head cow's rope paid out! The memory of it helps us now. Here we have one reader who wishes no tariff and another wishes more; one wishes more rain and another wishes none; one approves the proposition that the farmer should grow all the crops he can, another thinks it is up to the merchant and the financier! Oh, well! We have twisted the ends of their ropes and we can safely roll a cigarette!

WHAT RESERVE BANKS DID NOT DO.

On another page of this issue Mr. Pickering presents some declarations which a prominent reserve-banker makes on behalf of the institution with which he is connected. Such declarations are eminently fitting to be made and we do not doubt the exact truth of them, for not only are these reserve bankers intrinsically honorable men, telling the truth because it is true, but also because truth-telling is recognized as the best business policy. Therefore we can accept it as true that the reserve banks did not send out proclamations to their country members to dry up on crop loans. We do not know that they even sent out a friendly warning that light frosts might be expected in the rural districts. Even that may not have been necessary, for there are many ways to give advice which would be announcement enough to a country banker that re-discounting would be rocky and cause him to proceed at once to pull in all the money he can get hold of and reduce his obligations to the re-discounters. And, of course, while that is going on there is mighty little allowed to go out. We are not criticizing the reserve bankers for doing such things and obeying the law. That is what they are for, and perhaps by such action they have already prevented the country from going into a panic. The case which the farmers have against the financial machinery of the government is not that the reserve bankers did not have money enough to supply all the loans that the situation required, but because the higher-ups in the financial scale did things which helped to precipitate the situation itself. This they are alleged to have done by expressing complacence that product-prices would fall in spite of their cost to the grower and declaring that nothing could be done to promote purchases by foreigners which would steady the market; that farmers ought to have faith in the increased population of this country to consume their products, etc.; that nothing could be done to enable the farmer to market his crop later in the year, when there was some demand for it, etc. These attitudes on the part of high governmental financiers caused a slump such as no reserve banks, as now constituted, could cure. The question is not how good or bad the reserve banks have been. We are willing to grant that they have been as good as they know how to be. The point is that farming cannot go on adequately to the needs of the country unless it is better financed, and therefore we are deeply interested in the discussion, which is going on all over the country, as to what can and must be done to make farming safe for farmers!

WHAT IS NOW BEING DONE.

It does not strike us as materially important whether any one told the members banks not to lend money to farmers or not. Perhaps they twigged the situation, screwed down the lid, and gave their loan-assets double sterilization so that no financial botulism would exist in them. Perhaps they were warranted in doing so, for though everyone knows that a loan on good agricultural security is the best on earth in producing lines, everyone also knows that such loans cannot liquify as promptly as some others, and therefore are not good panic-preventers, nor are they very good to answer calls to cash in. The result was that though there was money in large amounts in the banks to move crops, there was no market to move them to, except at a great loss, and there was no money to be had to hold crops until buying revived. Then it was that the growers of grains, livestock, etc., attacked the government financiers, claiming that they were crying down prices as inevitable and by refusing to do anything to promote buying for future demand, either for domestic use or export, were making the farmer carry the whole burden of loss resulting from deflation of prices. This was in October last and the result was the indignant arising of farmers, threatening reduction of production and demanding that action be taken which would enable the farmers not to hold crops on speculation, but to market gradually as consumptive demand called for the products at a fair price. One point at least has been gained by the joint action of the great agricultural associations of the country. Their claim that their produce should not be dumped upon an unready and unwilling market is being conceded, for at the meeting of the Farm Bureau Federation in Indianapolis on December 7, Governor Harding of the Federal Reserve Board is reported to have said this:

Discussing apprehension on the part of farmers as to their current indebtedness, Governor Harding said that if the farmer would go to his banker and make a frank statement of his condition, agreeing to make orderly sales of his products as the market develops, he would be able to make arrangements for present pressing needs and for the requirements of another season.

That idea did not occur to Governor Harding last October. "Agreeing to an orderly sale of his products as the market develops" is exactly what the farmer desired and demanded, and it was partly because he could get no assurance that he would be helped to do it, that someone struck Billy Patterson at the November election. And now the head of the Federal Reserve Board gives assurance not only that disorderly marketing will not be forced but that the "requirements of another season" will be arranged for. Why should we try to find out who it was that said that member banks were instructed not to lend money to farmers? We do not care who said so. We know what instructions they now have and we know reasonably well why they have them also. The farmers' team has made a touchdown! The next move will be to kick a goal!

HOW TO HELP "ORDERLY SALES."

But there is another thing which is coming forward this week, which is perhaps more widely interesting than available loans, because all farmers do not need to borrow money, but all of them surely depend upon orderly sales at something above the cost of production. The thing which has been more strongly emphasized than any other at several great assemblies of farmers in the central west duuring the present month has been the financing of foreign trade so that hungry Europe would take our visible surplus of great staples in exchange for things from them which we can use. Various propositions have found advocates, viz.: government credit to European nations; credit to Germany on the basis of German property which our government has in hoc; financing exchange of products with the surplus earnings which the Federal Reserve banks have skillfully accumulated, etc. We do not know how practicable or otherwise these propositions are, but they have all served a good purpose probably, for the discussion of them has aroused a public interest and a public activity which seems to be coming through with the goods. There now seems to be reason to expect that prices may soon rise to the point of some profit to producers because of stimulated demand, and that the thoroughly impracticable schemes of concerted refusal to produce food crops may be soon forgotten. In this undertaking a Californian is leading—as might easily be expected. The following United Press dispatch sufficiently indicates the scope and manner of it:

CHICAGO, December 10.—Belief that the present price decline will continue indefinitely was indicated by delegates attending the foreign trade financing conference here today. The plans provide for establishment of a $100,000,000 corporation to finance foreign trade. The conference was called by John S. Drum of San Francisco, president of the American Bankers' association and is representative of all the country's industries, including agriculture.

The $100,000,000 capital will be subscribed by banks, business concerns and the public. Fixing of the capital at $100,000,000 is to give it the maximum financial ability of $1,000,000,000. The Edge act, which authorizes formation of the proposed corporation, permits issuance of debentures against existing securities owned by it to an amount equal to ten times its capital. The existing securities will consist of foreign trade obligations.

In an effort to maintain and stimulate America's foreign trade, it is planned to interest the general public in the capitalization of the corporation's stock. It is believed that if the general public comprehends what is at stake, and shows its approval by investing, it will put our foreign trade "over the top."

California has much to gain from the support of such an enterprise. We have neither the great surpluses of staple crops or manufactures, which the states beyond the Rockies need to push into consumption, but we surely have great productions of unique and durable foods, which are constantly increasing in volume and of which some parts may need to go abroad to countries which have no home supplies in our lines. In exchange we need many foreign products which are not made in this country. California, therefore, will share with the rest of the country the benefits which foreign trade will confer. Besides, we are just beginning to realize that California is a maritime state, and direct contact with foreign ports in various parts of the world is being provided in the steamship lines which are

already established or are being projected. California will be alert to take her share of support and to realize her share of the benefits, in the enterprise which Mr. Drum is organizing.

OUR DUTY ABROAD.

Quite germane to the foregoing and twinned with it in delivery is the organization of the European Relief Council which is a combination of eight American relief organizations, which appeals to the American people to contribute $33,000,000 for food and medical supplies for the children of eastern and central Europe. Two Californians are prominent in this movement—Herbert Hoover as chairman, and Franklin K. Lane as treasurer. At a recent meeting in support of this work in Minneapolis, Mr. Hoover made this touching appeal:

Should America abandon its charity and relief work in Eastern and Central Europe before 3,500,000 children have been tided over the wave of famine until the next harvest gathered, ascendency of Bolshevism in both enemy and friendly countries will result.

"Take an invisible guest into your home at Christmas time. We must have $35,000,000 for these little waifs, undernourished, orphaned children—$10,000,000 for medical supplies and the balance for food and clothing."

The figures indicate that ten dollars will save a child! What hint for Christmastide could be more appealing!

QUERIES AND REPLIES

By the Editor.

Inquirers Must Give Full Name and Address
Answered Questions also on other pages.

Bleaching Walnuts.

To the Editor: How are English walnuts bleached and made ready for market? The nuts as commonly seen in the market have a much lighter color than those which are newly picked, and I infer that they are bleached in some way to bring this change about.—A. P., Berkeley.

Although walnuts grown away from the fogs are naturally lighter colored, the beautiful and uniform hue of the standard commercial product is secured by thorough cleaning, grading and bleaching of the shells. In the packing houses of the Walnut Growers' Association this is cheaply and effectively done by proper machinery and dipping tanks in which the bleaching fluid consists of 25 lbs. of chloride of lime and 18 lbs. of sal soda, dissolved in 50 gallons of water. After this solution is made and drawn off clear from the settlings, sulphuric acid is added to it at the rate of 1¼ lbs. of acid to 425 lbs. of the solution. In this dip the nuts are quickly dipped (five to ten seconds) and then thorougly dried at once. This process is hardly available for use on a small scale. In such case the walnuts can be improved by washing, brushing, or rolling in a perforated barrel to remove dirt, and then treated to sulphur fumes as in the process of sulphuring fruit before drying. In using sulphur it most be made sure that the walnut is well dried and then very lightly sprayed, so that only a film of moisture is present on the outside of the shell or the flavor of the kernel may be impaired.

Killing Canada Thistle.

To the Editor: What will kill the Canadian thistle? I have 1200 acres of pasture and this thistle grows abundantly on it and I am anxious to get rid of it.—G. F. C., Cement.

Two ways are usually prescribed for checking the spread of the Canada thistle. One is cutting before it goes to seed, and the other is continuous cutting underground to kill the roots by smothering. Ethelbert Johnson of the State Department of Agriculture has pointed out that, in southern California at least, the plant seldom produces seed—therefore the rush to mow over before blooming is of doubtful value because, in that case, the plant is likely to spread only by its running roots, which run along underground several feet. The killing of the plant in permanent pastures is practically impossible, and it may have to be turned to some account as donkey pasture. In cultivated land the killing out of Canada thistle is like the treatment of morning glory—that is, cutting the patch with a weed-knife a few inches underground at such short intervals that it never can get a shoot to the light to become green. Fortunately, the Canada thistle, although it came to California many years ago, has never secured wide spread. There are, however, a number of other thistles which do become widespread and are mistakenly called Canada by those who do not know the more serious pest to which the name belongs. They are much more easily eradicated. Are you sure that you have the Canada thistle?

Fruit Tree Borers.

To the Editor: Is there anything that can be put around the base of fruit trees to help keep the borers out? What time of the year is the proper time to dig them out, and is it a good plan to dig the dirt away from the trees and leave open all winter?—R. R. L., Gilroy.

Which kind of borer are you out after? If it is the common borer, which usually follows sunburn of the bark, it is about half an inch long with a flat head and a wiggly tail-like body. If that is the one, you ought to have been going after it last midsummer with a knife and a pliant wire, and then covered the base of the trees and all bark reachable by the sun with a good whitewash to reflect the sun heat. This treatment can be still applied. If it is the peach or prune root borer, it is about an inch or more long, when fully grown, round and fat and sluggish. These can be dug out all the fall and early winter. Cover the base of the tree a few inches below and above the ground with asphaltum, Grade D, applied hot with a brush. We see no use in leaving the base of the tree exposed after you finish your surgery. If it is open late in the winter or early spring, it gives the parents of the borers a better chance to get their kids on the front seats for the summer's show.

Orange-Lemon-Orange?

To the Editor: Can fine two-year-old Lisbon lemon trees, now in nursery rows, be budded over next spring to Washington Navels? Would the trees secured from such methods be first class in all particulars, if properly handled? The lemon trees are on sour Florida stock and I cannot see what harm the lemon trunk would do.—R. L., San Francisco.

If the lemons were budded-in low on the sour stock there might be more danger of gum disease than if the root and stem were straight orange. The higher the budding the less danger of this. There are a good many worked over orange trees which have a zone of lemon wood, and it is thought to be at least no advantage. Besides, in the case of hard freezing, such as some citrus regions get now and then, experience has shown that trees with intervention of lemon have been harder hit than orange straight.

Killing Oak Stumps

To the Editor: Will you tell me when is the proper time to bleed live oaks, mush oak, white oak and scrub oak? Some say early in the spring, others about August; or can they be killed at all? If they are cut down they will grow from the bottom again, except the white and mush oaks.—Subscriber, Lower Lake.

All we know about it is that the best time to kill a tree is to cut it down when it has reached the fullness of its season's growth. This would be about midsummer. This will not kill all trees, but if it is followed by de-barking the stump or firing around it when it insists on sprouting, you will do the best we know—unless you proceed by blowing out the stumps with powder, or blowing out the trees without cutting.

Packing Grapes in Sawdust.

To the Editor: Can Muscat grapes, picked ripe during the season, be packed in sawdust? If so, how long will they keep in good condition if kept in a cool place? Will empty nail kegs do to pack them in?—B. R., Redding.

Yes; but the Muscat will probably only keep a few weeks—not as the Tokay or the Emperor, the latter of which is chiefly packed that way for eastern shipment. The Emperor will not keep as long as the Obanez or Almeria, which variety the Spanish ship in cork dust. Redwood sawdust must be used, to avoid the ill flavor of turpentine, and it must be baked to exclude moisture and reduce chance of mold. Nail kegs might be used but they would not do for sales packages, and for home use a packing case, which would be easier to pack in and take out, would be more convenient.

Pollinating Feijoas.

To the Editor: How long does it take for a feijoa to come into bearing when not grafted? I have a bush that has been planted six years and yet there is no fruit as yet, though there is plenty of blossoms. Are they self-sterile?—E. H., Marysville.

Seedling feijoas are often self-sterile and need pollination from another plant. When self-fertile they ought to bear in four or five years from the seed. Grafted plants are of course made with scions from plants known to be self-fertile as well as for the character of the fruit they bear. Self-sterile plants need pollination by artificial agency. You can answer your questions by dusting the blossoms of your plant with the flowers of another.

Storing Celery and Onions.

To the Editor: I have some very nice self-blanching celery, and would like to know the best way to keep it for us during the winter. Also, is there any way to keep onions from growing.—C. A. C., Gilroy.

You can stand the stools of celery side by side in a trench dug in a place where the water will not stand. Cover with thin layer of straw and bank up with earth—just as they do at the East but with much lighter covering, because we have no hard freezing. But your celery will be all right standing where it grows and pulled as wanted. California celery for eastern shipment is crated in the field and hauled to the cars without storage. We know no way to keep onions quiet except in cold storage.

Cutting-Back After Transplanting.

To the Editor: I have transplanted two walnut trees about three or four years old. They are black roots and English tops. They stand now about nine feet high. Shall I top them back and how much? I am also going to transplant a weeping willow tree. Shall I cut this back, and about how much?—P. E. V., Escalon.

A tree should always be cut back after transplanting because it has lost much root and cannot possibly supply all the old top with strong sap-pressure, which is required for good new growth. Sometimes the roots will be relatively so weak that they cannot keep the top alive. Remove one-half of the top growth and in the case of the walnut cover the cuts with paint, grafting wax or asphaltum.

More Sow-Bugs

To the Editor: I have an extra supply of sow bugs this rainy season. Do they eat the young plants, and which is the best way to destroy them?—W. I. N., Pacific Grove.

Sow bugs are believed to chiefly subsist on decaying vegetation, but they may take to leaves and rootlets of plants. They can be trapped under pieces of boards, and brushed off for the chickens or a hen in a coop with the brood free will clean them up. They can be poisoned by dusting cut vegetables or little heaps of bran with Paris green, but in that case you must look out for the chickens and the children! Garden snails can be handled in the same ways as sow-bugs.

Alfalfa Sowing.

To the Editor: Is it too late to plant common alfalfa?—E. T. H., Elk Grove.

It is getting too late to sow alfalfa in places where frosts may be expected and on cold, wet land, even if frost does not come, because the young alfalfa is not only tender, but needs soil-warmth to make a good start. There are places where a start can be made now, but spring-sowing is generally safer when it gets as late as this.

CALIFORNIA WEATHER RECORD

The following rainfall and temperature record is furnished the Pacific Rural Press by the United States Department of Agriculture Weather Bureau at San Francisco for the week ending December 13, 1920.

Station—	Rainfall Past Week	Rainfall Seasonal To Date	Rainfall Normal To Date	Temperature Highest	Temperature Lowest
Eureka	2.94	18.45	12.64	58	36
Red Bluff	1.63	11.27	7.32	54	34
Sacramento	1.62	7.00	4.88	54	36
San Francisco	2.32	7.43	5.44	56	44
San Jose	1.13	5.35	4.08	56	32
Fresno	.49	2.68	2.56	60	36
San Luis Obispo	2.00	4.98	4.31	62	38
Los Angeles	.30	2.31	3.11	68	46
San Diego	.08	.56	1.86	64	42
Winnemucca	.24	3.76	2.33	42	16
Reno	.40	1.47	2.95	52	16
Tonopah	.10	.74	3.20	48	16

Snow on Ground December 13, 1920.

Portola	14 inches
Emigrant Gap	38 inches
Summit	70 inches
Squirrel Inn	2 inches
Yosemite	8 inches
Glacier Point	24 inches

Deciduous Orchards Now Passing Crucial Period

Written for Pacific Rural Press by W. S. Killingsworth.

The deciduous fruit orchards of California are now passing a crucial period—a period upon which largely depends the quality and tonnage of the 1921 crop, the product of trees susceptible to attack by insect pests and fungous diseases whose failure to function rests in the well-directed application of standard insecticides and fungicides. While we have no alopogies to offer for having heretofore dwelt somewhat at length on the importance of spraying with the proper sprays at the proper time, we feel that as we have been entrusted with horticultural editorial responsibility we would be derelict in our duties not to sound a note of warning in every issue of the Pacific Rural Press, so long as there is danger of any loss from the invasion of any pest or disease.

From years of observation in some of the greatly infested districts of the State, we know that there is a prevailing tendency to overlook the importance of spraying until the damage was done, while in those same districts there are orchardists who have annually conducted a compaign against insect pests and diseases with that degree of efficiency that their trees are as near one hundred per cent proficient in production as scientific treatment can make them. However, from the State and National bulletins we are constantly receiving we learn that there is a concerted effort on the part of the fruit growers and farmers throughout the nation to put an end to the annual losses caused by insect pests and fungous diseases.

Annual Loss Enormous.

It may be interesting to know that from governmental reports, the annual loss caused by insect pests and fungous diseases in the United States amounts to more than $1,000,000,000. The following are some of the important losses as reported by the Plant Disease Survey of the U. S. Department of Agricultural during 1919: wheat, 112,000,000 bushels; oats, 50,000,000 bushels; corn, 80,000,000 bushels; white potatoes, 50,000,000 bushels; sweet potatoes, 40,000,000 bushels; tomatoes, 185,000 tons; cotton, 350,000 bales; peaches, 5,000,000 bushels; apples, 16,000,000 bushels. These figures represent actual losses, to say nothing of the great losses of which no authentic record has been kept. All for the lack of sprays applied at the proper time, or the lack of proper care of those commodities which could not be sprayed but saved, had they been cared for by prompt application of known measures of control.

Fortunately for the orchardist the time selected by the numerous insects and pests to begin their campaign of destruction does not fall upon the same week or the same month, as the insecticide used to destroy one invader might not have any effect whatever on another which would necessarily require an immediate application of spray of a different composition. Among the insect family doing great damage to the almond and prune orchards of the State, during the past several seasons, is the so-called almond red spider or brown mite. The writer can look back over a period of years and recall the damage wrought by this insect. Almond orchards, as well as prunes, divested of every leaf before the fruit was half matured, leaving it at the mercy of the hot summer weather, which resulted in a material loss. Their first appearance occasioned but little concern, as they were confined to localities, but when they began to search for new pastures and their damaging effects became apparent, a campaign was organized against them.

Several Successful Ways.

There are several successful ways of getting at them, some of which are substantially effective. It was our practice to begin on all insects and pests at the earliest possible moment after the shipping season had ended and the trees were in a sufficiently dormant state to be treated with whatever insecticide it was our intention to use. The red spider, or brown mite, if you please, deposits a red globular egg on the trunk and limbs of the trees late in the summer. As a matter of fact, the mother of this prospective family is not at all particular as to where she deposits her eggs; they may be on the aforesaid portion of the trees, or around the fruit spurs and in the rough bark. However, the eggs are there in evidence, and to be convinced of the fact all one has to do is to examine closely and they may be seen without the use of a glass. The eggs were biding their time until nature took its course, and it was then that we attempted to beat nature to it, by using a high-power spray machine in applying the best grade of crude oil emulsion there was on the market

There are several reliable manufacturers of this preparation in California, and as we used it year after year we soon learned from whom we could obtain the best It is a well-known fact that an egg, whether it be de deposited by insect or any member of the feathery tribe, if immersed in oil, will lose its hatching privileges. It was our custom to apply the oil spray in December or January. The best results may be obtained when the trees are perfectly dry as the oil is more penetrating under those conditions, finding its way into every crevice. In the badly infested orchards we have seen the eggs several layers deep, and in cases of that kind care must be exercised in the application of the oil, for unless every egg is well covered it still has a "burglar's chance." Where the eggs are not molested they begin to hatch with the coming of warm weather, and by that time the young foliage is making its appearance and its "pigs in clover" with the little red mite which afterwards turns a brownish color.

Almonds and Prunes.

In many sections where almonds and prunes are grown the adult brown mites carry on their destructive work from April or May until August, provided, however, there is no action taken against them. The crude oil emulsion formula is as follows: water, 175 gallons; liquid soap, 3 gallons; natural crude petroleum, 25 gallons. Partly fill the spray tank with water, add the liquid soap, then agitate thoroughly, add the oil and continue to agitate while running in the remainder of the water. If liquid soap cannot be obtained, use 20 pounds of fish-oil soap, dissolved in 10 gallons of boiling water, to which three pounds of caustic soda or lye have been added. The agitator should not be allowed to stop while the spray is being applied and every portion of the tree should be well covered.

If circumstances are such that an application of the crude oil emulsion cannot be used in the fall, there is another chance left by which this insect can be successfully dealt with, and that is with the application of the old standby remedy for many ills, lime-sulphur solution. This spray may be applied in the spring just as the buds begin to swell, as it is then the insect is out in full fighting trim. The old way of making lime-sulphur solution has been supplanted by a commercial lime-sulphur solution that gives splendid results. It is manufactured in California, and for years the writer used it with wounderful success. It is in a concentrated form, is easily handled, and comes at a reasonable price. Instructions for using may be found on each container. Now, if by neglect or failure in any way to apply either of the foregoing insecticides there yet remains a remedy that has also proven successful, which is by the use of a dusting machine manufactured for that purpose, it simply applies the sulphur in a perfectly dry form, handling it in such a way that in the distance in its application it has the appearance of fog.

While this method of checking—yes, destroying the insect—has proven effective, the orchardist relying upon it, in order to get results, must begin in time with its use, for where the eggs are on the trees, and meeting with favorable climatic conditions the insect is out and at work before it is thought it time for the eggs to hatch.

Lime Sulphur Solution.

In spraying with the lime-sulphur solution, in the late winter or early spring, just before the buds open, use 1 gallon of the commercial lime-sulphur to 9 gallons of water. With its use at that time the orchardist is killing several birds with one stone, not only does it have the desired effect on the red spider, but should there be other insect pests or diseases, such as shothole fungus, moss and lichens and soft-bodied scale-insects, this formula will have the same destroying effect. Now, if forced to use the dust formula in the summer when the red spider appears, usually in July, dust the trees with sublimed sulphur, using about 5 pounds per acre. Or the sulphur-glue mixture might be used instead, following being the formula: Sulphur, the very best and finest grade that may be obtained, 10 pounds; common glue, 1½ ounces; hot water, 1½ gallons; cold water to make 200 gallons. Dissolve the glue in hot water. Pour a small amount of the glue water into the sulphur and stir well until the mass is slightly damp. Add more water and work the mixture with the hands until the whole is reduced to a smooth, rather thick paste. Make sure that there are no lumps of sulphur in the mixture. Continue to work with the hands until all of the sulphur is used. Add water to make 200 gallons. Start the agitator and gradually add the sulphur-glue paste when it should be quickly distributed through the water. The agitator must be kept going until the spraying is started and afterward to keep the sulphur from settling to the bottom of the spray tank.

In the use of these formulas, when properly mixed and systematically applied, the best of results may be expected, as the experimental stage has been passed. All are advocated, not only by the leading orchardists of the State, but by the Department of Pomology of the University of California, and for more than 25 years the writer used with telling effects the lime-sulphur solution, and for ten years the crude oil emulsion and sulphur by dusting.

Barley for December delivery has been on the taboggan at the San Francisco Grain Exchange.

Starts Your Profits Now

The dormant or winter season is the critical time for your crops-to-come. Experience proves this. Use a standard treatment for brown apricot scale, and similar enemies of deciduous trees.

UNIVERSAL ORCHARD SPRAYS make a general clean-up, kill the insects and provide a needed tonic for the trees. The standardized treatment for all purposes is found in UNIVERSAL BRAND sprays prepared with

Dormant Soluble Oil
14-15 gallons
per 200 gal. tank
or
Crude Oil Emulsion
18-20 gallons
per 200 gal. tank

Prune and apricot growers all over the State place absolute reliance in these UNIVERSAL BRAND sprays. They are made in California factories of the best ingredients. Our chemists and entomologists use formulas specially adapted for trees and vines on the Pacific Coast.

Use Dormant Soluble Oil to kill scale insects, eggs of other insects, and for the general good of deciduous trees. Crude Oil Emulsion removes heavy coatings of moss and lichens. It's also an excellent insecticide.

Our new bulletin on deciduous spraying is yours for the asking. Our expert entomologist, Paul R. Jones, will advise you without charge.

INSECTICIDE DEPARTMENT

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San Francisco

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Every Water Appropriator Involved

(Written for Pacific Rural Press by Frank Adams, Irrigation Investigations Univ. Calif. and U. S. Dept. Agri.)

On July 1 last there was filed with the Superior Court of Contra Costa county what was widely heralded by the newspapers as probably the most important and far-reaching irrigation suit ever begun in California. Since July 14, when the case was transferred to the court of Judge A. F. St. Sure in Alameda county, it has been engaging the attention of many of the able water lawyers of California, has occupied nearly forty court days in the presentation of affidavits and in arguments of counsel, and has involved a litigation expense probably approaching, if not exceeding, $200,000. The case is now awaiting decision by Judge St. Sure, both on the matter of the application for preliminary injunction and on a demurrer to the complaint, so that just what the next step is to be can only be conjectured.

Origin of the Case.

The greatly increased demand for irrigation, growing partly out of the need for larger agricultural production, partly out of the unusual drouth conditions, and partly by rapid growth of the rice industry, has combined with record low-flows to make the Sacramento river, for the first time, an over-appropriated stream. An alarm was sounded from the Sacramento delta as early as 1919, when high tides were found to be forcing salt water from the Bay farther and farther above the junction of the Sacramento and the San Joaquin at Collinsville. By the early summer of 1920, when it seemed certain that Sacramento River would establish a new low-water flow, the delta landowners were greatly alarmed. An attempt was made by the Emergency Water Conference to bring the upper users in the Valley, chiefly rice growers, to some satisfactory understanding with the delta owners, but the upper owners flatly refused to treat in any way with those below. As a matter of self-protection, therefore, but still not well organized and uncertain as to what rights they might be able to establish, the delta owners were forced to take the offensive. Suit was commenced in Antioch's name.

The defendants to date include ten irrigation districts, twenty-one irrigation and land companies and reclamation districts, thirty-nine specifically named individuals and 248 John Does. All of these defendants are users of water for irrigation from Sacramento River or its tributaries, and represent, according to evidence introduced in the case, 452,584 acres, of which, in 1920, 136,581 acres were in rice and 72,618 acres in other irrigated crops. Up to November 20, 97 delta owners had, with permission of the court, filed complaints in intervention on the side of Antioch, and others are coming in. While the case is essentially one of the delta landowners against the upper users of water from Sacramento River, and while, according to testimony introduced, the irrigable area in this delta comprises 109,000 acres on the Sacramento, 258,000 acres on the San Joaquin, and 58,000 acres of upland above Tracy, Byron, and Brentwood, the total area represented by all of the intervenors, up to November 20, approximates, according to statements of counsel, only 40,000 acres.

The Points in Issue.

Chief counsel for the intervenors states that the "application for a preliminary injunction is . . . to stop these particular diverters (the defendants) from taking the water to non-riparian lands to such an extent that 3500 cubic feet per second will not flow past the city of Sacramento." This amount of 3500 cubic feet per second at Sacramento (it reached as low as 500 cubic feet per second at Sacramento during the fall of 1920 as against about 1980 cubic feet per second as the lowest previous record) was estimated by the engineer for plaintiffs and intervenors as the amount necessary to keep water in the channels and inter-connecting sloughs of Sacramento and San Joaquin rivers satisfactorily fresh both at Antioch and in the delta.

The chief grounds on which Antioch and the intervenors base their suit and which they seek to support in their arguments are, generally: (1) that Antioch is a riparian proprietor; (2) that Antioch is a prior appropriator, not only of the quantity of water it has pumped from the river (only .77 of a cubic foot per second), but, incident thereto, sufficient of the entire flow of the Sacramento to insure, through the holding back of the Bay waters, a continuous supply of "pure, fresh, sweet" water at Antioch, which plainly has not been available during the low-flow periods of 1919 and 1920; (3) that by lessening the flow in Sacramento River below Sacramento, the upper users have polluted the waters of the Sacramento by causing salt to flow in from the Bay.

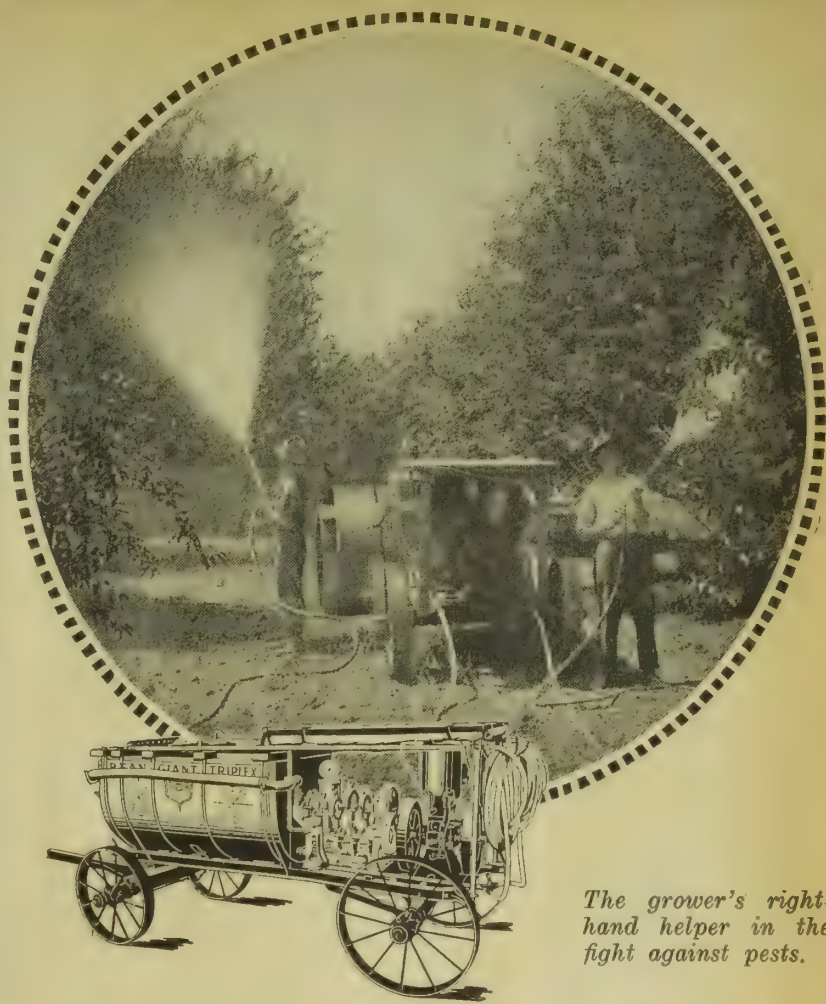
Defendants deny all of these claims. As to riparian rights claimed by Antioch, the defendants urge that, just as in the case of land outside of a municipality, these rights exend only to the individual parcels of land actually abutting on the river—Antioch owns a lot frontage on the river of only 60 feet, on which there is no use of water—and not to the limits of the town, since a riparian right is an actual part of the riparian lands, that cannot be separated from it, and is not merely an appurtenance that can be transferred. The appropriation right of Antioch, they contend, extends only to the amount of water actually diverted, taken into exclusive possession, and beneficially used—admittedly only .77 cubic foot per second—and, citing chiefly a well-known Idaho case, that an appropriation right cannot extend to the current of the stream necessary to hold back the salt water from the sea. The claim of pollution and nuisance is answered with the argument that to constitute pollution there must be direct addition of foreign matter by the one charged with the act of pollution, and that an appropriator cannot be held as a guarantor of the quality of the water after it passes his headgate, and, further, that since the defendants have a legal right to divert all of the water in excess of the .77 cubic foot per second taken into its possession by Antioch, any damage that results to Antioch comes within the Latin maxim, damnum absque injuria—damage without legal injury.

Unparalleled Preparations for Suit.

Regardless of whether the Court grants the temporary injunction, trial of the case itself is planned to begin as soon as practicable after the pending decision is given. To make ready for the actual trial of such a case, however, is an undertaking that probably has not held its parallel in American water litigation. No trial can be final and conclusive that does not include, among the parties litigant, every water user and every riparian land owner on the Sacramento and its tributaries, if not also on the San Joaquin and its tributaries, since the San Joaquin also contributes to the delta water supply.

Since the case is essentially one involving the entire Sacramento-San Joaquin delta against all upper appropriators and riparian owners, who these upper appropriators and riparian owners are must be determined and complaints served and answered—a task that in itself will involve weeks of effort and many thousands of dollars in engineering and legal expenses. But this will be as nothing compared with the time and expense involved in the gathering and hearing of evidence, not only in support of claims of plaintiff and intervenors, but also of those of the hundreds of defendants that ultimately must be entered. Naturally, neither side will accept the findings of the other side, which in simple terms means the entire physical field

(Continued on page 794.)



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Timely Work in the Orchard

(Written for Pacific Rural Press by W. S. Killingsworth.)

Planting Young Trees.

We learn that great activity abounds at all deciduous nurseries, and as a natural consequence orders are being filled, and in the due course of time trees will reach destination. These trees, regardless of size and variety, are costing from six bits to three dollars each, and many varieties are scarce at those prices. Now it behooves the orchardist to see to it that the trees he receives from the nursery are given the very best of care from the time they arrive on the ranch until they are planted, and what comes after will be discussed later. When trees arrive, have the local, duly authorized inspector examine them carefully for any pests or disease that might have escaped the attention of the nursery that shipped them, or the inspector who passed upon them at the time. Should trees be found to be free from all troubles, the next and all-important matter to be taken into consideration is in preparing the trees for planting. A lack of the proper attention at this stage has been the means of establishing many horticultural cemeteries in California. It must not be taken for granted that even with the greatest care at the nurseries, in digging and packing for shipment, that nothing remains to be looked after before trees are planted. Often roots are broken, bruised or mashed. That must by all means be removed before planting, else there is an opening for many pests and diseases to get in their work. When any of the foregoing troubles are detected the parts injured must be cut away with a sharp knife, which is more preferable to the use of the pruning shear, as the shear has a tendency to mash or bruise the soft tissues, while a sharp knife leaves a clean-cut wound that easily and quickly heals. When this has been carefully attended to the trees are ready to be planted, provided, however, the holes are properly dug. When we say properly dug, we wish it understood that they are to be holes, not merely impressions in the ground, or holes that would appear as though they had been made with a post-hole auger, but real holes that will accommodate the full expanse of all roots remaining on the tree. Top soil should be used in filling around the tree. See to it that it is well worked around the roots, tamping it well as it is placed, using care not to bruise any of the roots. Use judgment in not planting the trees any deeper than they grew in nursery row. However, if the soil is light, it will naturally settle some. When sufficient earth has been placed around the tree it may be well tamped with the foot, which will answer every purpose. Now, if the foregoing instructions in tree planting are followed, and there is life left, it may be expected that every tree will live. We have accomplished the purpose too often not to know that it works.

New Remedy Against Peach Borers.

A statement has been issued by the U. S. Department of Agriculture to the effect that a practical means has finally been found of ridding orchards of this much dreaded and disastrous pest. The remedy is what is known as the paradischlorabenzene treatment. Now those who have heretofore had this pest to contend with realize that the method of fighting them was to remove the earth from around the base of the tree, then go after the borer or grub with a stout knife or sharp-pointed instrument until the pest is finally routed. The government estimates that the borers have done $6,000,000 damage a year and that $2,000,000 a year has been spent fighting them. This remedy has been quite extensively used. Its application is by sprinkling fine crystals of the insecticide on the soil around the base of the infested trees and then cover it over with earth to retain the gas. A gas is formed when the soil is between 74 and 80 degrees F. This gas is much heavier than air and sinks down through the soil and makes itself most effective against the borer. It is estimated that one pound of this insecticide is sufficient for 8 or 10 trees. The labor required in doing this work will be far less expensive than it is in the matter of digging the borer out, and in that case care was necessary in the performance of such work, while any ranch hand with an average amount of intelligence can apply this remedy. The Georgia peach growers have given this remedy a severe test and it is learned that it was successful to the extent that some peach-growing sections used as much as 50,000 pounds. We believe it worth trying.

Care Must Be Used in Grafting.

At the close of each season many growers find that there are certain varieties of their deciduous tree fruits that are poor producers, while others that are good producers are commercially undesirable—the trade refusing to take them. In cases of this kind it is obvious that it is poor policy to allow such trees to remain intact, hence it is far better to topwork them into some one of the well known shipping, canning, or drying varieties. Where it is the intention to topwork trees, the time has arrived to prepare for such, and the first and most important move is to secure the service of a competent party to do the work of both grafting and waxing, for in the performance of this work one is as important as the other, as it matters not how well the scions are selected and inserted, this can be offset by a poor job of waxing the wound. Not only does this apply to the first waxing, but those that follow, for wounds of any proportion should be waxed the second, and in many cases the third time in order that all moisture may be excluded, for a poor job of waxing has been the means of many failures in grafting. Several inquiries have reached us regarding suitable help for such work. We have in mind a number who make a practice of contract grafting, and we might assist in securing the services of one or more of these parties for those contemplating such work.

Cut Grafting Stock Now.

Those who contemplate top-grafting would do well to select their grafting stock at an early date, and let it be understood that it must come from trees known to be of the variety desired, and such trees also known to be good producers. The pruning operation will soon begin, and it is poor policy to go among a lot of trees that have been pruned and attempt to select wood from the brush laying around promiscuously. To do this the orchardist had far better allow his trees to go over until another season rather than take chances of topworking them into something less desirable than the original. When the scions are cut securely tie them in bundles of, say 200 each; then heel them in in a convenient shaded spot and there allow them to remain until work of grafting begins.

ALFALFA THIRTY YEARS OLD ON ADOBE SOIL.

Alfalfa thirty years old on adobe soil and never irrigated yielded six wheat sacks full of seed from 18 acres last season for Guy M. Walden of Lake county, after it had produced about twelve sacks of barley per acre. It has been a practice for several years on this piece of alfalfa to grow a winter crop of barley, so it is free from weeds. Shortly before last Christmas Mr. Walden drilled about 45 pounds of barley per acre in the alfalfa after disking it thoroughly. The alfalfa for a time overtopped the barley, but before long the latter covered it. A binder cut the barley which had to be hauled off to the stationary thresher because the alfalfa came on so strong after the harvest.

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Better Trees Are Not Grown

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We ship any quantity, anywhere on approval. Return at our expense if not better trees than you usually get.

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TWO VIEWS OF CALIFORNIA.

The New York Life of December 9 says there are two sides to every question. In its October 7th issue, Life published a piece on California by B. H. Morton, to which some of our California readers took exception. They may be right. Herewith Life publishes a reply by C. A. Utley of Sacramento, Cal., and side by side with it the original document which caused all the trouble. The reader can take his choice.

A Day in California.

The Californian is awakened by a Connecticut clock, and crawls out of his New Hampshire sheets. He puts on his Lowell socks, fastens his Boston garters, buttons his Brockton shoes, jerks on his Chicago suspenders on Detroit overalls, washes his face with Cincinnati soap, wipes with a Rhode Island towel, puts on a Troy collar and a Paterson necktie, and brushes his hair with a Brooklyn brush. Then he sits down to a Grand Rapids table on a Grand Rapids chair, eats Beechnut bacon from Kansas hogs, bread of Minneapolis flour with Idaho potatoes cooked with New York lard on a Detroit stove burning Pennsylvania coal. After breakfast he plows his land (covered with New York mortgages) with a Syracuse plow and a Montana horse fed with Kansas corn and Iowa hay. Or, if he can afford it, he harvests his grain with a Hoosier tractor, puts it in Atlanta sacks, ships it on Delaware cars drawn by a Philadelphia engine on Pittsburgh rails. Then when evening comes he takes a ride in his Detroit Ford or his Toledo Overland. Then he looks at his Waterbury watch and returns home. He rests a while in his Wakefield rocker, reading his Eastern magazine. Finally he lowers his Columbia shades, bathes in his Bridgeport tub, crawls under his Lowell blankets, is kept awake by sand fleas, the only home product of his native state, and plans how to fleece the Eastern tourist of his hard-earned cash.—B. H. Morton.

Made in California.

The Eastern arrives in California. His Brockton shoes wear out; he replaces them with a pair of high-grade Napatans, made in Napa, Cal. He needs overalls. To his surprise, the pair he buys are made in Petaluma, Cal. He uses Peet Bros. soap, made in Oakland, Cal. Eager to get on, he purchases a Schmeiser land leveler, manufactured in Davis, Cal. He insures himself an abundance of water by installing a Pelton pump, manufactured by the Pelton Water Wheel Company, San Francisco, Cal. With the help of a Yuba tractor, manufactured in Marysville, Cal., he sets to work to lift that New York mortgage. When his puny Hoosier tractor cannot handle his bumper crop he replaces it with a Holt tractor (the kind that won the war), manufactured in Stockton, Cal. He sells his Montana horse to the Petaluma (Cal.) chicken raisers. He no longer rides in a Detroit Ford or Todelo Overland. He sports an airplane, made in Sacramento, Cal. He subscribes to the Pacific Rural Press, published in San Francisco, Cal. It tells of the unadvertised land in Northern California. He takes a spin up there in his airplane and discovers the "Heart of California." He settles there. He scraps his old Connecticut clock—he is awake! And he laughs when he thinks of the old Minneapolis-flour days. Sacramento and San Joaquin Valley wheat flour is good enough for him. The Easterner is a Californian.—C. A. Utley.

AGRICULTURAL NOTES.

Over 300,000 pounds of California honey were shipped by steamer to Philadelphia and Boston during November by the California Honey Producers' Co-operative Exchange.

The California State Land Settlement Plan was explained to Kansas legislators December 14 at the Kansas capitol by Dr. Elwood Mead, the father and chief administrator of the plan in California.

Eddie says—
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Insecticides and Fungicides.
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There is no substitute for ZENO,
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Odorless. Can be applied with a drill.
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Minimum Guarantee
2.25% AMMONIA. 1.25% PHOSPHATE ACID. 3% WATER SOLUBLE POTASH
1 ton is equivalent to from 5 to 7 tons ordinary barnyard manure.
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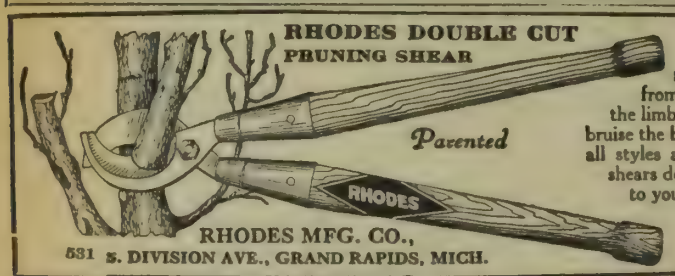

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Significant Agricultural Pointers

Federal Incorporation for Co-operatives.

So many organized farmers are keen to resent Government-packer persecution of co-operative marketing organizations that legislation is inevitable and makeshifts may be enacted, according to a message from Aaron Sapiro. Senator Capper, whose co-operative-protection bill aroused so much interest during last session of Congress, is thinking of introducing a new bill providing fundamental relief by permitting federal incorporation of co-operative marketing associations, defining their rights and powers, permitting long-term exclusive contracts with members only and handling products of members only, the associations being non-profit in character. Provision is made for adequate warehousing facilities, credits on warehoused co-operative association products, higher rediscount limits at the Federal Reserve Bank on such products, etc. Senator Capper believes this is a favorable time for such a bill.

Humboldt Purple Vetch Seed.

Purple vetch growers of Humboldt county recently formed a strong association with R. F. Fisher of Carlotta as president, according to C. E. Robertson, cattle inspector for that county. About 150 tons of purple vetch seed were threshed this year from a little over 300 acres. This fall 2000 acres are being seeded on a two-year contract under auspices of the Humboldt County Farm Bureau. This is to net the growers 14½ cents per pound for the next two crops. Two hundred acres additional are contracted to a Los Angeles seed house, and 200 acres are being grown uncontracted. Present plans are to increase the acreage planted to purple vetch in Humboldt county to 8,000 for the harvest of 1922. A fair yield from this, it is estimated, will supply the demand from citrus growers for cover crops. It will be remembered that purple vetch was recommended above melilotus indica by the Citrus Experiment Station for cover crops; but just as this variety of vetch was being introduced, the imports of seed from Germany were shut off and Oregon seed growers failed to supply the demand. The vetch makes a greater tonnage of winter and spring growth than melilotus.

Banker Objects to Farmer Credit.

A characteristc city banker's propaganda was uttered at the convention of the National Implement and Vehicle Association in Atlantic City by Vice-President Willis H. Booth of the New York Guaranty and Trust Co. A man in his position ought to know better; but if he is really blinded to the facts of the case, it is by ignorance of the ungodly spread between prices paid by consumers and those received by producers. He seems incomprehensibly ignorant of the fact that when a consumer protests at the present high price of flour or pork because he knows that prices to producers have dropped, he is told that present stocks are from wheat or hogs bought from farmers at higher prices; but a few months hence, when prices to producers shall have gone up, the prices of flour and pork will go up, regardless of the fact that the wheat and hogs, from which they will have been made, were bought at the lowest level of prices to producers. Mr. Booth says: "Farmers in their meeting with Secretary of the Treasury D. F. Houston, have demanded an increase in credit in order to enable them to carry their crops. . . . Credit has not been provided for carrying wealth for better markets. The principle has to be determined whether it is wise to increase the credit . . . and raise prices artificially in order that the producer may get this artificial price." If Mr. Booth had been buying his own supplies, he would have realized that the producers' prices bear no notably responsive relation to consumers' prices; that higher prices to producers would not justify higher prices in most cases to the consumers, and that a fixed proportion of crops must be carried by some one until consumers are ready for it. Why is a speculator better entitled to credit for such a purpose than the producer?

EVERY WATER APPROPRIATOR IS INVOLVED.

(Continued from page 791.)

will have to be investigated once by plaintiff and intervenors and again by defendants. And after that is all done, all of the evidence introduced, and the case argued, how the Court is to sift out and digest this interminable mass of complicating and interested evidence and testimony is almost beyond comprehension. In fact, so impossible does a court settlement of this controversy seem that some other method of procedure appears inevitable. When one considers merely the money cost that will be involved if the case continues to a conclusion in court as now planned, an attempted court settlement of such an issue seems absolutely inexcusable. If it has cost $200,000 to accomplish nothing in the trial of the application for preliminary injunction, what will be the cost of a complete trial of the cause itself, involving several hundred additional parties litigant and a number of years rather than months in court? Merely to ask this question is to disclose the impossibility, if not the absurdity of the situation.

Is a Different Procedure Possible?

Under the Water Commission Act, the case may, in the discretion of the Court, be referred to the State Water Commisison for investigation, as referee. A stipulation out of court, later made binding by court decree, might be resorted to if the case were not so involved; but if not so involved such a course would not be necessary. Possibly the merits of the issue between the delta and the upper appropriators and riparian owners may be settled in a simpler suit involving fewer parties, leaving a complete adjudication to the indefinite future. Construction of more storage on the headquarters of both the Sacramento and the San Joaquin, while possibly further complicating the pending case in court, will materially contribute to an ultimate solution of the entire problem of late summer water shortage on both the upper and lower rivers and of salinity in the delta. Rights of navigation in the delta obviously must always enter as an important element. To the writer the ultimate working out of both the water-right and the irrigation questions of Sacramento River have appeared to be essentially a matter of proper organization. It has seemed that by no other means can either the costs of possible conservation measures be equitably apportioned, or the most complete utilization of the water supply that is economically practicable be accomplished.

SOUTHERN CALIFORNIA IRRIGATION INCREASED.

A decrease in irrigation facilities in Ventura county between 1910 and 1920 is noted by the U. S. Census Bureau at the same time that the irrigated area has actually increased about 20 per cent in the same period and Riverside county increased about 45 per cent. Santa Barbara county irrigated acreage decreased about ten per cent. San Bernardino county will irrigate twice as much acreage as at present, when works now under construction shall have been completed and Santa Barbara irrigation is being revived to a 50 per cent increase. Inyo county had 65,163 acres irrgated in 1909 and 71,611 in 1919. Works under construction will raise the total to 93,072.

The Sutter Basin Company has arranged to have a sugar beet growing specialist to act as advisor

AMERICAN FARM BUREAU.

The American Farm Bureau Federation has grown faster in power than in membership, is a significant statement of President J. R. Howard at the second annual meeting of the Federation at Indianapolis, December 6 to 8. In organization is strength far more greatly multiplied than the numbers of farmers included. By organization each individual farmer's power is multiplied. But Mr. Howard's claim that the Federation now represents 1,500,000 farmers indicates that the multiplied power of those men must be heeded by Congress henceforth.

The Federation is alive to its opportunity and power, and is putting it to immediate use. Resolutions were sent to Congress requesting: (1) the earliest possible action to provide for extensions and renewals of farmers' obligations which are rediscounted by the Federal Reserve Bank; (2) until tariff protection is granted to agriculture, an embargo should be placed on imported agricultural products, which compete destructively with American agricultural products; (3) that Congress enact legislation that will immediately promote trade with Europe.

Speaking of credits during the convention President Howard urged that loans be made to farmers by bankers covering the period of consumption as well as production. When the farmer gets a loan for the cropping and harvesting season only, he is obliged to throw his products onto a glutted market at harvest time at losing prices. Speculators whom bankers finance, then buy on these glutted markets and sell the farmers' products to consumers as they are needed, but at greatly increased prices. It was pointed out that not one-tenth of one per cent of the paper rediscounted by the Federal Reserve Bank is farm paper. Regarding tariff, Mr. Howard said that the nation's policy has been to protect the industries. Many other matters of national interest to farmers were discussed and policies decided.

MORE COTTON WITH FEWER STALKS.

Would we rather grow cotton stalks or cotton? If we want cotton, the way to get it is to suppress the barren shoots on the cotton plant, as demonstrated by farmers in California and Arizona. Instead of having the rows filled with barren stalks and preventing full growth of low bolls, suppress the suckerous growth and give bolls a chance all the way down. It will make picking a lot easier, too. It will also require less work than is now put into the crop. The U. S. Bureau of plant industry sketches the system about as follows: Instead of "chopping" plants out to a wide spacing as soon as they have made the first leaves, let them grow five or six inches tall until they begin forming squares. Then chop them out to the width of a narrow hoe. This crowds them so that, with a minimum of irrigation in the early stages, bolls form and mature all over the plant and also gain considerable in earliness.

MILLION ACRES IN DRAINAGE DISTRICTS.

Organized drainage enterprises in California cover 1,132,759 acres and they cost $39,185,714, or a little over $34 per acre, according to figures of the U. S. Census Bureau just made public. Over a million acres in the drainage districts are being farmed. Over 46,000 acres within the districts are still too swampy to farm, and over 12,000 acres are timbered. The total area of the State is nearly 100,000,000 acres, 1.1 per cent being in drainage districts.

Vegetable shipments from Southern California, exclusive of Imperial and Coachella Valleys, from December 7 to 12 inclusive were lettuce, 457 cars; mixed vegetables, 354 cars; cauliflower, 249 cars; tomatoes, 20 cars; total of 1080 cars.

The Fruit Trees You Plant Today

Will Pay You Profits Five Years Hence

The fruit tree you planted five years ago paid you this year alone as much as your original investment in the land it occupies, plus the entire five years expense of bringing it into productiveness. : : :

ROOTS, fibrous and well-branched, such as are grown only on our foothill location.

Five years hence the present readjustment of economic conditions will be forgotten history, while the trees you planted will be paying you an income more than you can make from any other investment. Every dollar, invested in commercial fruit growing in the past, has each year repaid the original investment in profits.

Prunes, Pears, Cherries, Apricots, Peaches, Plums, Olives, are all profitable according to the adaptability of your location.

Trees are 85 per cent sold out. Give us your order now—while our available assortment of foot-hill grown trees is still complete.

Every dollar invested in commercial fruit tree planting immediately doubles the value of your orchard property.

Submit us today a list of your tree wants, for prices.

SILVA-BERGTHOLDT Co.
NEWCASTLE · CALIFORNIA

PROTECT PRUNING CUTS.

Tree cuts or wounds, if left exposed, are very likely to become infected. Prevent infection by prompt application of PABCO PRUNING PASTE. Ask your dealer. Manufactured by the Paraffine Companies, Inc., San Francisco, Calif.

CRESOLITE
makes
STUMPS HUMP
also willows and all brush. Money back if it don't.
LOUIS BAHES, Loomis, Cal. Agents wanted.

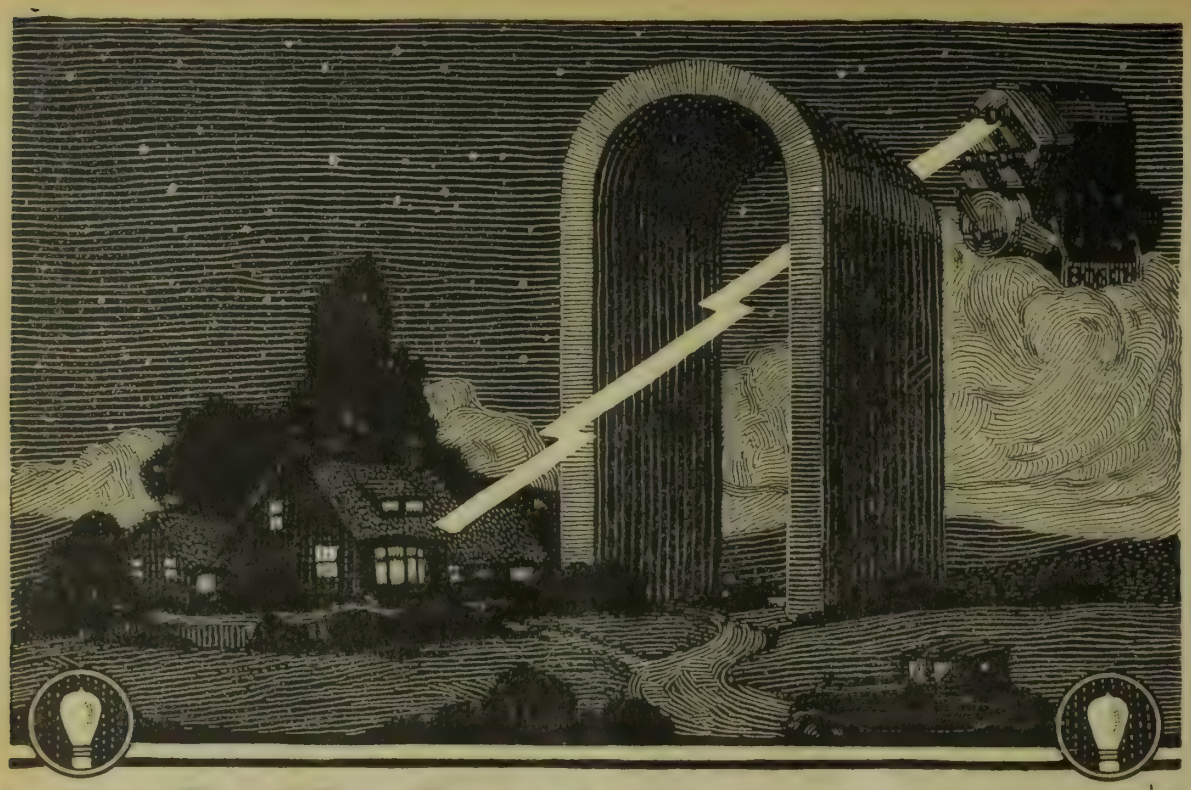
AGENTS for FORD Permanent Non-Skid Chains. $4.00 delivered. Instantly on and off. Big sales. Box B. H., Plantsville, Conn.

DON'T LET YOUR TIRES DIE.
Protect pruning cuts and wounds against infection with Pabco Pruning Paste. Ask your dealer. Manufactured by the Paraffine Companies, Inc., San Francisco, Calif.

FOUR THOUSAND AND MARIOUT SEED BARLEY
Limited surplus of high class seed of these two heavy-producing varieties, grown directly from University Farm Stock.
SAMPLES ON REQUEST
F. P. Wray, Davis, Calif.

"CALIFORNIA FRUITS And How to Grow Them"
BY E. J. WICKSON
Standard work on fruit growing in California. $4.00 per copy postpaid.
PACIFIC RURAL PRESS, Publishers

RELIABLE MARIOUT BARLEY SEED
HAS
Greatest Yield Record. Our Seed Is COMPETENTLY TESTED FOR HIGH PURITY.
H. G. STEVENSON, JR.
Winters, California



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Red Bluff	Hartman's Electrical Machine Works	600 Main St.
Redlands	Ray Ignition Works	338 Orange St.
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Santa Barbara	Western Machinery & Foundry Co.	Cota & Anacapa Sts.
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For Steady Power

Every farmer knows that a horse can't pull a load by jerking on the traces. There must be a steady, even pull or the load won't move.

Engines—like horses—must pull evenly or they won't work properly. Jerky operation—due to poor ignition—reduces the power of an engine. More than that—it wears the engine out.

Whether your gas engine drives a house lighting plant, the yard pump, or a big tractor, you need the full, hot, unfailing sparks of a Bosch Magneto to prevent misfiring. They fire all the gas in the cylinders—every time—and develop maximum power, economy and dependability in the engine. Four million users will readily testify to that.

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400 Service Stations in 400 Centers

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AMERICA'S SUPREME IGNITION SYSTEM

MOTOR TRUCKS - TRACTORS - AIRPLANES - MOTOR CARS - MOTOR BOATS - MOTORCYCLES - GAS ENGINES - ETC.

IRRIGATING PUMPS

AWARDED GOLD MEDAL PANAMA PACIFIC INTERNATIONAL EXPOSITION

Single Stage Motor Driven Pump

KROGH PUMPS absolutely hydraulically and automatically water balanced. No end thrust whatsoever.

Also DEEP WELL TURBINE PUMPS for bored wells 10-inch diameter and up.

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MIDWEST UTILITOR

Plows Harrows Cultivates Pulverizes Drills and does all Belt Work up to Four Horse Power

Greer-Brasier-Ricker Co.

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Some territory still open for good live dealers.

Dependable Power

AGRICULTURAL AND MECHANICAL SERVICE

Red Kidney Bean Markets.

I see red kidneys quoted on the San Francisco market at $10 and $10.50 wholesale. I have had two offers of 8 cents per pound for No. 1 beans as they came from the thresher; but those offers are withdrawn and buyers are holding off. Very few beans have been moved from here this year. About 75 per cent of the red kidney crop here was lost in the late rains. Just where is the red kidney crop used. Now, here is a sample of the procedure with our beans when they are moved at all. A local buyer buys for a firm at Sacramento who sells the beans to John Doe at San Francisco. It seems to me there are too many people handling these beans before the consumer gets them. Could you tell me the whole system that these beans go through from farm to consumer?—F. R. D., Butte county.

Some of them go rather directly as one of our subscribers recently wrote us regarding his pinks—he sold them at a local store for six cents and about ten days later saw them marked for his town neighbors to buy at 15 cents. Some go through the route you mention, and John Doe sells to a local wholesaler or another eastern jobber, who sells to an eastern wholesaler, who sells to a retailer, who sells to a consumer in little dabs, because by that time the price has had such healthy growth that the consumer hesitates to tackle it. Or the eastern jobber may sell to a canner, who sells to a jobber, who sells to a wholesaler, who sells to a retailer, who doesn't give them away to the consumer. A large proportion of American red kidneys are used in the United States, but Cuba and Porto Rico ordinarily take a good many. Conditions there are now unfavorable. Prices have steadily declined but should not stay down.

No General Rise on Plow Points.

How is it that when prices of all grains are hammered down, the prices of tools required to grow these grains are hammered up. Prices of plow points have just been raised 25 cents each in Grass Valley.—C. S. J., Nevada county.

Inquiry from leading plow distributors in San Francisco indicates that no rise in price of plow points has taken place for several months. Some price readjustments may be necessary by your local dealer if he bought his stock during the war when steel prices to implement manufacturers were held lower than now. If your dealer has recently sold the last of his old stock and bought new stock since the war restraint on steel was taken off, that will explain the rise. Some dealers, storekeepers, restaurant keepers, etc., occasionally mark up prices just for fun, or from force of habit.

Lime and Sulphur on Alfalfa.

I noticed in a recent issue that a half-acre plot of alfalfa treated with 500 pounds slacked lime and 100 pounds flowers of sulphur yielded 7,688 pounds of hay. When should this be applied to the land, before it is sowed or after? How much would be required to dress old alfalfa land not irrigated; and when is the time to apply it and how?—B. R., Shasta county.

Both lime and sulphur require time and moisture to do their work; so do it now. In the experiment mentioned, they were applied on producing alfalfa after the first cutting and before the first irrigation. The rate of application mentioned may prove as economical as any other rate. Only actual experiment on your own field with various quantities will prove which pays best.

Barley Future No Better.

Please send me names of a couple of firms who buy grain in San Francisco. Does the market look bad on barley? Have held four months and

the market gets weaker right along.—R. D., Tulare county.

You did not hold on our advice. We have consistently pointed out the fundamental weakness of the barley future. We believe it will "fast get no better," as an old friend of ours used to say. The price broke $2 per ton December 10. Grain buyers' names sent by mail. They must have a sample before quoting prices. Next time any of our readers ask for names of buyers or sellers of anything just mention the quantity you are interested in.

Mariout and Vetch in Shasta.

Would it be advisable to plant Mariout barley on the creek bank lands of Shasta county before December 31? Would the crop be greater if sown around the middle of February. No double cropping practice. Expect to intercrop with Oregon vetch. Is this advisable?—R. B., Shasta county.

We are not sure the vetch will amount to much. It would have made good growths and would have helped the grain if it had been sown earlier, provided the land is well drained. On such land, the sooner you plant Mariout the better crop you are likely to get. But Tennessee Winter barley will do better on cold, heavy, wet soils.

Many Brome Grasses.

How many kinds of Brome grass are there? What is the nature of the new "dry land" grass called "Darso," developed, I believe, by a midwestern experiment station?—J. T. W., Eldorado county.

There are nine varieties of brome grasses, mostly troublesome weeds, though one or two varieties are cultivated. Of Darso grass we can find no trace in grass descriptions by the Governments of the United States, Australia, or South Africa; but will be looking out for it and telling our readers what we find. Bromus inermis serves the dry-land purpose you mention.

Auto Duty into Canada.

I am going to Vancouver, B. C., and would like to take by automobile. Will there be any duty to pay?—R. A., Stanislaus county.

The customs officials will appraise your car at what they think it would cost in Canada and will then assess a duty amounting to 42½ per cent of the appraised valuation. If you intend to bring it back later on, say so when you go in and the duty payment will be regarded as a deposit to be refunded when you come back to the United States.

Late to Plant Harding Grass.

Is it too late to plant Harding grass? H. G. B., Sonoma county.

We fear you would not get a satisfactory stand from such late planting.

GREATEST OIL PRODUCTION IN 1920.

Consumption of California crude oil in October was 20,000 barrels a day greater than production, while production was the greatest of any single month in history, according to the Standard Oil Co. This year's oil production bids fair to exceed by 2,000,000 barrels the greatest amount ever produced. The record was set in 1914 when 103,623,695 barrels were taken out. The increase this year is chiefly due to the new Elk Hills field in Kern county, "one of the most remarkable and productive oil fields in the history of the State." Another new field in which one well is yielding 6,000 barrels per day has been opened near Huntington Beach in Orange county. Other new fields may be discovered by "wildcatters," many of whom are testing unexplored areas, including Imperial county. In the entire state 474 wells are being drilled at a cost of about $120,000,000.

Only 171,500 pounds of alfalfa seed have been imported into U. S. since June 30. But a great deal of imported seed was held over.

English rye grass seed imported into the United States since June 30. totaled 311,900 pounds. Italian rye grass seed importations totaled 214,600 pounds.

POWER FOR EVERY TASK

Harness your jobs on a Cletrac. Sturdy, powerful, rugged and sure-footed on boggy ground and steep grades alike, the Cletrac keeps all work moving at top speed. Lays its own endless track. Furnishes dependable power that can be used wherever power is needed, 24 hours a day if necessary.

The Cletrac clears away at top speed any work you put it to. Used alone or in fleets it is the right sized tank-type tractor to plough, harrow, drill, seed, harvest and reap. It also drags ditchers, graders, scrapers, hauls wagons and trailers and is an efficient stationary power plant for all kinds of belt work. Easy to run.

The Cletrac gives immediate power for filling silos, emergency pumping, threshing broom corn and for operating all kinds of machinery.

Ask your neighbors, or the Cletrac dealer near you about this all-purpose, every-season tractor. Or write us for a copy of "Selecting Your Tractor." It's free.

Easy going regular track, the CLETRAC *way.*

Pacific Coast Sales Offices:
LOS ANGELES, CAL.
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The Cleveland Tractor Co.
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Largest producers of Tank Type Tractors in the world.

One of more than 1,200 CLETRAC *dealers with repair stocks is near you.*

MEN WANTED TO LEARN AUTOS & TRACTORS IN LOS ANGELES

Men of any age with no previous experience can learn auto and tractor business in few weeks. Earn Big Money as repairman, tractor expert, or go into business for yourself. We help our graduates get started. Only school in America giving advanced auto-electrical training and actual garage and repair shop practice. All year 'round tractor field work. Training includes tire repairing, machine shop, driving and repairing all makes of autos, tractors and gas engines. Earn board and room while learning. Success assured. Jobs waiting. Write NOW for FREE book of facts telling about your chances in this business. Tells about men from your home town who are successful National graduates.

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824 S. Figueroa St. Los Angeles, Cal.

Why the OilPull Pays Best

A tractor that is constantly on the job and rarely in the repair shop is the one that is making profits for its owner.

Probably the most powerful influence in attracting buyers to the OilPull tractor is its rare need for service. Correct design, honest, generous construction and skilled workmanship have supplied dependability in full measure. Your inquiry will bring full details of the OilPull.

ADVANCE-RUMELY THRESHER COMPANY, *Inc.*
LaPorte, Indiana
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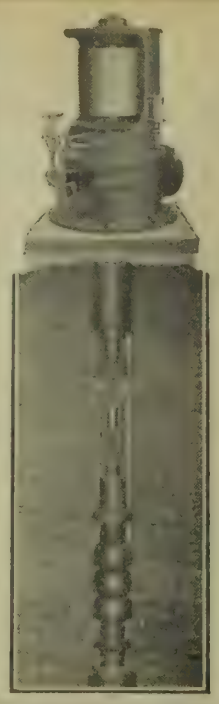

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Horizontal and Vertical

Centrifugal Pumps

BYRON JACKSON
IRON WORKS, Inc.
SAN FRANCISCO, CAL.

Highest Efficiencies
Best Mechanical Construction

Offices, Service Stations at:

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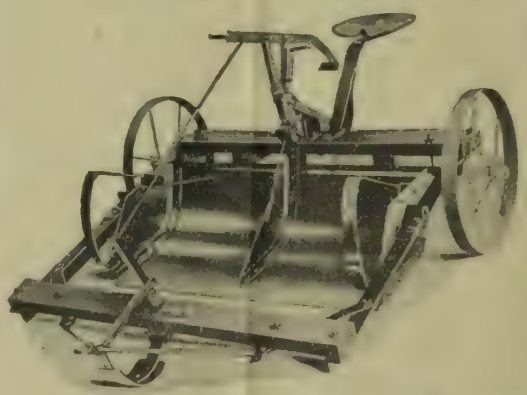
The Miskin Scraper

IS THE BEST SCRAPER ON EARTH
And we can prove it. Write for circulars



The above is a cut of the Famous Miskin Scraper, which in operation, easy draft, greater capacity, and better work has many advantages over the common Fresno and wheel scrapers now on the market and is guaranteed to take twice the dirt per trip with the same horsepower.

Made in 2-horse, 3-horse and 4-horse sizes. Can be operated by small tractors from the tractor seat by the tractor driver.

Send for descriptive circulars, with prices, or ask your dealer to send for one on approval. We pay the freight.

MISKIN SCRAPER WORKS, UCON, IDAHO

LEARN AUTO & TRACTOR BUSINESS

OXY-ACETYLENE WELDING—TIRE VULCANIZING
in few weeks time in
"AMERICA'S LARGEST TRADE SCHOOLS"
Learn this business. Make big money.

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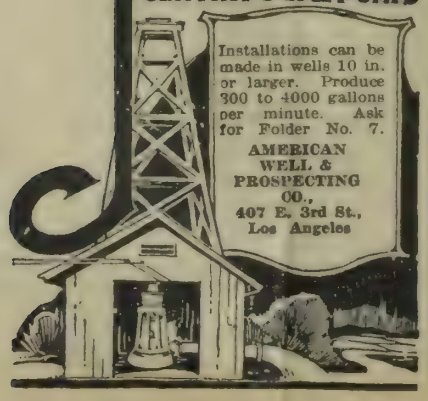
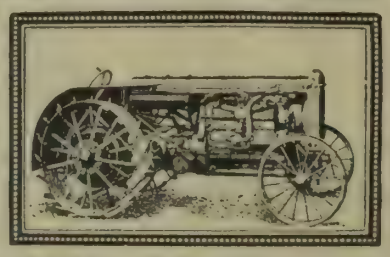
JOHNSTON TURBINE CENTRIFUGAL PUMPS



Installations can be made in wells 10 in. or larger. Produce 300 to 4000 gallons per minute. Ask for Folder No. 7.

AMERICAN WELL & PROSPECTING CO.,
407 E. 3rd St.,
Los Angeles



Allis-Chalmers Farm Tractors

The 18-30

A four plow tractor with 20% surplus power for ANY unusual load.

H. V. CARTER MOTOR COMPANY • Distributors
52 Beale St., San Francisco, Cal.

Mechanical Power on the Farm

CAN USE CRANK-CASE OIL REPEATEDLY.

"Steel costs more than oil"; and the man who allows steel in his tractor engine to wear out rapidly for lack of clean oil soon classifies himself with the "has-been" tractor users. Of course, it isn't fair to the tractors, but they get the blame. Tractor crank case oil quickly becomes foul from the carbon flakes that form on the underside of the piston head, from unburned fuel that passes the pistons, from dust that comes with that fuel through the carbureter, and with carbon from firing chamber and piston grooves particularly if the cylinders are not in good shape. In new machines molder's sands and bits of iron also drop into the crank case. Where the oil is watery for any reason, the water reduces lubricating power and causes extra wear on the cylinder and piston rings, dropping the grindings into the oil. Probably more tractor engine trouble is due to running with dirty oil than to any other cause. A great deal of the foreign matter acts beautifully with the oil to grind off the cylinder walls like emery.

Frequent or continuous changing of the oil touches many a man's pocketbook so hard that he uses the oil too long and gets touched harder eventually in the shape of cylinder repair bills. Many of our subscribers have asked how to salvage the used crankcase oil. If they could do this and use it again without damage, they would drain the crank case more frequently. Straining through several thicknesses of cheesecloth while the oil is warm has been recommended; but the weakness here is that while the oil is warm a great deal of the carbon is held in solution and is not taken out by the filter. If it is filtered cold, the oil is too sticky to pass readily through cloths fine enough to take out the small particles of foreign matter. Letting the impurities settle by gravity is an incomplete method at best and a considerable proportion of the oil must be thrown away with the impurities.

The dairyman separates the oily portions of his milk from the heavier watery portions by centrifugal force in a separator. The same thing is being done now with crank case oils. The De Laval Separator Co. has put on the market centrifugal oil cleaners of capacities all the way from eight to 350 gallons per hour, either belt or motor-driven. These units are of sizes that will prove economical on any farm even if only one tractor is used. The oil is used repeatedly, a little being lost at each cleaning; and probably each cleaning needing to be done a little sooner than the last time because there is an almost negligible proportion of carbon which no practicable means can take out of it. All water is taken out with the impurities, so there is no chance of trying to lubricate the cylinders with water as in the case of practically all uncleaned used oils. The saving in oil costs alone will probably repay interest and depreciation charges on a centrifugal oil purifier of suitable size; and the user will have for "velvet" all of the increased efficiency and longer life of his engine.

ORCHARDISTS CONVERTED TO TRACTORS.

"Do you often run across orchardists who turn back to horses after having used tractors?" we asked Santa Clara County Horticultural Commissioner L. R. Cody. "I can't recall any such case," he replied. "They are all keen to use the tractors, especially if they have 20 acres or more to care for. It isn't a question of tractors or horses so much as of which tractor is best fitted for the ranch. Some of the orchardists have found their first tractors unsuitable, but are not returning to use of horses. They simply find a tractor that will better fit their conditions."

NEW HOME-MADE TRACK TRACTOR.

Another "home-grown" tractor is about to be launched in California, the 10-20 horsepower track-type Herbert tractor to be made at San Jose. Though ground will not be broken for the factory until January, the first tractor has been in use about four months in Contra Costa county and eight months in Santa Clara county, being at present on the ranch of R. P. Van Orden. The machine is designed for orchard work, being only 52 inches high, five feet wide, and eight feet six inches long. It has no tiller wheel but is guided solely by the tracks. These are twelve inches wide and rest on the ground for a length of 4½ feet, thus distributing the 5,500 pounds weight of the machine over 1,296 square inches of ground, giving a pressure of a little over four pounds per square inch. The 4½x6 motor turning 900 revolutions per minute is conservatively rated at 20 horsepower. Hitched to a tree, the motor slips its tracks without stopping. The tractor speed is figured at 1¾ miles per hour on low and 2½ per hour on high. All bearings that get heavy wear are fitted with Timken, Hyatt, or radial ball-bearings. A feature of the machine is its kerosene burner device. The kerosene before entering the carbureter is divided to pass through a multitubular heater, through the center of which the exhaust passes. According to A. S. Holmes of the Herbert Tractor Co., the device has been used eight months on trucks of the American Railway Express Co., without notable dilution of lubricating oil.

PUMP PRICES GUARANTEED.

One leading reason why a rancher may not be justified in ordering now the irrigation pump he expects to buy next season is that he hopes the price will go down and he wants to buy as cheaply as possible. If the pump manufacturers would generally adopt the policy now in effect with the Bean Spray Pump Co., it would abolish this reason for delaying the order until the season when the order itself is likely to be delayed in fulfillment. The Bean people are guaranteeing to all buyers from now on that if prices fall before next June, the early buyers will get full benefit of the late reductions. The reason for early orders is to justify the manufacturers in making up the pumps during winter when there is no rush. This means prompt shipment when the pumps are wanted. Of course, if they are made from the present high-priced steel, and if the latter should later fall enough to justify reduced pump prices, the manufacturer who gives early buyers the benefit of later reductions will lose on the deal. But the Bean people, whose General Manager J. D. Crummey has just returned from an extended trip in the East, feel assured that steel prices will not decline in the six months ahead of us.

MAKING BELTS LAST LONGER.

Avoid tight belts; tightness is hard on the lacings, it springs shafting, and wears bearings rapidly. With a loose belt, have the slack side on top; it gives better contact with the pulleys and reduces slippage. Use large pulleys where possible, in order to give more contact on the belt and to reduce the tendency for its fibers to break after they have bent short over the pulleys a few million times. Don't let one edge rub, if you do it will soon wear and stretch on that side, and you will have difficulty keeping it on the pulleys or preventing slippage.

Keep grease and mineral oil away—they rot belts. Protect the belt from direct rays of the sun while it is not running. It gets hot when idle in the sun, though it is air-cooled while running in the sunshine.

FARMERS' UNION CONVENTION.

(Written for Pacific Rural Press.)

"Greater interest was displayed in this convention than in any for several years, and the organization is stronger than ever before," says Secretary Fred Millard of the Farmers' Educational and Co-operative Union in regard to the annual convention held at San Jose, December 7 and 8. Aside from the internal affairs of the organization, the business of chief importance was adoption of the report of the Legislative Committee. These recommendations add weight to the influence being exerted almost unanimously by farmers' organizations: (1) in favor of strengthening the Federal Farm Loan Banks along the lines of their activity up to the time the mortgage banks tied them up in a law suit which is still pending before the Supreme Court. President Ellis of the Berkeley bank is strong for co-operative marketing. "Of what use is it," says he, for us to provide money at low interest to aid production unless the marketing can be done at a profit to the producers?" (2) In favor of adequate appropriations to continue the deciduous experimental work of the University at Mountain View.

Officers were elected as follows: J. J. Hardie, Riverbank, president; R. V. Garrod, Saratoga, vice-president; Fred Millard, Los Gatos, secretary-treasurer, and Allen Talbot, Modesto, and J. C. Moore, Keyes, new members of the executive committee to work with holdover members, C. W. Blabon, Oakdale, F. H. Weld, Evergreen, and Mrs. Gertrude M. Battee, Los Gatos. Chairman L. Woodard was re-elected for a three-year-term on the legislative committee. Holdover members of this committee are G. N. Pfarr of Empire and R. V. Garrod of Saratoga. Numerous matters were left to the executive committee on account of shortness of time at the meeting.

Several prominent speakers addressed the convention chiefly on co-operative subjects, and many complimented the effectiveness of the organized efforts of the farmers in recent years.

TRACTOR STUDENTS REQUISITION HORSE PAVILION!

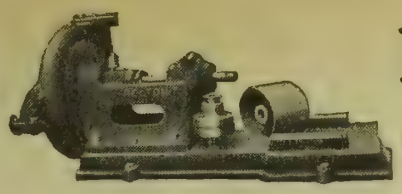
Sixty thousand dollars worth of tractors and implements, mostly borrowed, are housed in a shell of a building 72x150 feet, which cost $5,000 three years ago at University Farm. This equipment and building are used for instruction of classes in agricultural engineering, some of which contain as many as 30 students to one instructor. Sometimes several classes are working in the building at one time, each enjoying the noises made by all of the others. The courses are this year so crowded that the horse pavilion at University Farm has been requisitioned for use of tractor and mechanical power students. What does Dobbin think about that! What will our Solons do about it?

POWER NOTES.

Eighty-eight ranchers enrolled in the University tractor short course, recently held at the Lodi High School. Within ten days requests had been received by Prof. L. J. Fletcher from half a dozen other High Schools for similar courses.

The Tractor and Implement Dealers' Association of Southern California has voted to employ a permanent secretary as the California Tractor and Implement Association has done in Northern California. There is also some talk of combining the associations into a manufacturers' and distributors' organization for the State with separate dealers' clubs in the two sections.

The sugar harvest of Spain this year will reach nearly 100,000 tons, as against the national requirements of 150,000 tons.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ANCHOR Brand Velvet Flowers of Sulphur, also EAGLE Brand, and Fleur de Soufre, packed in double sacks, are the fluffiest and PUREST sulphurs that money can buy; the best for vineyards; the best for bleaching purposes, LEAVING NO ASH.

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To create additional available plant food, and prevent smut in grain, drill into the soil 220 POUNDS PER ACRE of TORO BRAND SPECIALLY PREPARED AGRICULTURAL SULPHUR or our DIAMOND "S" BRAND REFINED POWDERED SULPHUR. This soil treatment has increased various crops up to 500 per cent. Send for Circulars Nos. 6, 7 and 8.

Also PREPARED DRY DUSTING MATERIALS, Tobacco Dust, Dusting Sulphur Mixtures, etc.

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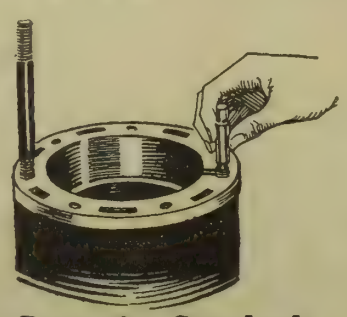
Ask us for prices for Carbon Bisulphate, the surest remedy for destroying ground squirrels.



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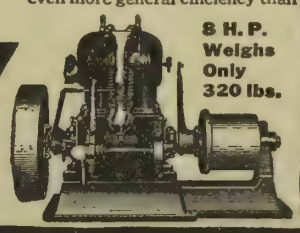
Only 40 to 60 lbs. Per Horsepower

In the Cushman you secure a gasoline motor weighing only 40 to 60 lbs. per horsepower—depending on the size—yet with as much power and even more general efficiency than engines of the ordinary type weighing three or four times as much.


8 H. P. Weighs Only 320 lbs.

The Cushman 4 H. P. weighs only 190 lbs.—8 H. P. Double Cylinder only 320 lbs.—15 H. P. Double Cylinder only 780 lbs.—20 H. P. Double Cylinder only 1200 lbs.

Cushman Motors have extra equipment, such as Throttling Governor, Carburetor, Friction Clutch Pulley and Water Circulating Pump, without extra cost. Write for the Cushman Book on Light Weight Engines.

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BULL DOG pulls largest, smallest, low cut, green, rotten, tap-rooted stumps or trees, either in swamp or on hillsides in minutes. Other methods take hours. Made of tough steel. Weighs less. Will last a life time. *You alone* can yank out biggest stumps quickly and cheaply. Plenty of the strongest cable, blocks, hooks and guaranteed "Take-up" Root Hook FREE with every outfit.

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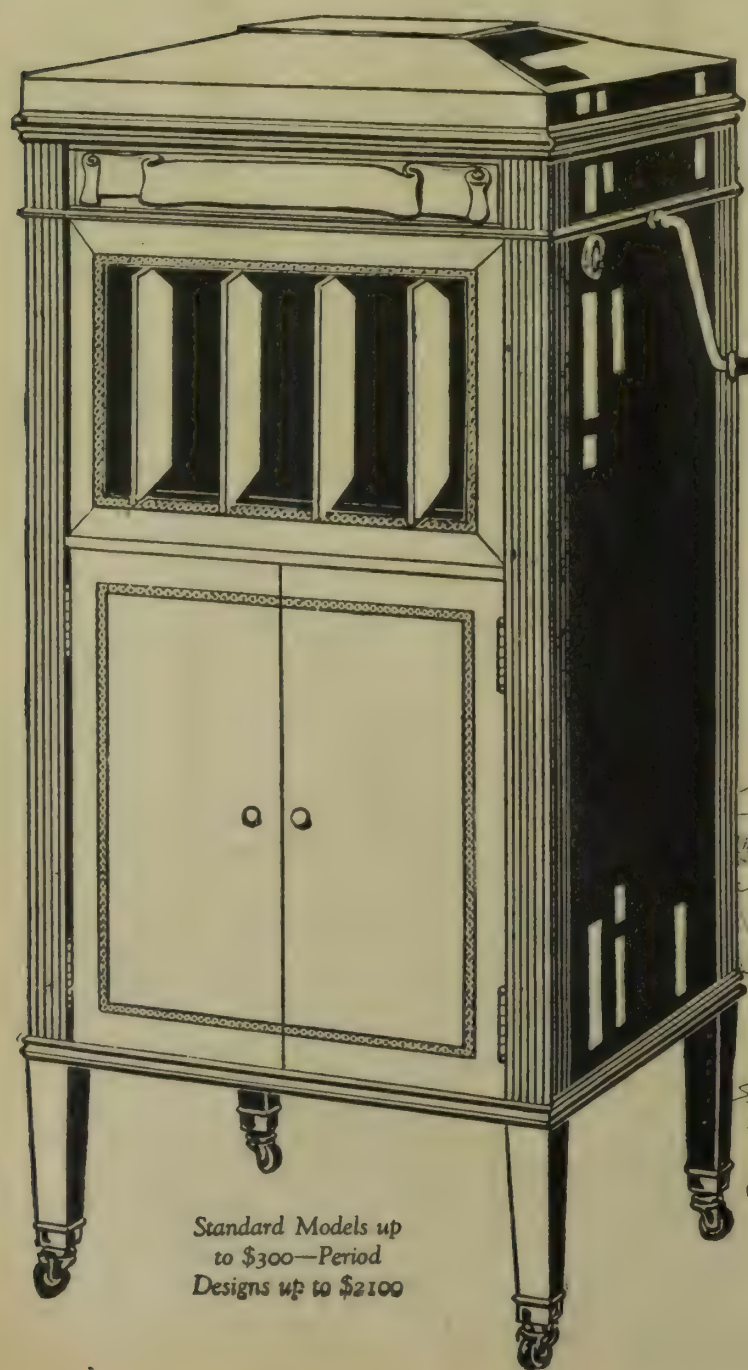
Give Music This Cr

The Only Non Set Automatic Stop

Nothing to move or set or measure. Just start the Grafonola and it plays and stops itself. Never stops before it should. Always stops at the very end. Exclusively on the Columbia Grafonola.



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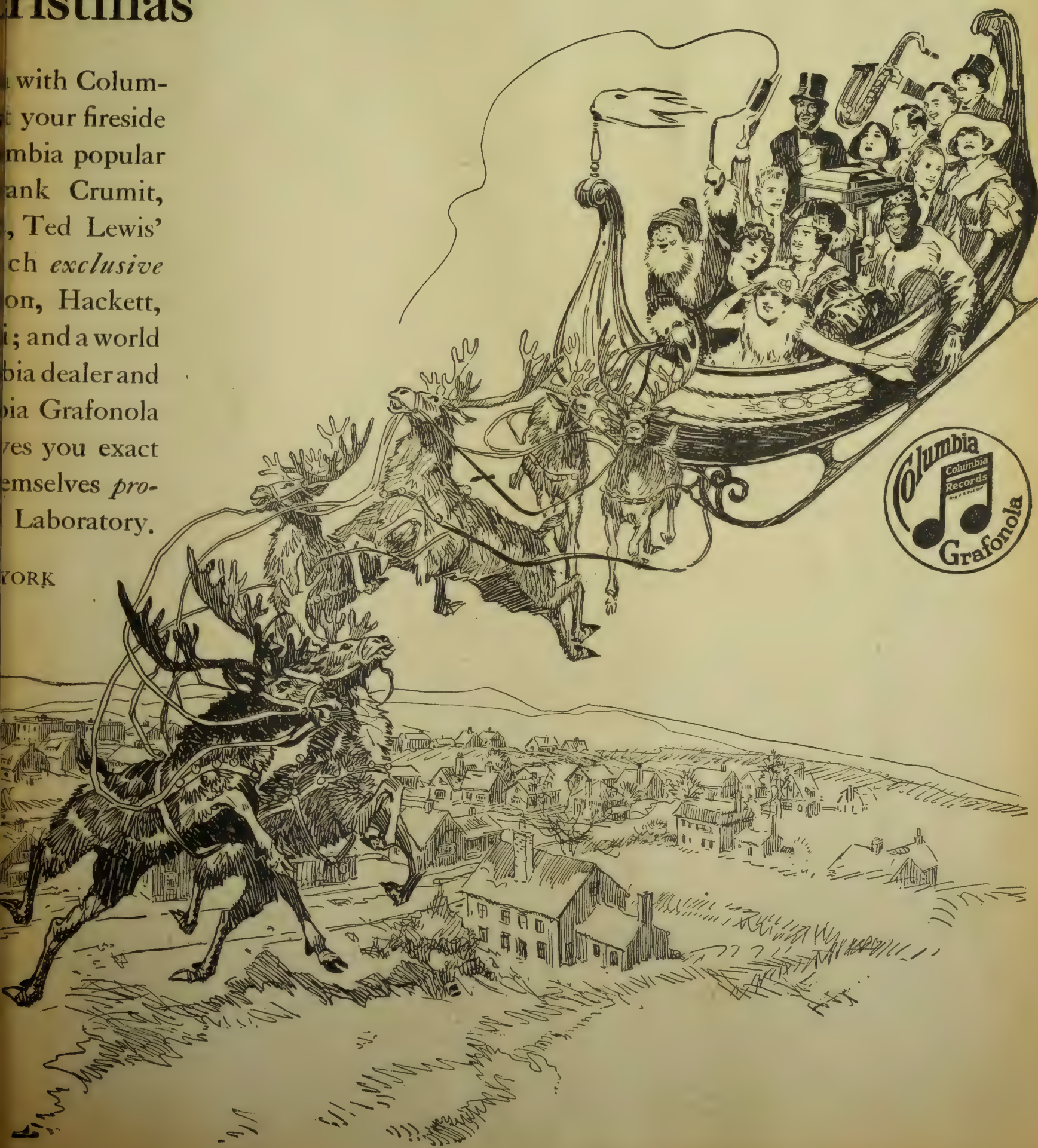


California Cattlemen Decide on Big Issues

(Written for Pacific Rural Press.)

The annual round-up of the California cattlemen themselves occurred at the Palace Hotel on Saturday of last week. The forenoon was spent in listening to prominent men connected with and interested in cattle raising as a business and also men well known in the affairs of our commonwealth among whom, outside of the Association, were Dr. David P. Barrows, President of the University of California, District Forester Redington of the U. S. Forest Service, Wm. Sproule, President of the Southern Pacific Railway, and Professors Wm. R. Camp and P. B. Kennedy of the University.

President Barrows, among other things, emphasized the necessity for greater attention to the health of livestock, stating he was well satisfied the University had efficient men in this line if it was made possible for them to carry out research work in this direction.

The subject of burning over brush ranges was touched upon by Forester Redington, who told why the Department had been obliged to refuse permission. Three reasons advanced were: 1st, Burning prevents conservation of water supply. 2d. Soil erosion follows quickly. 3d. Vegetation is injured. The desirability also of changing the opening of the hunting season from August 15th to September 15th in many regions seemed best as there would be considerable less danger of fire on the latter date.

All speakers' subjects were timely and well received, and will be published in full where the material can be obtained in time.

Membership Is 2707.

After lunch the reports of the various committees were in order and T. H. Ramsay, chairman of the Finance Committee, among other things, said the members now numbered 2,207, of which number 403 were delinquent. This leaves 1,800 members in good standing, who represent a large percentage of the beef cattle owned in the state. The annual dues have been changed so that each member pays $2.50 and an additional sum of 2½ cents for each head of cattle owned. The Marketing Committee, with C. N. Hawkins as chairman, made a very comprehensive report. Among other things, it was shown the Association, under the efficient management of President Bixby and Secretary Stolley, had saved the cattlemen from 4½ to 5 millions of dollars the past season.

It seems to be the fashionable thing to view financial conditions pessimistically at present, but when O. B. Fuller of Los Angeles took the floor and made a speech in favor of immediately subscribing enough to clear off the liabilities and starting the new president, whoever he might be, with a clean slate, he met with ready response. First, he called upon all the zones to subscribe and headed the list with $500 from Zone 5. This example was followed by the other four zones and then by individual subscriptions. In half an hour, more or less, the subscriptions totalled $13,625, which eliminated the debts and left over a thousand dollars in the treasury. Throughout the whole meeting confidence in the future was expressed, not only by word but acts as well.

The Committee on Reorganization also was upheld by the action of the Association, a full account of which will appear.

T. H. Ramsay Elected President.

The announcement of election of a president was followed by the nomination and election of T. H. Ramsay of Red Bluff by acclamation. Mr. Ramsay, who was on the committee on resolutions, which was then in session, was called before the members and accepted the honors and responsibilities of the position in a very pleasing manner.

Directors.

The cattlemen elected for the ensuing year by the various districts follow: District No. 1, M. D. Lack, Sacramento, president; John Boyce, Weaverville; Geo. McBride, Aetna Mills; P. S. Dorris, Alturas; J. Doto. District No. 2: T. H. Ramsay, Red Bluff, president; E. F. Forbes, Marysville; F. Gordon, Suisun; J. Greenlees, Slough House; W. N. Russ, Eureka. District No. 3: C. Z. Hebert, president, Salinas; Howard V. Jack, Chelame, Julius Trescony, Walter Brush, Paso Robles; C. N. Hawkins, Hollister. District No. 4: H. A. Jastro, Bakersfield, president; W. O. Blasingame, Fresno; L. Frankheimer, Stockton; C. B. Orvis, Stockton; W. H. Robinson, Merced. District No. 5: Fred H. Bixby, Long Beach; O. B. Fuller, Los Angeles; G. C. Waterhouse, Ventura; Frank Butler, Bishop; James Sloan, Lompoc.

The members of the Association, on motion of H. A. Jastro, decided to chance the term "zone" to "district" and that in the future all of the various regions would be known by the latter name.

The business of the annual meeting closed the California Cattlemen's Association in convention and terminated the year's labors by a banquet, much enjoyed by all.

Marketing Committee Submits Report.

The year now drawing to a close has been one of almost universal disaster to the cattle interests of the United States. Excessive costs until recently of feed, with rapidly declining prices of beef have caused serious losses nearly everywhere and has put thousands of cattlemen out of business. At the beginning of the year, prices were the highest on record. At the recent conference of officials of the Cattle Association of the twelve Western States held at Salt Lake City, it was learned that the present price of beef steers of the quality now selling in San Francisco and Los Angeles at 10c or better is around 7c in Salt Lake—7½c in Denver—8c in Kansas City and Omaha, and 8½c in Chicago. California today has the most active and probably quality considered the highest market in the United States for beef cattle.

Last spring local conditions were most favorable. The rainfall in most sections of the state had been away below normal. There were very few really fat cattle and an excess of half-fats and stock cattle, many of which required immediate moving.

There was comparatively little pasture left for summer and fall. Prices were dropping in the Eastern market and Eastern buyers were timid. California slaughteres were pessimistic. The stage was all set for a big disaster to our cattlemen. Without this Association, such a result would have been certain. The owner of fat cattle would have sold as soon as possible at rapidly falling prices. The half-fat cattle would have been dumped on the market at any price with very undesirable results.

How Was the Disaster Averted?

Early in May President Bixby sent out notices that fat beef steers should bring 9½c during that month. Soon thereafter an owner of two cars of fat steers in the Sacramento Valley telephoned that 8¼c was his best offer. President Bixby procured a buyer at 9½c, who shipped them to Portland at a small profit. This action alone set the price in that section for several weeks. Mr. Bixby shipped his own steers to Portland and induced others owning good cattle to do likewise. Mr. Jastro of the Kern County Land Company, assisted by shipping several trains East and thereby holding the price of cattle firm. Many others followed his example. A largely attended boosting meeting of cattlemen was held at the St. Francis Hotel in San Francisco at a critical time and cattlemen exhorted to stand firmly for fair prices. A realization that this Association was standing behind the cattle interests had a moral influence on both sellers and buyers. The result was that disaster was averted. Prime beef steers sold for 10c—the bulk of fairly good steers went at 9 to 9½c. Half-fats and stock steers of average quality sold from 8c to as high as 9c. While these prices were somewhat disappointing, they now appear remarkable and saved the California cattlemen from the ruin.

The actual value of the saving to California cattlemen, due to the existence and efforts of the organization can be only approximated. There have been in the neighborhood of 500,000 beef and stock cattle sold in this State since May 1st. It is easily conceivable that the loss on their cattle without this organization might have averaged far more than 1c per pound but at that figure the cattlemen have been saved from $9 to $10 per head or a total of the astounding sum of 4,500,000 to 5,000,000 dollars for one year.

Attitude of Packers.

The attitude of the big packer and slaughterers in California, we believe, is friendly to our interests. Whatever the conditions are that prevail in other sections, there is competition among buyers in California. It must be remembered, however, that while these people are competing with one another in buying, they are also competing in selling. And, therefore, they are compelled to buy as cheaply as possible. They are interested in our prosperity and will be glad, we believe, to pay good prices, if assured that their competitors cannot break the market and undersell them.

That brings us to the consideration of a plan for the permanent stabilizing of prices, which, it is believed, will thoroughly accomplish, in an organized, businesslike and scientific manner, what was partially achieved this year by this Association and its officers in a more or less disconnected manner and at considerable personal risk and sacrifice by a few.

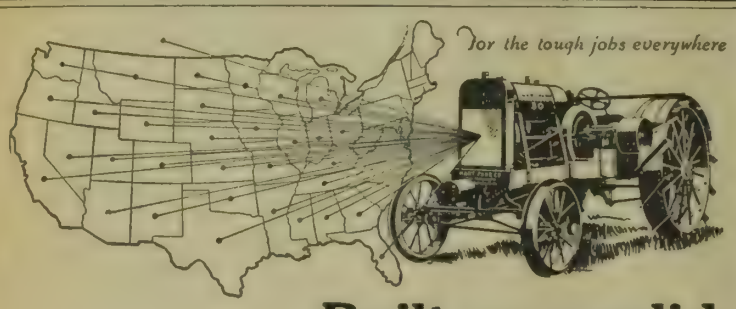
The basic principle, as tersely expressed by President Bixby, is, that whoever controls the surplus of any commodity, controls the price. The usual spring surplus of beef cattle in California is only about 25,000 head. Heretofore, the buyers have controlled this surplus and therefore the price. The plan proposed means that the Association shall control the surplus and therefore the price.

A Guarantee Fund.

Briefly, the plan is to establish a guarantee fund of $250,000, not by assessment, but by the voluntary action of broad-minded and far-seeing members, which fund should be under the control of a select committee. This committee will gather data from which will be determined from week to week during the congested period, what price good fat steers will bring by shipment to eastern and northern markets. It will have power to employ expert agents, who will pass on, select and assemble cattle for such shipment and will arrange for their transportation in train loads at minimum expense.

California cattlemen are indeed fortunate because the fact that when the bulk of their cattle are fat in the spring, they have no grass cattle in competition except from South Texas and the entire country is their market. The plan proposed to dispose of the comparatively small surplus existing at this time is far reaching, and cannot fail to result in stabilizing and strengthening the market during the entire year. We cannot refrain, at this time from again urging

(Continued on page 806.)



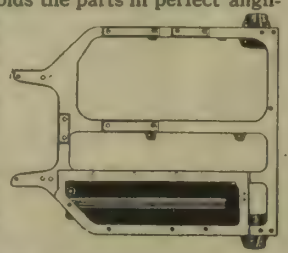
Built on a solid, one-piece, cast-steel frame

The old Hart-Parrs were the first tractors to conquer the virgin prairie sod of the Northwest. The Hart-Parr of today is working in the flooded rice fields of the South where it was once thought a tractor would never run. It is pulling its three fourteen-inch plows up the Montana Hills, over the tough sod of Nebraska plains. Wherever there are difficult tractor jobs to do, the Hart-Parr is a favorite.

Of course Hart-Parr 30 must have abundant power to do this, but it is a sturdy tractor from start to finish.

Parts Always in Perfect Alignment No Bend—No Twist

Its solid, one-piece cast steel frame makes an engine bed solid as concrete. There is no bend, no twist to this frame. It always holds the parts in perfect alignment, and when it is necessary to put on new parts, they always fit perfectly. The tremendous twists and strains of a rough field do not harm the Hart-Parr 30.



Get the complete story of the Hart-Parr as told in our catalog. Write for a copy today.

Many of the old Hart-Parrs that plowed the virgin prairies of the Northwest are still in use today. The great grand-daddy of all Tractors was old Hart-Parr No. 1, built in 1901.

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Founders of the Tractor Industry
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A POWERFUL STURDY THREE-PLOW KEROSENE TRACTOR
HART-PARR 30
BUILT BY THE FOUNDERS OF TRACTOR INDUSTRY

Livestock and Dairy Notes

The Dairy.

Many dairymen up the Sacramento Valley are grinding their grain for cow feed instead of selling it at current prices.

The Lewis Company has sold to Joe Haflinger of Hollister an unusually fine registered bull to head his herd of thirty highly bred Holsteins.

Hugh Richards has at his Denair ranch two 2-year-old Jersey heifers bought from Dr. Belknap's herd at San Jose that are making better than 3 lbs. fat a day two months after freshening.

T. J. Gist and Sons have sold a young son of King Sadie Vale Rose to Silvera & Menez of Tulare. Gist's Milka Lady Scott has just completed a 7-day record with 20.67 lbs. butter.

W. J. Higdon of Tulare has sold to Frampton Bros. of Artesia a young bull sired by Kind Korndyke Pontiac 20th, out of a 35.46 lbs. granddaughter of the King of the Pontiacs.

H. J. Stammerjohan of Turlock has purchased another daughter of Jane De Kol of Linwood bred to Sir Aaggie De Kol 2d. This makes four of Jane's daughters now owned by Six Brothers' Dairy.

In a report on the draft sale of Milking Shorthorns from the Duke of Westminister's herd the average on 105 head was $1118. The champion cow, Bare Charm, brought $4590. She is going to an American buyer.

Betsy Lamb Prilly, prize cow of H. E. Vogel, Westlawn Stock Farm, was sold for $4000 at a recent dispersal sale. A. W. Morris and Sons of Woodland purchased the animal. Seventy-five cows and bulls were sold at prices averaging $500.

The American Guernsey Cattle Club in commenting on the recent record of a Florida cow of that breed states that she produced enough milk daily to supply 16 families with milk and her yearly butter yield would supply one family with enough butter for 16 years.

"Food Values of Dairy Products" published by the California Dairy Council contains a very large amount of information relative to the importance of milk as a food for humans. It shows clearly and conclusively the necessity of milk in the diet especially of children.

G. H. Ball of Tulare has recently completed some tests indicating persistency. Trout Brook Starin made 14.48 lbs. in 7 days ten months after calving, and Prilly Queen Meadmore Segis, a senior yearling, made 10.79 lbs. six months after calving. Ball's cows have given him 7 bulls out of 9 calves dropped.

At the annual meeting of the Stanislaus County Holstein Breeders' Association, A. M. Bibens was re-elected president, H. E. Cornwell vice-president and E. M. Morrow secretary. A purchasing committee consisting of W. M. Way and E. E. Freeman was appointed to buy the feeds needed by the members in wholesale quantities. It is thought considerable saving can be effected in this way.

The Hollow Hill Farm at Colton sold the following from their herd of Guernseys recently: A bull to Alfred Peterson of El Centro, sired by Effie's King. This calf was first in Get of Sire at Sacramento this year. Hans Mortenson of Santa Rosa bought a bull calf sired by King of Holly Hill, he by Itehem's Dairy May King of Longmoles, out of Caroline of Chilmark, with a record of 722 lbs.

Little Beauty 2d, 45221, owned by the Brant-Rancho of Owensmouth, California, is now listed among the 26 Guernsey cows that have four or more times fulfilled the requirements for the Advanced Register. In the California Dairy Cow Competition, Little Beauty 2d, 45221 was credited with a production of 9777.0 pounds of milk and 575.39 pounds of butter fat in 300 days, giving her third place in this competition of all breeds.

Three public sales of the very highest type of registered dairy cattle are scheduled for the latter part of January and the first week of February. The first will be the registered Guernsey herd at Revada Ranch, Yountville, Napa county, on Thursday, January 20, 1921. The next will be the entire herd of Holsteins owned by Jas. J. Jeffries at Burbank on Thursday, February 3d, and the third sale that of the Holstein herd of W. A. Thompson of Holtville, to be held at Hynes, Los Angeles county, on Saturday, February 5th.

Sam H. Greene, Secretary-Manager of the California Dairy Council announces a series of 16 meetings for the last of the old year and opening of the new at various points in Southern California embracing the territory from El Centro to Van Nuys. The subjects cover the entire field of dairying from publicity to caring for the cows and will be handled by experts in each particular line. Practical dairymen and creamerymen, experts from the College of Agriculture and U. S. Department of Agriculture are on the program. Details and dates next week.

The first report on the second statewide dairy cow competition which commenced September 1 of this year was made today by Professor F. W. Woll, in charge of the competition. At the present time 25 different breeders or dairy farmers have entered 171 cows, of which 73 are purebred and 98 are grades. Among the purebreds Holsteins lead with 38, followed by Jerseys 23, and Guernseys 12; among the grades Holsteins lead with 48, followed by Jerseys 15, Guernseys 5, Shorthorns one, and not specified 29. Los Angeles County has the largest number of herds entered with 7, followed by Stanislaus 4, Humboldt, Riverside, and San Joaquin 3 each, and Contra Costa, Del Norte, Imperial, Orange and Yolo with one each.

Beef Cattle.

The sensation of the Pacific International at Portland was the Shorthorn heifer, Mary Ann Rush, developed and exhibited by the University Farm at Davis. This blue ribbon winner was first in a very large class and was presented to the University by Hon. B. F. Rush of Suisun.

At the annual meeting of the California Cattlemen's Association a telegraphic bulletin was received from Washington, D. C., announcing that Vice-Governor Edmund Platt of the Federal Reserve Board today approved the Young Bill, authorizing that $100,000,000 be used through the Federal Land Banks in rediscounting notes secured by livestock when guaranteed by a responsible bank. Platt so informed Representative Young of North Dakota, father of the bill, in a letter. The measure would grant relief to cattle raisers and the livestock industry in general.

DUROC-JERSEYS
At Bargain Prices
5 April Boars out of Taxpayer Sows and sired by Western Pathfinder, a half-brother of Queen of Pathfinders, the Grand Champion Duroc sow at Sacramento and Los Angeles this year. As desirable in type and size as in breeding.
HIND RANCH CO., Atwater
J. H. HEENDON, Supt.
3 miles south of Station.

SHIRE HORSES
For Size, Bone and Quality
More is required of Horses than ever before hence the need of more size, weight and power. Large geldings never were higher. Shire Geldings usually top the market. Use Shires to raise larger and better horses.
For information on Shires, write W. G. Lynch, Secretary, The American Shire Horse Association, Tonica, Illinois.

Mammoth Dispersal Sale
FALFADALE FARM DUROCS
Everything will be sold. Included in the offerings is the "Sensational Boar"
GREAT ORION SENSATION JUNIOR
He was Grand Champion at Tulare, Los Angeles and Riverside, and Reserve Grand Champion at Sacramento.
40 — 40 Sows and Gilts Bred to the Grand Champion — 40 of his best spring pigs first week in February — 40
B. H. WILKINSON, Mgr. PERRIS, CAL.

JAVA COCOANUT CAKE MEAL.
Made where the cocoanuts grow.
Sun-dried—not smoky or rancid.
Carried in modern ventilated steamers. Shipped in solid cakes.
Inspected and ground in San Francisco
Has your past experience in feeding cocoanut cake meal been satisfactory?
We particularly request a trial of our meal by those who in the past have been disappointed.
Your feed dealer may not have our brand in stock but can obtain a large or small lot promptly.
Trade INSULINDE Mark
Look for it on the sacks
Java Cocoanut Oil Co., Ltd.
Dept. 10
16 California St., San Francisco
Largest manufacturers cocoanut products in the world.

DIGESTER TANKAGE
Send for Sensible Folder on Feeding Hogs
WESTERN MEAT COMPANY
Animal Food Dept. 704 Townsend St., San Francisco

GUASTI BERKSHIRES
Weaned pigs, both sexes, from sows that farrow large litters and raise them. Priced reasonable — they are money-makers.
ITALIAN VINEYARD COMPANY
ALEX. M. WILSON, Supt. Guasti, Calif.

FORTUNA HERD OF POLANDS
We offer a few choice bred gilts sired by THE CALIFORNIAN, whose get won more firsts at Sacramento than all other western boars together. Also weaned pigs. Satisfaction guaranteed.
HUGH C. SHINN, Tulare, Calif.

WINSOR RANCH DUROCS
Young boars ready for service; also fall gilts by WINSOR'S GIANT ORION and GREAT SENSATION 3RD. Priced to move.
MORRIS C. ALLEN, Mgr. CARL WOOSLEY, Hog Dept.
Bonita, Calif.

HAVE YOU SEEN THE
Grand Champion Duroc State Fair 1920
HERD SIRE CHOICE WONDER III { Mahaska Wonder { Great Wonder / Grand Lady 20th; Grand Lady 72nd { Grand Model / Rose
Write for yours from the most select herd in California.
Littermate (gilt) topped Ed Kern's Last Sale at $5600
V. F. DOLCINI, JUNE ACRES STOCK FARM, DAVIS, CALIF.

El Dorado Ranch Ayrshires
Young Service Bulls for Sale
From High-Producing Strains
Tuberculin Tested.
Prices Reasonable—Write for Them, or Come and See Us.
EL DORADO RANCH, H. P. Faye, Owner
F. M. LOHSE, Manager
GRAFTON P. O., Yolo Co., California. Ry. Station, Knight's Landing

THE TAMWORTH, KNOWN AS THE BACON HOG.

(Written for Pacific Rural Press by Thos. F. McConnell.)

The man who loves to delve into the ancient history of breeds of livestock will find that mention of the Tamworth hog extends as far back as any of the others. In fact is has been credited by practically all writers and authorities with being of ancient English origin, although E. N. Ball made the statement at one time that the Tamworths was originally an Irish breed and was introduced into England in 1812 by Sir Robert Peel. Mr. Ball is alone in his assertion and common belief gives the native locality of this breed as the midland counties of England.

Some writers think the Tamworth has had no admixture of foreign blood and that the breed is nearer the wild hog than any other. We mean by this that all improvement has been made by selection and mating of the best individuals of the type.

After all is said about the origin of the breed, what are they? They are practically unknown in California when compared with others of the more popular breeds. There are, however, several small but excellent herds in the state and there was a good exhibit of them at the state and other fairs in California this fall made up of some eastern herds and Dr. Summerfield's of Santa Rosa. To be explicit they are the English bacon hog supreme and in England and some localities of Eastern Canada they have been raised for this ultimate view for many years.

It is not within the province of any one to say positively that some certain breed or type is the best without danger of finding they will be on "thin ice" at times, but when it comes to the production of bacon and hams that bring the highest price in London and some Canadian markets we find that a large percentage of the cured meat was made from Tamworth hogs.

First Impressions.

The breeder or market hog-raiser, who is accustomed to the old lard types or later "big types" of the American hogs are rather inclined to "holler out" "tule rooter" and "rail splitter" when they see their first specimen of the breed. The snout impresses one as being very long, but it should also be noticed that there is no loose flabby jowl and that the eye is clear and large. Next the shoulder is noted as being smooth and well-covered with firm, hard flesh, the back long, arched and smooth, but not wide. The sides are long and deep, furnishing exceptionally good cuts of bacon. The hams are long, narrow and rather thin. The bone is finer than is fashionable at present but is unusually strong. The general impression is that of a rather tall, rangy, long, thin rather than wide, but withal smooth animal with lots of quality. The flesh has a very large percentage of fine-grained lean meat and they kill exceptionally well with but a small proportion of waste.

California has a vast alfalfa acreage and a field of this luxuriant legume is particularly fitted to be the home of the Tamworth as they are especially good grazers. The writer has seen them making a living on the Laramie plains in Wyoming, where it was supposed nothing but sheep or goats could exist. It could not be said, however, that they were thriving like they would on good alfalfa, supplemented with a little grain.

Their appearance would indicate to many that gain in weight would be approximately slow, but such is not the case as experiments show they produce one hundred pounds of gain from the usual amount of feed.

The size of the Tamworth compares favorably with other breeds. While they are up on rather long legs they weigh heavy and are firm fleshed and hard under usual feeding conditions. The average weight of all breeds is much below the maximum and the Tamworths are no exception, as there is a record of a boar of the breed in England that weighed when alive, 1607 lbs. at less than 3 years of age with a dressed weight of 1.330 pounds. The average is probably one-half this at the same age.

MILKING MACHINE AND FEW BACTERIA.

(Written for Pacific Rural Press.)

The milker had a quarrel with the hired man and the milker quit without notice. There were 45 cows of which 36 had to be milked. This was the situation some time ago on a dairy ranch in Los Angeles county. About five of the cows were registered Holsteins and they at least had to be properly milked. Did the owner worry? Did his wife or the hired man help milk the three dozen cows? Not at all. And this dairyman doesn't think he has earned a breakfast until all those cows are milked by himself. He has a milking machine about three weeks old, one of about five of its kind in the United States. With a unit on each of two cows he milks the entire herd in two hours and says that could be reduced to 90 minutes. Once a day it takes 30 to 45 minutes to clean and sterilize the machine. In evenings after milking, cold water is run through it and this is followed by warm water. In mornings after milking, the machine is taken apart and washed in warm water with washing powder. The pieces are put into a metal tank, the rubber parts with them, but kept together in a bucket. Fire under the tank keeps the temperature at 160 degrees for half an hour, a thermometer being used. The machine is designed for dairies where the milk-house, cooler, etc., are close to the barn so milk would be piped direct to cooler. On this ranch it has to be carried, thus exposing it more. Withal, the bacterial count since the machine was installed has been between 10,000 and 30,000—almost good enough for certified milk. Of course, this sells in the Grade A class.

An advantage of this machine is that it may be left on the cow without injury after she has been milked dry. A milking-machine formerly used was discarded because the cows developed garget so generally that no Grade A milk could be produced. This, however, was not the fault of the machine. Its vacuum gauge was faulty. Whereas, fifteen inches of vacuum were desired, it actually went up to 21 inches without showing it, and that caused trouble. The machine used at present has frequently been left working on the cows as much as 20 minutes, though the heaviest milkers are dry in half that time. With such a machine, no stripping is necessary if it can be left on long enough. If three units were used instead of two the cows would be milked perfectly clean by leaving each one on a longer time. With two units, there is time to spare so the operator actually does strip some or all of the cows. As it is, the machine milks the cows drier than most hand milkers.

The pulsator of this milking machine is worked by a gear which moves slides, off and over parts. The milk is delivered into a central tank equipped with a "detector" or glass gauge to indicate how much the cow is giving. Thence it would flow by pipe to the milk house if the latter were nearby. The pipe is in three-foot lengths, easily taken apart and washed. The teat cups and all rubber parts are heavier than common. On each unit is a small hole through which suction is automatically relieved about two pounds if it gets too high.

From the above it is seen that it is possible to have clean milk from cows milked by a machine and the operation completed without manual assistance.

Supervisor Henry Ayer of Santa Clara county has purchased 1,500 cattle at Naco, Texas.

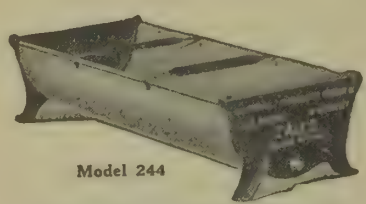
A Hog isn't a "Live Catch Basin"

When you feed your hogs dirty feed and foul water—you make your hogs a catch basin for filth and disease germs.

Install a full set of Calco hog equipment, and your hogs will have clean feed and fresh, clean water.

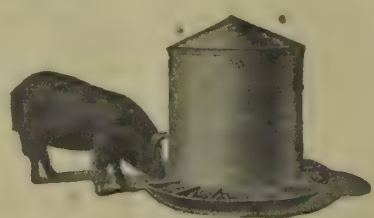
Discard all the disease traps that you are using. It will pay—and pay you well.

Write for price lists and sizes.



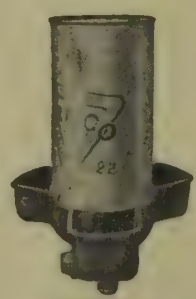
Model 244

Calco Hog Trough.—No disease catching cracks and crevices. Easy to keep clean and sanitary. Made in ten sizes.



Model 256

Calco Self Feeder for Hogs.—All metal construction automatically prevents disease germs collecting. Made in five sizes.



Model 269

Calco Hog Fountain.—A sanitary, automatic fountain for providing a constant supply of clean, fresh water.

CALIFORNIA CORRUGATED CULVERT COMPANY

417 Leroy Street
LOS ANGELES

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Your Private Cow Doctor

If cows could tell their feelings, many a serious illness would be prevented, and constant milk losses would be saved.

Milking cows, particularly, are subject to many ailments that are first manifested only in a reduced milk yield.

Such cow ills you can treat yourself with the aid of Kow-Kare, the great cow medicine. At the first sign of reduced milk flow try Kow-Kare. Use it according to directions and watch the story the milk pail tells.

Dairymen everywhere know the value of Kow-Kare both in preventing disease, and in treating such ailments as Barrenness, Abortion, Retained Afterbirth, Scouring, Lost Appetite, Bunches.

No cow barn should be without Kow-Kare, your private cow doctor. Sold in in 70c and $1.40 packages by feed dealers, general stores and druggists.

Write for free book, "The Home Cow Doctor."

DAIRY ASSOCIATION CO.
LYNDONVILLE, VT.

GERMAIN SEED CO.
KOW-KARE AND BAG BALM,
Distributor for California.
San Francisco, Cal.

HOLSTEIN CATTLE

Mr. Datus Clark, Member Farm & Market Council, Albany, N. Y., writes:

"Twelve years ago, my Holstein start cost $1,100. The thinking farmer can decide as to the financial end. I now have eighty head and have sold as many dollars worth of cattle as I have bought and have made much more in milk than I would have with scrub or grade cattle."

Send for Free Booklets

The Holstein-Friesian Ass'n of Amer.
230 American Bldg.,
Brattleboro, Vermont

REGISTERED HOLSTEINS

Creamcup Herd offers service bulls and bull calves of 34-lb. breeding. Females offered for foundation stock.
Tuberculin tested.

M. M. Holdridge, San Jose, Cal.
R. D. "A," Box 437,
Two miles out North First Street.

HOLMES STOCK FARM
MODESTO.
Registered Holstein Friesians
Prize winners at all the Shows. Inspection invited and satisfaction guaranteed.
Write for prices.
R. L. HOLMES, Prop.

CALF PROFITS

Are you getting them? Calf profits mean more to you now than ever before.

BLATCHFORD'S CALF MEAL has been known since the year 1800 as the complete milk-substitute. Costs less than half as much as milk—prevents scouring—promotes early maturity. Sold by dealers, or direct from us.

Write for New Data *See actual figures showing how to increase your calf profits.*

COULSON CO. • • • Petaluma, Cal.

Dealers in PAPER | Blake, Moffitt & Towne
37-45 First St., San Francisco
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Blake, McFall Co., Portland, Ore.

OBTAINING A START WITH PUREBREDS

There are thousands of farmers all over the United States who are breeding scrub cattle which, if the cost of feed, pasture, and labor incidental to their keep were figured, would show considerable loss. When these same farmers are approached and efforts made to interest them in the purebred business, they state that it takes too much capital to start in the purebred business. The same argument will apply to anyone wishing to start farming or any other line of business if it applies to the purebred business.

The successful man of the twentieth century is he who has more energy, initiative, and courage than his neighbors.

In almost every section of the United States, there are local associations of breeders of the various breeds of live stock which are formed for the purpose of encouraging and assisting other breeders of the same stock. Most of these associations conduct sales and otherwise assist in the disposal of the surplus stock.

Almost all of the larger breeders started in a small way with the purchase of a few head. What may be accomplished in a short time is well illustrated by the following facts related by Professor E. L. Potter of the Oregon Agricultural College.

In 1914, twenty-five hundred dollars was appropriated by the officials of the college to purchase a few purebred Hereford cattle to form a nucleus of a herd. The college was growing and a herd became necessary for the instruction of the students. The amount appropriated was not much, but Professor Potter was determined to make the best of what he had available and with these funds purchased eight head, seven females and one bull. At the present time they have a most excellent herd of twenty-five females and the herd bull. Not another female has been purchased, the entire herd having been built up from the original eight head. They not only have this beautiful herd, but have sold five thousand dollars worth of cattle in the past six years, thus double the original investment has been realized in sales, and more than three times the original number of cattle purchased remain on the college farm.

This instance cited is not exceptional; in fact, almost every breeder of purebred stock has had practically the same experience. It is true that it would cost more to start now than it did six or ten years ago, but the progeny are worth more than they were in those times also. Two or three or a dozen head may be purchased and handled practically the same as other cattle on the farm, and it will be found that the purebreds require less feed than the scrubs. Take care of the calves, grow them out in good shape, and you will have no need to worry about the sale of them.

THE HOLSTEIN CONSIGNMENT SALE AT TULARE.

December 2nd witnessed the disposal of 68 head of registered Holsteins at the Fourth Tulare Sale. The top animal brought $600 while the average for the whole lot was $245.25. Burr Farms of Los Angeles bought 23 head at an average price of $236, several of them fine individuals.

As averages go, this sale is to be written down a success, for the writer took time to interview a number of breeders the day after the sale and the general opinion seemed to be that, on the average, the consignments brought all they were worth. Some good animals—and there were some very good ones—went below real value. Some poor ones—and there were some very poor ones—brought more than they were worth. The average, therefore was about what justice would seem to dictate.

The Western Breeders' Journal is authority for the statement that Bonner county (Idaho) has sent ten cooperative community shipments of cattle to the Union Stock yards at Spokane, during the past year.

Penobscot Ayrshires

Are good "rustlers," hardy and long lived. High butter fat producers. ¶ Herd founded on imported Canadian stock. All ages for sale at reasonable prices.

Send for booklet "The Ayrshire Cow in America"

The Penobscot Farm
Cool, Eldorado Co. Calif.
Nine miles from Auburn. Visitors welcome.

Read what your neighbors say about Jerseys

"THE KEY TO DAIRY PROFITS" is a Jersey book that tells of the profits farmers the country over are making with Jerseys—THE PROFIT BREED. The letters of neighbors of yours are probably in it—the letters of several people in your county or state *are* in it.

Send for this free book and read what men you actually know say about Jerseys. That's the kind of proof that counts. Write now, whether you are interested in one cow or a hundred. We'll include a copy of "Jersey Facts," also.

THE AMERICAN JERSEY CATTLE CLUB, 324 Y W. 23d St., New York
An Institution for the Benefit of Every Jersey Owner

JERSEYS

LEONARD FARM JERSEYS
Bulls for sale from Register of Merit Cows.
Write for information.
W. J. HACKETT,
CERES, CALIFORNIA

PUREBRED JERSEY BULL
Dropped September 9, 1919
Sire—FINANCIER'S REMUS, 104,413
Dam—ROMULUS LEGACY LORENE, 294,130
Record 457 lbs. butterfat.
T. B. Purvine & Son
Petaluma, California

ABORTION IN CATTLE
CAN BE TREATED SUCCESSFULLY AND
YOUR COWS MADE PROMPT, REGULAR BREEDERS BY
STERILOID

TREATMENT: If STERILOID is used at the first sign of abortion the cow will go her full time and have a healthy calf. If your cows or heifers do not come in season, or fail to get with calf, use STERILOID. Cows get with calf after only one treatment. Write today for FREE BOOK. It explains the causes and symptoms of Abortion and tells how to treat Abortion, and make your cows regular, healthy breeders with STERILOID. Also contains letters from breeders who have used STERILOID successfully.

STOP LOSING CALVES

GUARANTEE: We will refund money in every case when STERILOID FAILS to make good. PRICE, $1.00 plus 4c tax. Mailed Postpaid, in plain wrapper.

MARTIN REMEDY COMPANY, Dept. P, 398-408 Columbus Ave., New York City. Reference—Colonial Bank.

HILLCREST STOCK FARM
Shorthorn Cattle
Won at Sacramento Both Championships
7 Firsts and 5 Second Prizes
Shropshire and Merino Sheep
RAMS AND BULLS FOR SALE
Single or in Carload Lots
T. S. GLIDE, Prop. DAVIS, CALIFORNIA

Registered Herefords
FAIRFAX and REPEATER Stock
SIERRA VISTA VINEYARD CO.
Minturn, Calif.
On Highway 16 miles south of Merced.

CLARK, HUNTER & CLARK
LIVESTOCK AUCTIONEERS
915 I St., Modesto, Calif.
Registered Hog Sales a Specialty

ABSORBINE
TRADE MARK REG. U.S. PAT. OFF.

Reduces Strained, Puffy Ankles, Lymphangitis, Poll Evil, Fistula, Boils, Swellings; Stops Lameness and allays pain. Heals Sores, Cuts, Bruises, Boot Chafes. It is a SAFE ANTISEPTIC AND GERMICIDE

Does not blister or remove the hair and horse can be worked. Pleasant to use. $2.50 a bottle, delivered. Describe your case for special instructions and Book 5 R free.

ABSORBINE, JR., antiseptic liniment for mankind, reduces Strains, Painful, Knotted, Swollen Veins. Concentrated—only a few drops required at an application. Price $1.25 per bottle at dealers or delivered.

W. F. YOUNG, Inc., 86 Temple St., Springfield, Mass.

MORE PORK IN LESS TIME

Duroc-Jersey hogs have a tendency to put on great amounts of pork at an early age. They are easy-feeding animals, and raise large families. These hogs were introduced less than 50 years ago, and yet in 1918, 51% of all the hogs marketed in the country were "Duroc-Jerseys." They are uniformly red in color. Increase your profits by raising Duroc-Jersey hogs.

Write for "DUROC-JERSEY HOGS ARE PROLIFIC AND PROFITABLE"—sent free to hog-raisers by the largest swine record association in the world. Over 12,000 members.

The National Duroc-Jersey Record Association. Dept. 120 Peoria, Ill.

JERSEY FUTURITY STAKE.

The California Jersey futurity stake is to be contested annually in authenticated yearly test in class for heifers under 30 months of age at freshening.

The entries shall close on December 31 of each year, but all heifers must be entered before six months of age, and freshen by or before two years following.

Entry fee shall be $6.00 or $8.00, divided as follows: One dollar when heifer is entered if under six months of age, or $3.00 when heifer is entered, if over six months of age and under one year. Five dollars when heifer starts on test, at which time name and registration number must be given. No entry fees shall under any circumstances be returned to the breeder or owner. Th entry fees with such additional amounts as organization or individuals may contribute shall constitute the amount of the annual stake.

The stake shall be divided into five prizes, as follows: 1st, 35 per cent; 2d, 20 per cent; 3d, 20 per cent; 4th, 12½ per cent; 5th, 7½ per cent, and awarded as follows: First money to heifer making the greatest amount of butterfat over the amount required for entry for heifer of her age in American Jersey Cattle Club register of merit; second money to next greatest amount, and so on for third, fourth and fifth moneys.

Entries so far received at the Secretary's office follow: J. W. Coppinni, Ferndale, two heifers sired by St. Mawes of Ferndale; Bonnikson Bros., Ferndale, five heifers sired by Financial King B; Guy H. Miller, Modesto, five heifers sired by Jap's Perfection Owl; E. J. Wilson, Ripon, one heifer sired by La Creole's Sir Oxford, one heifer sired by Merry King Pogis; E. E. Greenough, two heifers sired by Fairy Fern's Noble 9th; H. McComas, one heifer sired by Valet's Peter of Lockeford; M. Fortini, Orland, one heifer sired by Golden Maidikin's Boy.

Altogether eighteen heifers have been enterd in the 1920 stake, but really there are enough good Jerseys in California so that three times that number should be found in the list. Some of the prominent breeders are not represented and we are certain this is an oversight on their part. The time for the close of the entries for this year is fast approaching and all breeders of purebred Jerseys having eligible heifers are urged to send their entries to Prof. V. C. Bryant, Berkeley, Calif., at once, as according to rules the limit is December 31st.

CALIFORNIA CATTLEMEN DECIDE ON BIG ISSUES.

(Continued on page 802.)

upon cattlemen everywhere the importance of not overstocking in order that a larger proportion of really fat cattle and less of half-fats may be marketed. If every stockman in the state who is overstocked would reduce his herds accordingly, he would not only stop the wearing out process on his land, but would make more money for himself and be a help instead of a harm to the industry as a whole.

Reorganization.

That the By-Laws be amended to the extent that the County Secretaries collect all dues, and every quarter remit to the State Association a statement with its proportion;

Further, that the By-Laws be so amended that the election of Directors may be held prior to or at the time of the Annual Convention, either at the call of the District, or at the suggestion of any three counties within the District.

Resolutions Committee.

Resolved, That this Association endorse the plan of State inspection of all carcasses of animals slaughtered for food purposes, and careful inspection of all slaughtering places, to the end that the same may be kept sanitary; that the enforcement of such measures be placed with the Bureau of Animal Industry of the Department of Agriculture.

Resolved, That a committee of three be appointed to meet with the Forest Service, and go over all forest ranges, and assist in classifying said ranges.

Resolved, That we unqualifiedly favor a tariff for the protection of our meat and meat products. We favor such legislation by the National Government as will tend to increase the borrowing power of livestock owners.

A PROSPEROUS YOUNG ORGANIZATION.

The Stanislaus County Jersey Breeders' Association held their regular monthly meeting at Modesto last Tuesday. Organized only seven months ago they now have 21 members and are growing.

A calf club has been successfully launched with 15 purebred heifer calves owned by as many boys and girls.

The secretary announced that a movement is under way to secure a field man to devote his whole time to organization work in the three Pacific Coast states.

The association has eleven calves entered in the State Futurity Class.

LIVESTOCK DIRECTORY.

Rate, 4c. per word. Cash must accompany all orders.

SWINE.

Duroc-Jerseys

DUROCS—BIG-TYPE—HIGHEST QUALITY—popular blood lines. Herd headed by Johnson's Defender, Jr., and Western Pathfinder. Bred sows and gilts and young boars for sale at moderate prices. Greenwood Farm, Witherow & Stafford, Live Oak, Cal.

BRED SOWS AND GILTS and young stock. Pathfinder and Great Wonder I Am breeding. Monthly payments, if you wish. Derryfield Farm, Capital National Bank Bldg., Sacramento.

BOYANNA BIG-TYPE DUROCS—Breeding stock; priced right for sale. Inquiries invited. Satisfaction guaranteed. J. Boyd Harrold, Dixon, Cal

BIG-TYPE DUROCS—Herd headed by California Orion King. Am offering excellent young boars at right prices. Inquiries invited. Harvey M. Berglund, Dixon, Calif.

GOOD SPRING AND FALL GILTS—Strong in Pathfinder blood, sired by Pathfinder Wonder. Hamlin Farm, Box 697, Sacramento.

WINSOR RANCH DUROCS—Young boars and some top gilts bred to WINSOR'S GIANT ORION—Morris C Allen, Mgr., Bonita, Cal.

REGISTERED DUROCS — Choice gilts and weanlings, either sex. Breeding and satisfaction guaranteed. H. E. Boudier, Napa.

BIG-TYPE DUROCS — Gilts and boars of Great Orion Sensation breeding. Falfadale Farm, Perris, Cal.

FOR THE BEST in Durocs, write June Acres Stock Farm, Davis, Cal.

Poland-Chinas.

ELDERSLEY AND SHADY BROOK Farms big-type Poland-Chinas that make money for the Feeder, the Farmer and the Breeder. Prices reasonable. J. H. Ware, Brown's Valley, Calif.

POLAND CHINA BOARS—Big type. Two Iowa bred boars—weigh about 350 lbs. Big bargain because of size. W. J. Hanna, Reaoaks Ranch, Gilroy, Cal.

TOHOQUA POLAND-CHINAS—A good tried boar and some choice young breeding stock for sale. Ferguson & McKaig, Orland, Cal.

WAUKEEN HERD POLAND-CHINAS — Home of King's Big Bone Leader. A few service boars for sale. Les McCracken, Ripon.

LAKESIDE STOCK FARM—Large, smooth and big-boned Poland-Chinas. Geo. V. Beckman & Sons, Lodi, California.

REGISTERED POLAND-CHINA SWINE — Prize-winners. Finest stock in the State. Bassett Bros., Hanford, California.

BIG-TYPE POLAND CHINAS—Stock of all ages for sale. Houck & Lewis, Winton, Calif.

POLAND-CHINAS—Strictly large type. J. F. Lehman, Lodi, Cal.

REG. BIG-TYPE POLAND-CHINAS—Service boars; weanling pigs. J. H. Cook, R. 4, Chico.

LIBERTY HERD—Service boars. January weanlings. J. W. Raymer, Soledad.

Berkshires.

ANCHORAGE FARM BERKSHIRES
Orland, Calif.
HERD BOARS—STAR LEADER, Junior and Reserve Grand Champion of the World. The Grand Champion carload of barrows, over all breeds, at the San Francisco Live Stock Show, was sired by a son of Star Leader, NATOMAS BARON DUKE, grand champion of California. For sale, bred gilts, open gilts, young boars and weanling pigs. Write for booklet, prices and list of sows

GRAPE WILD FARMS—Berkshires—Guernseys. Big-type Berkshire Boars of serviceable age, sired by Big Leader—greatest son of Grand Leader 2nd. Panama-Pacific Grand Champion. A. B. Humphrey, Prop., Escalon.

BERKSHIRE BOARS—Real herd sires. We are offering these at sacrifice prices to move them quickly. Write for description and price. R. J. Merrill & Son, Morgan Hill, Cal.

QUALITY BERKSHIRES — Young stock, both sexes. Geo. P. Upham, Martinez.

REAL GOOD BERKSHIRES — Cholera immune. Frank B. Anderson, Sacramento, Cal.

GLOBE "A1" FEEDS
—Judge them on Business Principles!
FEED FOR SWINE, STOCK AND POULTRY
ASK YOUR DEALER

OVER TWO MILLION CALVES
Protected against Blackleg for LIFE with ONE treatment vouch for Purity Blackleg Aggressin (Germ-Free Vaccine made by the Kansas Process). Absolutely safe to use. Cannot transmit disease. Brand, castrate, etc., when you vaccinate. OTHER PURITY PRODUCTS—Anti-Abortions Vaccine for Cattle; Hemorrhagic Septicemia Vaccine for Cattle and Sheep; Anti-Hog Cholera Serum, and High Count Mixed Infection Vaccine for Swine. For service that counts, write, phone, or wire.
PURITY SERUM CO., J. L. Thatcher, Mgr., Riverside, California

Hampshires.

NO! NOT MANY Hampshire Hogs advertised. We have some weanling pigs ready to ship now and two bred gilts direct descendants by sire from General Tipton and Dan from Mose Messenger. Great stuff. Rio Hondo Rancho, Rt. 1, Compton, Cal.

THE HISTORY of Hampshire Hogs in America since 1830 for the asking. Rio Hondo Rancho, Rt. 1, Compton, Cal.

YORKSHIRE SWINE — Registered Boars, Sows. Young stock. Mahajo Farm, P. O. Box 597, Sacramento, Calif.

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FOR SALE—Car of good stock hogs. All sizes. Most of them are purebred Durocs. L. R. Adams, Island Mountain, Trinity County, Cal.

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Holsteins.

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THE LEWIS COMPANY

Registered Holstein Cattle
Bulls, Heifers and Calves
of Ormsby breeding
Tuberculin tested
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Breeders of
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Young bull, sired by King Abbekirk Johanna 24th, and out of a dam making 24 lbs. as a 4-year-old

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REG. HOLSTEINS, both sexes. World's record backing. Kounias Reg. Stock Farms, Modesto, Cal.

REG. HOLSTEINS—A. W. Morris & Sons Corp., Importers and Breeders, Woodland, Cal.

F. H. STENZEL, SAN LORENZO—Breeder of Registered Holsteins. High test producers.

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CHOICE HOLSTEIN bulls for sale. No females. Millbrae Dairy, Millbrae, California.

GOTSHALL & MAGRUDER — Breeders of registered Holstein-Friesians. Ripon, Calif.

SIX BROTHERS DAIRY—Registered Holsteins and Duroc Jerseys. Turlock, Calif.

EL DORADO HERD OF REG. HOLSTEINS Alex. Whaley, Tulare, California.

Milking Shorthorns.

REGISTERED MILK AND BEEF SHORThorns, bulls and heifers for sale; catalogue free. Thomas Harrison, Santa Rosa Stock Farm, Santa Rosa, California.

MILKING SHORTHORNS — Two yearling heifers bred to North Star, Senior Champion at Portland.; one March bull. Charles L. Weaver, Tulare, Cal.

INNISFAIL HERD MILKING SHORThorns—Young stock for sale; both sexes. Owned by Alexander & Kellogg Leased by J. D. Rowe & Son, Davis, Cal.

WILLOW BROOK HERD—Milking Shorthorns. A few registered bulls and heifers for sale. W. T. Roberts, Penn Grove.

BREEDERS OF REGISTERED SHORThorns—Milk strain; choice young stock for sale. John Lynch Ranch, Box 321, Petaluma

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SERVICE JERSEY BULL, bull calves Financial King blood, Chester White boars, prize winners. Best blood, type, production. N. H. Locke Co., Lockeford, Cal

FOR SALE—Purebred Jersey bull, 16 mos. old. Prize winner at two fairs this fall. $250.00, if taken now. W. H. Alfred, Loleta, Humboldt Co., Calif.

REGISTERED JERSEY HEIFER—One year old. Price, $85.00. L. Nielsen, Sunnyvale.

SUNSHINE FARM JERSEYS—"Production counts." E. E. Greenough, Merced, Cal.

PUREBRED JERSEYS from Register-of-Merit dams. Purvine & Son, Petaluma.

REGISTERED JERSEYS—E. F. Smith, Route 1, Box 424, Hayward, Cal.

Ayrshires.

EL DORADO RANCH AYRSHIRES—Young service bulls, nicely marked from high-producing strains. All registered and tuberculin tested. Prices reasonable. El Dorado Ranch, Grafton P. O., Yolo Co., Ry. Station Knights Landing.

PENOBSCOT FARM AYRSHIRES—Long-lived, hardy, good "rustlers." High butterfat producers. Registered. Choice individuals; all ages; reasonable prices. Cool, El Dorado Co., 9 miles from Auburn, Cal.

STEYBRAE AYRSHIRES — Registered; all ages. E. B. McFarland, 414 Claus Spreckels Building, San Francisco.

NORABEL FARM AYRSHIRES — Le Baron Estate Co., Valley Ford, Cal.

Guernseys.

PUREBRED GUERNSEY HEIFERS—Heifer calves and bull calves for sale at reasonable prices and on terms, if necessary. The mothers are wonderfully bred, and with high milk and butterfat yields. The sires have made Guernsey history. Also a few purebred Holstein cows, heifers and a herd sire for sale. Prices and terms on application. If you desire to start with purebreds, now is your opportunity. S. J. Strauss, P. O. Box 62, Modesto, Cal.

FOR SALE—Registered Guernsey bull, 8 months old from high-producing dam. H. W. Moergeli, Rt. D, Box 240B, Fresno, Calif.

BEEF CATTLE.

STRATHMORE STOCK FARM—Registered and purebred Shorthorn bulls, suitable for range or registered herd sires, some ready for service. Turney Bros., Strathmore, Tulare Co., Cal.

SHORTHORNS—The foremost beef breed—Have a limited number of stock for sale, both sexes. If you wish to start a small herd I can probably supply your needs. T. T. Miller, Hollister, Cal.

RANCHO SAN JULIAN SHORTHORNS—Purebred range bulls, unregistered, for sale. Estate Thos. B. Dibblee, Santa Barbara, or Lompoc, Calif. John Troup, Supt.

ALAMO HERD REGISTERED HEREFORDS (founded by Governor Sparks). Herd and range bulls. Reasonable prices. W. D. Duke, Gazelle, Siskiyou county, California.

THE NEVADA HEREFORD RANCH—Jno. H. Cazier & Son Co., Prop., Wells, Nevada. Reg. Hereford cattle. Breeding stock for sale.

CARRUTHERS FARMS, Live Oak, California. Shorthorn cattle and Berkshire swine of quality and select breeding.

WM. BRIGGS & SON, Dixon, Cal. Breeders of Hereford cattle and Rambouillet sheep.

SIMON NEWMAN CO., breeders of Registered Herefords, Newman, California.

HEREFORDS — Mission Hereford Farm, J. A. Bunting, Prop., Mission, San Jose, Cal.

REGISTERED HEREFORDS—H. H. Gable, Diamond G Ranch, Esparto, California.

GEORGE WATTERSON — Breeder Registered Herefords. Bishop, California.

REGISTERED SHORTHORNS — Fair Oaks Ranch, Willits, Calif.

SHEEP AND GOATS.

FOR SALE—Rambouillet rams and ewes—purebred; the very highest grade of large smooth body; heavy shearers; the wool and mutton type. Immediate delivery of individual or carload lots. You can find none better or of higher grade. Address Glenn, Cal. Location, 8 miles south Hamilton City, 1 mile west Ordbend. Windell Orchards Co.

F. A. MECHAM ESTATE, Petaluma, Cal.—Breeders and importers of Shropshire, Rambouillets and American Merinos, both sexes. Also Red Polled cattle. Take electric car at Petaluma or Santa Rosa for Live Oak Ranch.

OAKDENE GOAT FARM, Walnut Creek, Contra Costa Co., Cal.—Breeder of milk goats, Nubian, Saanen and Toggenburg registered grades. Bred and fed for milk production.

DORSETS—ROMNEYS—Dorset ram lambs for sale. John E. Marble, South Pasadena.

HARVEY S. VAN VLEAR, Lodi, Breeder and importer of registered Hampshire sheep.

CALLA GROVE FARM, MANTECA, CAL.—Breeders and importers of Hampshire sheep.

KAUPKE BROS., WOODLAND, CALIF.—Breeders and importers of Hampshire sheep

BULLARD BROS., Woodland, Calif.—Breeders and importers of Rambouillet sheep.

CARL LINDHEIMER, Woodland, Cal.—Breeder of Rambouillets.

MISCELLANEOUS.

BUTTE CITY RANCH
SHORTHORN CATTLE, SHROPSHIRE Sheep, Berkshire Hogs, Shetland Ponies, Bronze Turkeys, White Plymouth Rocks. Stock for sale at all times. W. B. Dwyer and W. S. Guilford, Box P, Butte City, Glenn county, California.

REGISTERED BROWN SWISS, carrying best blood of the breed. M. J. Pedrotti, San Rafael, Calif.

Poultry for Profit

THE POULTRY MARKET.

On Tuesday of this week, the day on which we close up our market report, first quality eggs and extra pullets took a drop, but not so low as to start a panic among egg farmers. When the bottom was reached quotations registered 83c wholesale for extras and 71½c for extra pullets. In view of the splendid prices at which poultry products are now selling and with the falling prices of feedstuffs, it would seem possible for the poultry farmer to lay aside a little of his surplus returns for less favorable times. No other branch of the livestock business is on so satisfactory a basis today as the poultry branch.

TO A POULTRY BEGINNER.

To the Editor: I am located at the Delhi State Land Settlement, Delhi, Calif. I wish to engage in the poultry business and am planning to begin in a moderate way, starting with about 600 baby chicks, from which I wish to raise two hundred pullets. What do you think of the plan? I have never handled so many little chicks at one time before. Will you fully advise as to the size and kind of brooder house necessary and the best and safest heat to use, taking also the cost into consideration? I understand that electricity will be available soon. Also, how large a poultry house should be made for two hundred hens?—S. B. W., Delhi, Calif.

Limited space prevents publication of an extended and illustrated article such as would be necessary to safely guide our correspondent in this matter. Under the circumstances, and for the reason that he is located near the Turlock district, which has grown to be a very important poultry center, we advise him to visit several successful poultry plants of moderate size. Nearly all poultry keeps are willing to go out of their way to help beginners who frankly state their lack of knowledge and experience, and who make a showing of appreciation of the effort to help them. Frequently they may hesitate if they suspect that they may be drawn into an argument with an inexperienced person concerning one or several antiquated methods or practices that they have proven to be unsatisfactory, to say the least. It is well to at once state that advice only is desired, and it is promised that arguments will be omitted. Do not overlook taking a note book and make records of the information obtained—do not depend on memory. Doubtless there are a number of poultry plants near by that are of the capacity similar to the one it is intended to establish, and an actual inspection of these will be more educational for a beginner than printed descriptions unless very complete in all details and fully illustrated.

PROBABLY COPPER POISONING.

To the Editor: Can you suggest a remedy for sick turkeys? I had about 70, but they have all died but about a dozen. People tell me it is cholera. I have tried all cures that I could hear of, but none have stopped it yet. They only live from six to eighteen hours after they get sick. I have raised turkeys on one range for six years, but never lost any before. As soon as they get sick they seem to have a high fever and drink a good deal of water. Their droppings at first are thin and yellowish, but after it lies about six hours it turns green. —J. W., Biggs.

The symptoms described indicate cholera or poisoning from some mineral in solution. We suggest that it is possible the turkeys have been getting the poison from eating grass or other vegetable matter that has been covered with a spraying solution containing copper in some form. We have had a number of reports during recent years in which it was stated that fowls had been poisoned by running in orchards quite a long time after the trees had been sprayed. If the disease is cholera, there is little hope of curing those already affected. No satisfactory remedy has been found for this complaint. The sick fowls should be immediately removed from the flock and all litter, droppings, etc., should be scraped up and burned, and the premises thoroughly disinfected. By this means the healthy birds may be saved.

REMEDIES FOR SCALY LEGS ON TURKS.

In our issue of November 20 we published an item entitled "Turks with Scabby Legs." From the description of the trouble we believe it to be a more serious complaint than the ordinary scale or itch that is caused by a parasite which establishes colonies under the scales of the shanks, and which does not directly have any bearing on the general health of the fowls—it is an itch, not a blood disease. In the meantime we have received another inquiry from a Turlock subscriber as follows: "I have a few turkeys that have scaly legs. Will dipping them in crude oil cure the disease, or what would you advise?" We have also received letters from two readers who, considering that the first mentioned fowls were affected with the complaint caused by the parasite, have offered simple remedies that have proven successful with them in the treatment. We publish these letters hereunder:

To the Editor: I wish to enlighten the subscriber of Turlock, Cal., in the November 20th issue of the Rural Press, asking for cure of scaly legs in turkeys. Make a paste of dry sulphur and lard (I used cooking oil), clean legs first with warm, soapy water with soft brush, then put on paste—all that you can make stay on. After several applications, in trying to remove scale be careful not to pick it off too soon as it will bleed. Eventually they will drop off. This is a simple and sure cure.—Mrs. C., San Diego.

To the Editor: A subscriber wants to know what to do for white scab on turkey legs. Tell him to apply coal oil once a day for three days and they will get alright in about two weeks.—J. A. E., Laton.

A WORLD'S POULTRY CONGRESS.

A World's Poultry Congress is to be held at the Hague, Holland, September 6 to 13, 1921, in buildings to be provided by the Netherlands Government. Eighteen countries, including the United States, have signified an intention to participate. The object of the Congress is to stimulate interest in world poultry affairs; to educate poultrymen in the most efficient methods of production, standardization, distribution, and co-operation; to promote international acquaintance and goodfellowship among the poultrymen of the world.

A lecture program, in which an effort will be made to cover all subjects bearing on the industry, will be one of the important features of the Congress. There will be educational exhibits representing the breeds and varieties of the world, latest inventions of equipment and appliances, educational methods, results of research, etc.

OUTLOOK FOR POULTRY FEEDS.

The local prices of poultry feeds have declined materially from the high costs that prevailed during 1918 and 1919, but according to present indications the present prices will be subject to still greater reductions when the old stocks of materials are entirely exhausted and the new crops of grains enter exclusively into use for this purpose. Manufacturers of poultry feeds located in the great grain-growing section of the Middle West are already actively seeking to contract orders for delivery in the near future at figures that are about one-half the prices they obtained two years ago.

THE CARNIVOROUS HEN.

And now the little brown hen must have meat. It has been found upon experiment that the feeding of meat scraps or tankage, say one pound to every four pounds of mash, has increased the egg production from thirty to sixty per cent. In addition to the mash, a scratch mixture of grains should be fed.

While meat scrap is not produced on the farm and costs more than grain feed, it produces eggs several cents a dozen cheaper than where no meat scrap is fed. During the winter milk products may be substituted for meat scraps with good results in egg production. However, if the farmer does not have milk to feed it will pay him to buy commercial meat scraps or tankage for his chickens.

FIRST EXHIBITION RABBIT BREEDERS' ASSOCIATION.

The first exhibition under the auspices of the nationally incorporated Rabbit Breeders' Association, the California Rabbit Breeders' Association, will be held at the Oakland auditorium January 6 to 9. The exhibit will include cavies, chickens, pigeons and bees. George E. Hilton is managing the show.

Turkeys as a side line are profitable. It is reported that P. F. Barton of Escalon received a check for $1,380 for a shipment of dressed turkeys sent to San Francisco, and has 90 birds left. His grain bill totaled but $300.

Poultry Breeders' Directory

Rate, 4c. per word. Cash must accompany all orders.

BUFF ORPINGTONS—Sullivan's Commonwealth Strain; we originated and have bred in line for 20 years. If you want eggs and finest type of this breed, one of our males at this time. $7.50 and $10.00 each; exhibition birds. Write for prices. Book for eggs for February delivery, $3.00 and $5.00 for 15. Mr. and Mrs. W. S. Sullivan, 100 Market Road, Agnew, Santa Clara Co., Calif.

BARRED PLYMOUTH ROCKS — "Nothing Better in Poultry." Wonderful layers. Choice hens and pullets for sale; also fine cockerels that will improve your flock. Now booking orders for hatching eggs. I have made a specialty of Barred Rocks for over twenty-two years. That's why our birds win at all the leading shows. Catalog free. Chas. H Vodden, Box 3, Los Gatos, Calif.

CHICKS HATCHED in Petaluma Electric Incubators are of superior class. It adds "pep" to the chicks. They develop into layers in shorter time than by old methods. Modern Poultrymen are rapidly adopting our system. 400 incubators in one Hatchery. Illustrated Catalogue free. Petaluma Electric Incubator Co., Petaluma, Calif.

SUPERIOR WHITE LEGHORNS — WE BREED THEM.—Order your spring chicks now to insure desirable delivery date. We raise all chicks from our proven producers from OUR OWN YARDS and guarantee them vigorous heavy layers. A card brings full information and catalogue. Bolfing Poultry Farm, Gilroy, Calif.

TURKEYS—"Goldbank," "Copper King V" strain. Selected Giant Bronze Toms, sired by son of famous "Copper King V," first prize yearling N. B. T. Club Show, Madison Square, N. Y., January 1919. Bred to 20-lb. hens. Egg orders taken. Prices reasonable. Address: Bronze King Mountain Farm, P. O. Box 308, Calistoga, Calif.

WHITE LEGHORN BABY CHICKS—We are now booking orders for spring delivery from two and three-year-old hens that have the laying qualities well established. We give extras. Send for free folder and price list. Tacker's Poultry Ranch and Hatchery, Escalon, Calif.

BABY CHICKS—Stop! Look! Listen! Before you place your order for Single-Comb White Leghorn Baby Chicks, write for my booklet telling you about my large, heavy-laying stock, etc., and price and terms. H. A. Schlotthauer, Exeter, Calif.

BABY CHICKS from good layers. Booking orders now for 1921 delivery: R. I. Reds, Barred Rocks, White Rocks, White Leghorns, Brown Leghorns. Safe arrival guaranteed. Write for circular. Stubbe Poultry Ranch and Hatchery, P. O. Box 67, Palo Alto, Calif.

SANTA CRUZ CHICKS—White, Brown and Buff Leghorns, Anconas, Minorcas, Barred Rocks, Reds, Buff Orpingtons, White Rocks and White Wyandottes. Write for 1921 folder with price list. B. W. Archibald, Soquel, Santa Cruz Co., Calif.

MAMMOTH BRONZE TURKEYS—"Stafford strain" from eastern stock. Extra large bone and frame and beautiful plumage. Money back guarantee. Send for circular. R. M. Dodge & Son, Stafford Farm, R. D. 2, Box 129, Bakersfield, Cal.

WHITE LEGHORN BABY CHIX from heavy-laying Hoganized Stock. Safe arrival of full count, live, strong chix guaranteed. Price list and interesting literature on application. The Pioneer Hatchery, 408 Sixth St., Petaluma, Cal.

CHICKS — EGGS — Hoganized White Leghorns, Brown and Buff Leghorns, Black Minorcas, Rhode Island Reds, Barred Rocks, Anconas, Blue Andalusians. Free circular. Order early. McDonald Poultry Ranch, King Road, San Jose, Calif.

RHODE ISLAND REDS—1st Cockerel, special, Oakland Show 1918; 1st cockerel, Special 1920. Why? Because they have quality; bred for years for heavy egg production. Cockerel Pens, Hatching Eggs, Baby Chicks. Wm. Larm, 3915 39th Ave., Fruitvale, Cal.

ATKINSON'S PEERLESS ANCONAS lay more and eat less than other breeds. 50 big husky cockerels, $5 and up; 200 pullets, trios, and pens for sale. Hatching eggs. Catalogue free. J. W. Atkinson, Box B, 130 Willard St., San Jose, Cal.

BABY CHIX
We specialize in Rhode Island Red and Black Minorca chix from stock bred for eggs, vigor, color. Any number at popular price. Secure date early. Denton Poultry Yards, Campbell, Cal.

PRUSSIAN HILL POULTRY RANCH—Superb Barred Rock, Black Minorca and Blue Andalusian cockerels. March hatch at $5.00 each. A few extra at $7.50. Pullets at $2.00 each. Geo. I. Wright, Mokelumne Hill, Cal.

WATCH US GROW—"Quality Chicks." We are now booking orders for the season of 1921. White and brown Leghorns, R. I. Reds and Barred Rocks. Order early. E. W. Ohlen, Campbell, Cal.

S. C. WHITE LEGHORN Baby Chicks from our own Bred-to-Lay stock. Now booking for January to July delivery. Our prices are right. Model Poultry Farm, W. C. Smith, Prop., Corning, Cal.

NEWTON POULTRY FARM—White Leghorn Baby chicks from our well-known, carefully selected stock. Best strain. Big plant. Order now for spring delivery. Any number. Los Gatos, Calif., Dept. 1.

BABY CHICKS—Hatched from our utility S. C. White Leghorns, a result of many years' selection and breeding, for egg production. San Jose Poultry Yards, 15th and Margaret Streets, San Jose, Calif.

BABY CHICKS — White Leghorns — 10s, 100's, 1,000's—hatched right in $60,000 brick and concrete hatchery from our selected heavy layers. Pebbleside Poultry Farm, Sunnyvale, Cal.

GOLDCROFT BUFF ORPINGTONS, Columbian Wyandottes and White Leghorns. Heavy laying strains. Breeders and young stock. Samuel Abrams, Box 13, Los Altos.

TURKEYS — Mammoth Bronze, limited number of fine young cockerels for breeding stock, $10 and $15. Claremont Ranch, Calistoga, Calif.

MAMMOTH WHITE HOLLAND TURKEYS for sale. Choice hens and Toms from our famous breed of large vigorous turkeys. Earl V. Smith, Loma Vista Ranch, Willows, Calif.

BARRED ROCKS, WHITE ORPINGTONS—heavy layers; winners at leading shows. Special prices on old and young stock. R. P. Lutzi, 1450 23d Ave., San Francisco.

LARGE NUMBER of Choice Stock Toms and hens; also Geese and Herding Collie Dogs. Stock shipped from St. Helena and San Miguel. John G. Mee, San Miguel, Calif.

WE WILL BOOK ORDERS for Fall and Spring now. Our baby chicks have no superiors and very few equals. Ask for price list. Hick's Jubilee Hatchery, Petaluma, Cal.

HART'S MAMMOTH BRONZE TURKEYS—Large, well-marked, year-old hens. Thrifty young stock of both sexes. Albert M. Hart, Clements, Cal.

FOR SALE—7 Cyphers incubators (400-egg size), all in first-class hatching condition. Meyer Poultry Farm, Rt. A, Box 17A, Modesto, Cal.

BABY CHICKS—Thoroughbred White Leghorns, Hoganized. No dead or weak ones charged for. Schellville Hatchery, Schellville, Sonoma Co., Cal.

FOR SALE—300 S. C. White Leghorn pullets, 5 months old, from 227-egg strain. Meyer Poultry Farm, Route A, Box 17A, Modesto, Cal.

BIG, VIGOROUS Rhode Island Red cockerels, farm bread and prize stock, $5. Hatching eggs, $3 for 15. C. E. Kunze, Box 333, Mountain View, Calif.

NOW IS THE TIME to place your orders for the standard breeds of baby chicks. At the Santa Clara Valley Hatchery, San Jose, Cal.

CHICKENS, DUCKS, GEESE, GUINEAS, Pea Fowl, Pigeons. Wm. A. French, 545 W. Park St., Stockton, California. Stamps.

PLACE YOUR ORDER NOW for chicks for 1921. Standard varieties. Prices right. Send for circular. Madera Hatchery, Madera, Calif.

WHITE LEGHORN Baby Chicks—Pure Tancred strain. Honest-to-goodness layers. Circular. Henry Tarratt, Corning, Calif.

WANTED—Jubilee or Charters incubators in good condition. State your lowest cash price. Argle Rogers, Chowchilla, Cal.

"EASTMAN'S BRED-TO-LAY" Trapnested Barred Rocks. January chicks. Fairmead Poultry Farm, Fairmead, Cal.

FINE ROUEN DRAKES—$5.00 each. Black Cochin bantams. Prize stock. Emma Miller, R. R. 2, Box 534, Santa Cruz, Cal.

BOURBON RED TURKEYS—Buff Orpingtons. The Ferris Ranch, R. 2-144D, Pomona Calif.

WHITE HOLLAND TURKEYS — Breeding stock. H. H. Buhring, Concord.

BOURBON RED TURKEY TOMS for sale. J. W. Renwick, Burrell, Calif.

BOURBON RED TURKEYS—Mrs. Geo. F. Smith, Hardwick, Calif.

BREEDING FOR GREATER EGG PRODUCTION.

To the Editor: I have 50 young Brown Leghorn hens, eight months old, which are not laying yet. They are nicely developed hens and look well. I feed bran mash at morning and scratch feed at night thrown in straw. I keep charcoal and shell before them all the time and mix beef scrap with mash, which is mixed with milk each morning. I feed my mash mixed just as stiff as possible with the milk. I would like to know how much wet mash is required for 50 hens at a feed and how much grain should be fed, and should I feed three times a day? I mix my scratch feed of wheat, oats, barley and gyp corn for them; also have corn on cob to be fed this winter. They are given green stuff every day in some variety. Please send me formula for mash and amount to be fed each day and amount of scratch feed to be fed.—Mrs. A. S. B., Ukiah.

Our correspondent mentions bran mash. If she is feeding a mash composed chiefly of bran, this exceedingly bulky nitrogenous feed may be responsible for the large growth of the pullets and their failure to lay before and at eight months of age. When a large part of the ration of growing pullets is excessively bulky it tends to encourage continued growth, and this in a large measure retards early laying. If, however, her mash is reasonably well proportioned and of average bulk, it may be that her pullets are from a decidedly poor-laying strain, or the parents were not properly mated to produce pullets qualified to lay a large number of eggs. Or they may have been eating grapes, grape seeds, tomatoes, tomato seeds, stale cabbage leaves, or something else containing acids which prevent laying. The manner of preparing and feeding the wet mash and grains is alright, but we prefer to feed the mash dry in hoppers, and the milk in the form of clabber or cottage cheese. Developed pullets that are ready for laying should be fed daily about one and a half ounces each of assorted grains and mash—dry weight. This is an approximate scale when the fowls are receiving a fair quantity of greens each day. If supplied with all the assorted greens they can eat, Leghorns can lay exceedingly well with fifteen per cent less grains and mash. Practically all feeders of wet mash feed the mash in the morning, the grains in the straw toward evening, and the greens during the middle of the day. We have taken it for granted that the fowls are supplied with hard sharp grit as well as with shells and charcoal. The Indian corn added to the grain mixture and fed preceeding exceptionally cold or foggy nights, will help to keep the fowls warm, which also encourages egg production. In order to recommend a formula for mash that may be economically mixed by our correspondent, we must be supplied with a list of ingredients that are available (and the cost of value of each) in addition to the grains already mentioned. In balancing a ration (both the mash and grains must be considered), attention must be paid, not alone to the analysis of the materials to be considered, but bulk, adaptability, availability, cost, and palatability must be taken into account. Two feeding materials may, by analysis, be apparently alike, but they may produce quite different effects in the system of the hen, if fed in like quantities. This may be because of difference in bulk or in digestibility. There are also differences of this sort that can be determined only by long and careful experimenting; they may be alike in all other respects but differ greatly in cost. Because of the difficulty experienced by the individual feeder in securing all the necessary materials it is now, with few exceptions, more economical in the long run for them to buy the commercial mixed feeds that are generally sold, and which are manufactured practically under the supervision of the state government. However, if we are furnished with the list and cost of materials obtainable, we will attempt to supply an economical formula for a mash to be fed in connection with an equal quantity of the grains mentioned.

HEAD DENOTES EGG TYPE.

E. G. Foreman, Extension Specialist Michigan College of Agriculture, in an article in the Reliable Poultry Journal, contends that the heavy or light egg layer may be determined by the conformation of the head. He says a heavy laying hen always possesses a refined head, indicating a bright, active and intelligent disposition. The skull should be moderately narrow, with an absence of coarseness directly above the eyes. A wide skull with overhanging eyebrows indicates a propensity for broodiness. The face should be lean and delicate, avoiding the fat wrinkles common to beef types. A very delicate skin indicates sensitiveness that responds readily to care. Preference should be given to the hen with an oval eye, showing considerable eye membrane directly in front of the eyeball. The jaw should not be thick nor deep.

The head of every hen is constructed a little differently and herein lies a field for further study in the egg-type controversy. Not only is this an individual characteristic, but it also is also found to be a breed characteristic. In the Leghorn family, the brown variety is different from the white in point of head structure. Although the variation is not so pronounced as it is between breeders, nevertheless a difference is easily noted. The Brown Leghorn possesses a shorter and rounder head, fuller face and heavier skull.

CARE IN FEEDING CHICKS.

The first rule for getting a good profit from poultry is to get the chicks hatched early, and the next is to keep them growing so that they will reach laying maturity before the commencement of cold weather. There is no profit in keeping a chicken just alive, whether it is intended for laying stock or for the market. One reason why more care should be exercised in feeding chicks than in feeding fowls is that the chicks know less about what is good for them than do the fowls. The healthy chick is a hungry thing and will eat what is given it; the digestive organs being weak are less able to dispose of objectionable feed than are those of older fowls.

Young chicks should be fed a little at a time and often, poultry specialists in United States Department of Agriculture say. They should be fed early in the morning and just before going to bed at night, and not less than three times in the intervening period. For the first two weeks they may be fed three meals of soft feed and two of hard, and after that age two of soft and three of hard, less soft feed being fed as they grow older. No more moistened soft feed should be given at one time than they will eat up clean.

CLEANLINESS.

Cleanliness is of the greatest importance in keeping lice and mites, fleas, and other insects under control, and should have the closest attention. The poultry houses, roosts, dropping boards, brood coops, and all other places that the fowls or chickens occupy should be kept clean. An abundance of light and fresh air should also be provided. While these things cannot be depended on to keep away lice and mites, yet they make it easier to determine when the pests are present and help to keep fowls healthy and vigorous.

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POULTRY FEEDS

Make a Healthy, Productive Flock

POULTRY feeds must contain the proper ingredients, correctly blended and accurately balanced, to produce maximum results. That is why every comparative test proves OLYMPIC Poultry Feeds to be without *either* equal or superior.

THE PORTLAND FLOURING MILLS CO., Sebastopol, Cal., Sept. 22, 1920

Gentlemen:

I have checked up my egg record for the first three weeks of September, during which time I used your OLYMPIC SCRATCH FEED and OLYMPIC EGG MASH, and I find my flock showed a remarkable increase, the average of the last three days of the test over the first three showing 137 1/3 eggs per day increase, or 70% gain. My hens are also laying the largest eggs I have ever had, weighing over 26 ounces to the dozen. The pullet eggs went to 19 and 22 ounces on the OLYMPIC feeds. This I call remarkable.

I have been breeding for forty-five years and exhibiting for thirty-five years.

I am delighted with your special molt and spring laying mash.

Enclosed find my full egg record for the twenty days, September 1st to 20th.

Yours very truly, WM. BACON.

Dried Buttermilk

The drying of buttermilk for the various OLYMPIC Feeds, is proven the only practical method of introducing this most valuable ingredient into prepared feed. It does not become rancid when shipped or stored, nor lose any of its desirable qualities. The water has simply been removed, leaving the Buttermilk in highly concentrated form.

OLYMPIC Scratch Feeds

BABY CHICK SCRATCH consists of small, uniformly ground grains suited for the critical first three weeks' feeding.

GROWING CHICK SCRATCH — Of slightly larger grains for the youngsters up to 8 or 9 weeks of age.

SCRATCH FEED—For full grown chickens. Properly balanced proportions of Wheat, Cracked Corn, Kafir Corn, Milo Maize, Hulled Barley, and Oats, Buckwheat and Sunflower Seed.

OLYMPIC Dried Buttermilk Feeds

DRIED BUTTERMILK in the following feeds not only supplies its share of nutrition, but the lactic acid multiplies the digestive and assimilative properties of all other ingredients contained therein.

CHICK MASH is a body builder and feather grower. It eliminates the dangers of White Diarrhoea or bowel trouble.

EGG MASH is the egg-making feed and tonic for health and strength. It increases laying to a greater extent, over a longer period and with 20 per cent less feed consumed.

CRATE FATTENER tears down the muscles and builds up the flesh; making the meat whiter, sweeter and more tender in the shortest possible time.

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Oh, You Tex!

By William MacLeod Raine.

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SYNOPSIS OF PRECEDING CHAPTERS: Jack Roberts, known as Tex, a young line-rider in the cattle country of the Texas Panhandle, discovers rustlers at work. He is prevented from getting a close view of the culprits because of a barrier in the form of a Winchester rifle. However, he gathers what clues he can at long range, one of the clues being a sorrel horse with a white nose and white stockings. Roberts is planning a coup on the rustlers when a Mexican boy rides up and informs him that his employer, Clint Wadley, owner of the A T O ranch, desires his presence at the ranch house. Wadley informs the line-rider that he is to be assigned to service as a trail herder, to move a band of cattle to market. During his interview with the ranch owner, Roberts meets, for the first time, his employer's daughter, Ramona, who has just returned from attending school in the East. Later, when Roberts visited the Longhorn saloon, looking for a cook for his trail outfit, he is surprised to see a sorrel pony with a white nose and white stockings. Entering the place to investigate he has an encounter with three men. He is obliged to give one of them a good licking. Shortly after the incident he is amazed to learn that his adversary is the son of Clint Wadley, cattle king. Tex Roberts at once resigns his position as trail foreman.

CHAPTER V.

Captain Ellison Hires a Hand.

Captain Ellison was preparing for the Adjutant-General a report of a little affair during which one of his men had been obliged to snuff out the lives of a couple of Mexican horse-thieves and seriously damage a third. Writing was laborious work for the Captain of Rangers, though he told no varnished tale. His head and shoulders were hunched over the table and his finger-tips were cramped close to the point of the pen. Each letter as it was set down had its whispered echo from his pursed lips.

"Doggone these here reports," he commented in exasperation. "Looks like a man hadn't ought to make out one every time he bumps off a rustler."

He tugged at his goatee and read again what he had just written:

"Then this Jose Barela and his gang of skoundrels struck out for the Brazos with the stolen stock. Ranger Cullom trailed them to Goose Creek and recovered the cattle. While resisting arrest Barela and another Mexican were killed and a third wounded. Cullom brought back the wounded man and the rustled stock."

A short noontime shadow darkened the sunny doorway of the adobe office. Ellison looked up quickly, his hand falling naturally to the handle of his forty-five. Among the Rangers the price of life was vigilance. A tall, lean, young man with a sardonic eye and a sunburned face jingled up the steps.

"Come in," snapped the Captain. "Sit down. With you in a minute."

The cowboy lounged in, very much at his ease. Roberts had been embarrassed before Ramona Wadley that morning, but he was not in the least self-conscious now. In the course of a short and turbid life he had looked too many tough characters in the eye to let any mere man disturb his poise.

"Do you spell scoundrel with a k?" the Ranger chief fired abruptly at him.

"Nary a k, Captain. I spell it b-a-d m-a-n."

"H'mp!" snorted the little man. "Ain't you got no education? A man's got to use a syllogism oncet in a while, I reckon."

"Mebbeso. What kind of a gun is it?" drawled Jack Roberts.

"A syllogism is a word meanin' the same as another word, like as if I was to say caballo for horse or six-shooter for revolver."

"I see—or tough guy for Texas ranger."

"Or durn fool for Jack Roberts," countered Ellison promptly.

"Now you're shoutin', Cap. Stomp on me proper. I certainly need to be curried."

Again the Ranger snorted. "H'mp! Been scarin' any more young ladies to death?"

"No more this mo'nin', Captain," answered Jack equably.

"Nor grandstandin' with any more ladino steers?"

"I exhibit only once a day."

"By dog, you give a sure-enough good show," exploded Ellison. "You got yore nerve, boy. Wait around till the prettiest girl in Texas can see you pull off the big play—run the risk of havin' her trampled to death, just so's you can grin an' say, 'Pleased to meet you, ma'am.' When I call you durn fool, I realize it's too weak a name."

"Hop to it, Captain. Use up some real language on me. Spill out a lot of those syllogisms you got bottled up inside you. I got it comin'," admitted Roberts genially as he rolled a cigarette.

The Captain had been a mule-skinner once, and for five glorious minutes he did himself proud while the graceless young cow-puncher beamed on him.

"You sure go some, Cap," applauded the young fellow. "I'd admire to have your flow of talk."

Ellison subsided into anticlimax. "Well, don't you ever drive yore wild hill-critters through town again. Hear me, young fellow?"

"You'll have to speak to Wadley about that. I'm not his trail boss any longer."

"Since when?"

"Since five o'clock yesterday evenin'. I was turnin' over the herd this mo'nin' when the little lady showed up an' I had to pull off the bulldoggin'."

"Wadley fire you?"

"That's whatever."

"Why?"

"Didn't like the way I mussed up son Rutherford, I kind o' gathered."

"Another of yore fool plays. First you beat up Wadley's boy; then you 'most massacree his daughter. Anything more?"

"That's all up to date—except that the old man hinted I was a brand-burner."

"The deuce he did."

"I judge that son Rutherford had told him I was one of the Dinsmore gang. Seems I'm all right except for bein' a rowdy an' a bully an' a thief an' a bad egg generally."

"H'mp! Said you was a rustler, did he?" The Ranger caressed his goatee and reflected on this before he pumped a question at the line-rider. "Are you?"

"No more than Rutherford Wadley."

The Captain shot a swift slant look at this imperturbable young man. Was there a hidden meaning in that answer?

"What's the matter with Wadley? Does he expect you to let Ford run it over you? That ain't like Clint."

"He's likely listened to a pack o' lies."

"And you haven't heard from him since?"

"Yes, I have. He sent me my check an' a hundred-dollar bill."

Ellison sat up. "What for?"

"For my fancy bulldoggin'." The hard eyes of the young fellow smouldered with resentment.

"By dog, did Clint send you money for savin' 'Mona?"

"He didn't say what it was for—so I rolled up the bill an' lit a cigarette with it."

"You take expensive smokes, young man," chuckled the officer.

"It was on Wadley. I burned only half the bill. He can cash in the other half, for I sent it back to him. When he got it, he sent for me."

"And you went?"

"You know damn well I didn't. When he wants me he knows where to find me."

"Most young hill-billies step when Clint tell 'em to."

"Do they?" asked the range-rider indifferently.

"You bet you. They jump when he whistles. What are you figurin' to do?"

"Haven't made up by mind yet. Mebbe I'll drift along the trail to the Pecos country."

"What was Clint payin' you?"

"Sixty a month an' found."

"How'd you like to have yore wages lowered?"

"Meanin'—"

"That I'll give you a job."

Young Roberts had a capacity for silence. He asked no questions now, but waited for Ellison to develop the situation.

"With the Rangers. Dollar a day an' furnish yore own bronc," explained the Captain.

"The State of Texas is liberal," said the cowboy with sarcasm.

"That's as you look at it. If you're a money-grubber, don't join us. But if you'd like to be one of the finest fightin' force in the world with somethin' doin' every minute, then you'd better sign up. I'll promise that you die young an' not in yore bed."

"Sounds right attractive," jeered the red-haired youngster with amiable irony.

"It is, for men with red blood in 'em," retorted the gray-haired fire-eater hotly.

"All right. I'll take your word for it, Captain. You've hired a hand."

CHAPTER VI.

Clint Wadley's Messenger.

Outside the door of the commandant's office Arthur Ridley stood for a moment and glanced nervously up and down the dirt road. In a hog-leather belt around his waist was six thousand dollars just turned over to him by Major Ponsford as the last payment for beef steers delivered at the fort according to contract some weeks earlier.

Arthur had decided not to start on the return journey until next morning, but he was not sure his judgment had been good. It was still early afternoon. Before nightfall he might be thirty miles on his way. The trouble with that was that he would then have to spend two nights out, and the long hours of darkness with their flickering shadows cast by the campfires would be full of torture for him. On the other hand, if he should stay till morning, word might leak out from the officers' quarters that he was carrying a large sum of money.

A drunken man came weaving down the street. He stopped opposite Ridley and balanced himself with the careful dignity of the inebriate. But the gray eyes, hard as those of a gunman, showed no trace of intoxication. Nor did the steady voice.

"Friend, are you Clint Wadley's messenger?"

The startled face of Ridley flew a flag of confession. "Why—what do you mean?" he stammered. Nobody was to have known that he had come to get the money for the owner of the A T O.

"None of my business, you mean," flung back the man curtly. "Good enough! It ain't. What's more, I don't give a damn. But listen; I was at the Buffalo Hump when two fellows came in. Me, I was most asleep, and they sat in the booth next to me. I didn't hear all they said, but I got this—that they're aimin' to hold up some messenger of Clint Wadley after he leaves town tomorrow. You're the man, I reckon. All right. Look out for yourself. That's all."

"But—what shall I do?" asked Ridley.

"Do? I don't care. I'm tellin' you—see? Do as you please."

"What would you do?" The danger and the responsibility that had fallen upon him out of a sky of sunshine paralyzed the young man's initiative.

The deep-set, flinty eyes narrowed to slits. "What I'd do ain't necessarily what you'd better do. What are you, stranger—high-grade stuff, or the run o' the pen?"

"I'm no gun-fighter, if that's what you mean."

"Then I'd make my get-away like a jackrabbit hellpoppin' for its hole. I got one slant at these fellows in the Buffalo Hump. They're bully-puss kind o' men, if you know what I mean."

"I don't. I'm from the East."

"They'll run it over you, bluff you off the map, take any advantage they can."

"Will they fight?"

"They'll burn powder quick if they get the drop on you."

"What are they like?"

The Texan considered. "One is a tall, red-headed guy; the other's a sawed-off, hammered-down little runt—but gunmen, both of 'em, or I'm a liar."

"They would probably follow me," said the messenger, worried.

"You better believe they will, soon as they hear you've gone."

Arthur kicked a little hole in the ground with the toe of his shoe. What had he better do? He could stay at the fort, of course, and appeal to Major Ponsford for help. But if he did, he would probably be late for his appointment with Wadley. It happened that the cattleman and the army officer had had a sharp difference of opinion about the merits of the herd that had been delivered, and it was not at all likely that Ponsford would give him a military guard to Tascosa. Moreover, he had a feeling that the owner of the A T O would resent any call to the soldiers for assistance. Clint Wadley usually played his own hand, and he expected the same of his men.

But the habit of young Ridley's life had not made for fitness to cope with a frontier emergency. Nor was he of stiff enough clay to fight free of his difficulty without help.

"What about you?" he asked the other man. "Can I hire you to ride with me to Tascosa?"

"As a tenderfoot-wrangler?" sneered the Texan.

Arthur flushed. "I've never been there. I don't know the way."

"You follow a gun-barrel road from the fort. But I'll ride with you—if the pay is right."

"What do you say to twenty dollars for the trip?"

"You've hired me."

"And if we're attacked?"

"I pack a six-shooter."

The troubled young man looked into the hard, reckless face of this stranger who had gone out of his way to warn him of the impending attack. No certificate was necessary to tell him that this man would fight.

"I don't know your name," said Ridley, still hesitating.

"Any more than I know yours," returned the other. "Call me Bill Moore, an' I'll be on hand to eat my share of the chuck."

"We'd better leave at once, don't you think?"

"You're the doc. Meet you here in an hour ready for the trail."

The man who called himself Bill Moore went his uncertain way down the street. To the casual eye he was far gone in drink. Young Ridley went straight to the corral where he had put up his horse. He watered and fed the animal, and after an endless half-hour saddled the bronco.

Moore joined him in front of the officers' quarters, and together they rode out of the post. As the Texan had said, the road to Tascosa ran straight as a gun-barrel. At first they rode in silence, swiftly, leaving behind them mile after mile of dusty trail. It was a brown, level country, thickly dotted with yucca. Once Moore shot a wild turkey running in the grass. Prairie-chicken were abundant, and a flight of pigeons numbering thousands passed at one time over their heads and obscured the sky.

"Goin' down to the encinal to roost," explained Moore.

"A man could come pretty near living off his rifle in this country," Arthur remarked.

"Outside o'flour an' salt, I've done it many a time. I rode through the Pecos Valley to Fort Sumner an' on to Denver oncet an' lived off the land. Time an' again I've done it from the Brazos to the Canadian. If he gets tired of game, a man can jerk the hind-quarters of a beef. Gimme a young turkey fed on sweet mast an' cooked on a hackberry bush fire, an' I'll never ask for better chuck," the Texan promised.

In spite of Ridley's manifest desire to push on far into the night, Moore made an early camp.

"No use gauntin' our broncs when we've got all the time there is before us. A horse is a man's friend. He don't want to waste it into a sorry-lookin' shadow. Besides, we're better

(Continued on page 812.)

Hear Rachmaninoff on the New Edison

THE photograph, from which this illustration is reproduced, was taken in Mr. Rachmaninoff's home in New York City. It shows the great Russian pianist playing the Second Hungarian Rhapsodie (Liszt), while the New Edison RE-CREATED his previous rendition of the same composition.

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OH, YOU TEX.

(Continued from page 809.)

off here than at Painted Rock. It's nothin' but a whistlin' post in the desert."

"Yes, but I'd like to get as far from the fort as we can. I—I'm in a hurry to reach Tascosa," the younger man urged.

Moore opened a row of worn and stained teeth to smile. "Don't worry, young fellow. I'm with you now."

After they had made camp and eaten, the two men sat beside the flickering fire, and Moore told stories of the wild and turbulent life he had known around Dodge City and in the Lincoln County War that was still waging in New Mexico. He had freighted to the Panhandle from El Moro, Colorado, from Wichita Falls, and even from Dodge. The consummate confidence of the man soothed the unease of the young fellow with the hogskin belt. This plainsman new all that the Southwest had to offer of danger and was equal to any of it.

Presently Arthur Ridley grew drowsy. The last that he remembered before he fell asleep was seeing Moore light his pipe again with a live coal from the fire. The Texan was to keep the first watch.

It was well along toward morning when the snapping of a bush awakened Ridley. He sat upright and reached quickly for the revolver by his side.

"Don't you," called a voice sharply from the brush.

Two men, masked with slitted handkerchiefs, broke through the shin-oak just as Arthur whipped up his gun. The hammer fell once—twice, but no explosion followed. With two forty-fives covering him, Ridley, white to the lips, dropped his harmless weapon.

Moore came to life with sleepy eyes, but he was taken at a disadvantage, and with a smothered oath handed over his revolver.

"Wha-what do you want?" asked Ridley, his teeth chattering.

The shorter of the two outlaws, a stocky man with deep chest and extraordinarily broad shoulders, growled an answer.

"We want that money of Clint Wadley's you're packin'."

The campfire had died to ashes, and the early morning air was chill. Arthur felt himself trembling so that his hands shook. A prickling of the skin went goose-quilling down his back. In the dim light those masked figures behind the business-like guns were sinister with the threat of mystery and menace.

"I—haven't any money," he quavered.

"You'd better have it, young fellow, me lad!" jeered the tall bandit. "We're here strictly for business. Dig up."

"I don't reckon he's carryin' any money for Clint," Moore argued mildly. "Don't look reasonable that an old-timer like Clint, who knocked the bark off'n this country when I was still a kid, would send a tenderfoot to pack gold 'cross country for him."

The tall man swung his revolver on Moore. "'Nuff from you," he ordered grimly.

The heavy-set outlaw did not say a word. He moved forward and pressed the cold rim of his forty-five against the forehead of the messenger. The fluttering heart of the young man beat hard against his ribs. His voice stuck in his throat, but he managed to gasp a surrender.

"It's in my belt. But don't shoot."

"Gimme yore belt."

The boy unbuckled the ribbon of hogskin beneath his shirt and passed it to the man behind the gun. The outlaw noticed that his fingers were cold and clammy.

"Stand back to back," commanded the heavy man.

Deftly he swung a rope over the heads of his captives, jerked it tight, wound it about their bodies, knotted it here and there, and finished with a triple knot where their heels came together.

"That'll hold 'em hitched a few minutes," the lank man approved after he had tested the rope.

"I'd like to get a lick at you fellows. I will, too, some day," mentioned Moore casually.

"When you meet up with us we'll be there," retorted the heavy-weight. "Let's go, Steve."

The long man nodded. "Adios, boys."

"See you later, and when I meet up with you, it'll be me'n' you to a finish," the Texan called.

The thud of the retreating hoofs grew faint and died. Already Moore was busy with the rope that tied them together.

"What's the matter, kid? You shakin' for the drinks? Didn't you see from the first we weren't in any danger? If they'd wanted to harm us, they could have shot us from the brush. How much was in that belt?"

"Six thousand dollars," the boy groaned.

"Well, it doesn't cost you a cent. Cheer up, son."

By this time Moore had both his arms free and was loosening one of the knots.

"I was in charge of it. I'll never dare face Mr. Wadley."

"Sho! It was his own fault. How in Mexico come he to send a boy to market for such a big stake"

"Nobody was to have known what I came for. I don't see how it got out."

"Must 'a' been a leak somewhere. Don't you care. Play the hand that's dealt you and let the boss worry. Take it from me, you're lucky not to be even powder-burnt when a shot from the chapparral might have done yore business."

"If you only hadn't fallen asleep!"

"Reckon I dozed off. I was up 'most all last night." Moore untied the last knot and stepped out from the loop. "I'm going to saddle the broncs. You ride in to Tascosa and tell Wadley. I'll take up the trail an' follow it while it's warm. We'll see if a pair of shorthorns can run a sandy like that on me." He fell suddenly into the violent, pungent speech of the mule-skinner.

"I'll go with you," announced Ridley. He had no desire to face Clint Wadley with such a lame tale.

The cold eyes of the Texan drilled into his. "No, you won't. You'll go to town an' tell the old man what's happened. Tell him to send his posse across the malpais toward the rimrock. I'll meet him at Two Buck Crossin' with any news I've got."

A quarter of an hour later the hoofs of his horse flung back faint echoes from the distance. The boy collapsed. His head sank into his hands and his misery found vent in sobs.

(To be continued.)

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"Where's my honey?" he demanded.

The waiter hesitated, looked awkwardly at the bride, then he stammered: "Er—Mamie don't work here no more, sir."—Ex.

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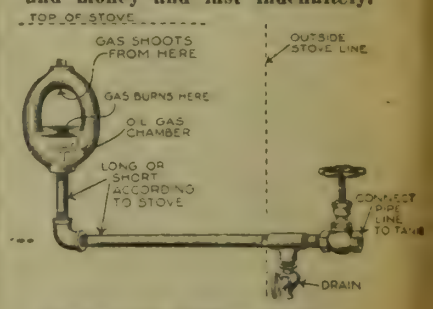

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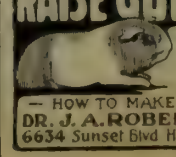

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DR. J. A. ROBERTS LABORATORIES 6634 Sunset Blvd HOLLYWOOD, CAL. — Dept 1-RP.

Home Circle Department

GIVE THE GROWING CHILD PLENTY OF VEGETABLES.

Vegetables and fruits are now considered a necessary part of the diet of the child. The reasons are many, but most of them may be summed up by saying that they furnish material needed to form bone and tissue and to regulate body processes. The mild acids which some of them contain help to prevent constipation; so, too, does the cellulose or fiber, especially when it is raw.

Green vegetables are also a valuable means of introducing into the diet mineral matters, particularly iron, in a form in which the body can utilize them. Leaf vegetables, like spinach, beet greens, kale, etc., have recently been found to contain some of the growth promoting substances that are found in milk.

The uses of fruit in the diet are much the same as those of green vegetables, though, unlike most vegetables, they have a considerable precentage of sugar, especially when they are dried and sugar is a quickly absorbed fuel food. Like vegetables, they have value because they contribute some of the nitrogen required for tissue building and repair and some energy, food specialists of the U. S. Department of Agriculture say. The quantity of growth material in fruits and vegetables is small, but large in comparison with the amount in many other common foods.

NEGRO DISPLAYED TACT.

A gentleman who had a colored butler and was expecting company, said to him:

"Now, when these friends of mine come, I want you to treat them with a great deal of tact."

And the butler said: "Shuah, boss, I'll do that."

After the boss was gone, he beat it across the street to a house where a colored friend of his was butler, and he told him about it, and said:

"Now, I dunno what tact means. Can you tell me?"

"Shuah, I'll 'splain that to you. Now this mawnin' when I was doing the work on the second floor, I went into the bathroom, and there was a beautiful young lady right in the bath-tub, and as I backed out and closed the door, I says:

" 'Scuse me, sir."

"Now, 'scuse me," is just plain politeness, but "Sir" is tact.

FOUND ALL THREE.

Three Harvard students were walking along the campus when they met an old gentleman with a white beard, and they accosted him as follows:

"Good morning, father Abraham," said one.

"Good morning, father Isaac," said the second.

"Good morning, father Jacob," said the third.

The old gentleman replied:

"I am neither Abraham, nor Isaac, nor Jacob. I am Saul, the son of Kish, in pursuit of my father's three asses, and behold I have found all three of them."

BLACKBERRY DUMPLINGS.

Heat a quart can of blackberries to a boiling point, then drop in slowly, in small teaspoonfuls, the following dumplings. Boil rapidly ten minutes with the cover on.

Recipe for the dumplings: two cups sifted flour, with pinch of salt, and 1½ level teaspoons baking powder. Rub in with the fingers 1 teaspoon shortening; mix with one beaten egg and enough milk to make of sufficient consistency for dumplings.

Jimmie giggled when the teacher read the story of a man who swam across the Tiber three times before breakfast. "You do not doubt that a trained swimmer could do that, do you?" "No, sir," answered Jimmie, "but I wonder why he did not make it four and back to the side where his clothes were."

Ask for Ghirardelli's at the store where you trade; and write for our Book of Chocolate Recipes—it's free!

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Perfect Home Comfort

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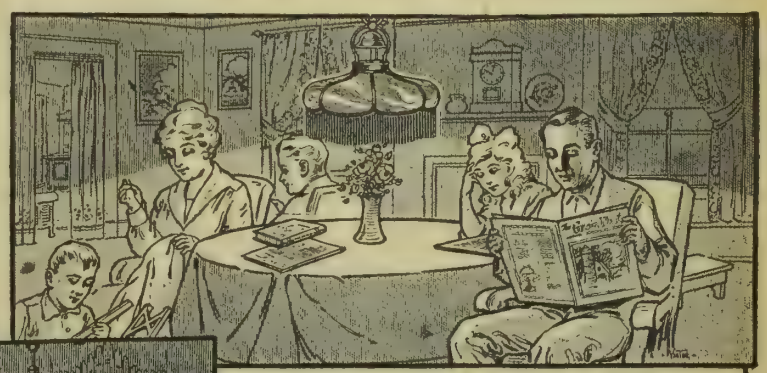
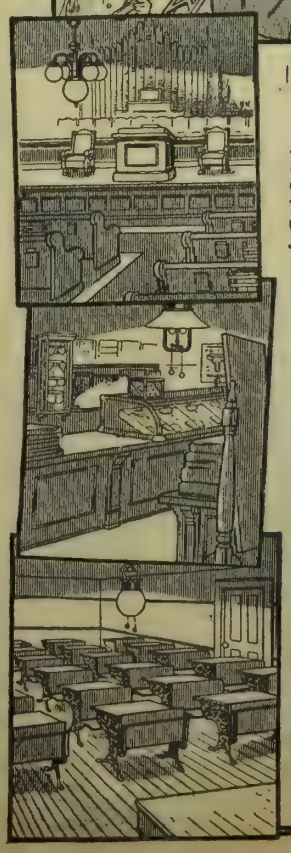
(California)





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have brought all the comforts of modern city life to thousands of farm homes, small town stores, halls, schools and churches. The Coleman is a natural light, brilliant and white—without glare or flicker. Restful to the eyes. Any one of the various chandelier designs is an ornament to any home.

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You can now enjoy the greatest light in the world. In hundreds of small towns and cities, thousands of old style kerosene lamps have been discarded and in their places Coleman Lighting Plants are giving a hundred times better light at less expense than coal-oil, gas, or electricity. Because of poor light and frequent failures of electric light plants, merchants in all parts of the country have installed complete

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The Coleman Lighting System, like the Coleman Gasoline Lamp and Lantern is a product of long experience. Mr. W. C. Coleman, President and active head of this Company, was the pioneer in gasoline lighting. Imitations have come and gone, but the Coleman line of lamps, lanterns and systems stands as the great product of a great organization.

We will gladly give you full information about Coleman lighting plants, Lamps and Lanterns without any obligation on your part. Sold exclusively through dealers. See yours, and if he can't supply, write us, addressing nearest office for Catalog No.

THE COLEMAN LAMP COMPANY,
120 S. Los Angeles St., (Catalog 64) Los Angeles, Cal.

THE MARKET REPORTS

SAN FRANCISCO

San Francisco, December 15, 1920.

WHEAT.

Considerable quantities of wheat have been shipped in lately from the outside, and markets in other sections of the country quote prices lower than the local price, which remains unchanged so far. A downward tendency is noticeable, however, and trading is inactive.

Wheat, spot ..... $2.50@2.65

OATS.

The market is more quiet and weaker than it has been for some time, but prices, although nominal, are the same as reported last week.

Red Feed, ctl. ..... $1.90@2.00

BARLEY.

There is very little or no trading in evidence and shippers are out of the market almost entirely. Fupture call board trading is also at a minimum. Quotations have declined and further reductions are thought likely.

Feed Barley, ctl. ..... $1.35@1.50

CORN.

A large supply has reached the local market and corn is being shipped here from other sections of the country. The same prices prevail.

Egyptian, white ..... Nominal
do, brown ..... $2.25@2.30
California yellow ..... $2.10@2.25

FEEDSTUFFS.

Rolled barley and mill run are quoted at lower figures and there is a distinct downward tendency ruling on all grades. The feed in the country districts is in good shape and with the pasturage excellent, price declines are predicted.

Rolled Barley, per ton ..... $38.00@40.00
Rolled Oats ..... $55.00@56.00
Alfalfa Products ..... $31.00@33.00
Cracked Corn ..... $56.00@57.00
Bran ..... $52.00@54.00
Mill Run ..... $47.00@49.00
Poultry Scratch, ctl. $3.55
Cocoanut Meal Cake ..... $28.00@30.00

HAY.

Hay prices have veered off a little with an extremely dull and inactive market? Receipts have been far in excess of the demand and only by considerable efforts and price concessions have sales been effected. Receipts, which were 1380 tons for the past week, were mostly of consigned cars shipped by farmers who believe they have not been offered satisfactory prices for their holdings and apparently either want to try the market or realize a little ready money. For the previous week 1161 tons were received.

Red oat hay has arrived on the market in larger quantities than any other variety and is the weakest grade, it having become a drug on the market. The influence of the demoralized grain markets is also perceptibly felt in the hay market and indications are that hay prices may go still lower, especially with a continuance of good weather which precludes the necessity of stock feeding. No great activity is expected during the holiday time.

Prices quoted f. o. b. San Francisco less $1.00 a ton commission charge.

Wheat hay, new ..... $26.00@27.00
Tame oat, new ..... $21.00@24.00
Barley ..... $15.00@19.00
Wild oat, new ..... $15.00@18.00
Alfalfa ..... $20.00@23.00

RICE.

The market is very quiet and what rice is on the market is not moving well. Prices, however, are steady so far with the exception of California grades, which are off a trifle. Heavy arrivals are expected soon.

California Fancy, ctl. $5.25
do, Choice $5.00
Southern Honduras, long grain $9.25
China, No. 1, double mat $8.50
Blue Rose, fancy $7.00
Fancy Head (Philips & Co.) $10.00
California Japanese, No. 1 ..... $5.50
do, No. 2 ..... $5.25
California Japanese, No. 1 ..... $5.25
do, No. 2 ..... $5.00

FRESH FRUITS.

A poor market for apples is developing with a surplus of all grades on the market. Wagners have dropped considerably in price, but old prices hold for other grades still. Oregon banana appes and Ortleys are on the market. Casabas and honeydew melons are not selling well and their prices have receded. The last of the grapes has been seen. Strawberries are still selling, but poorly. Cranberries are scarce and predictions are that there will not be enough for the Christmas trade. Cranberry prices will probably advance further.

Apples: Oregon Banana ..... $2.50@2.75
do, Oregon Ortleys ..... $2.50@2.75
do, Wagners, 40-lb. box ..... $1.25@1.75
do, Spitzenberg, Oregon ..... $2.50@3.00
do, Jonathan ..... $2.50@3.00
do, Bellflowers, Watsonville ..... $1.50@2.00
do, Newtown Pippins ..... $2.00@2.25
Pears (52-lb. box) ..... $2.00@3.50
Strawberries, 6 12-oz. boxes ..... $1.00@1.25
Casaba, crate ..... 50c@75c
Honeydew Melons, crate ..... $1.00@1.25
Cranberries, box ..... $5.00@5.50
do, bbl. ..... $22.50@25.00

FERTILIZER MATERIAL.

Fish meal is quoted at from $85 to $120 a ton, and meat scrap at $100 a ton, but little trading is being done in either. Green bone is worth $20 a ton.

POULTRY.

The market has been overstocked during the past week with Eastern poultry and prices have ruled low. Indications are, however, that prices will advance some before Christmas. The market is cleaning up a little.

Broilers, small, alive, per lb. ..... 50@52c
do, large ..... 45@50c
Hens, mixed color ..... 33@35c
do, Leghorns ..... 32@35c
Roosters, young ..... 33@35c
do, old 23c
Friers ..... 38@40c
Friers ..... 40@42c
Squabs ..... 70@80c
Geese ..... 33@35c
Ducks ..... 35@37c
do, old ..... 35@38c
Belgian Hare, live ..... 20@25c
do, dressed ..... 24@30c
Jack Rabbits ..... Nominal
Turkeys, young, large, lb. ..... 45@50c
do, old, lb. ..... 45@47c
do, dressed, lb. ..... 53@58c

BUTTER.

The butter market is firm with prices about the same. There is a good demand for medium grades. No New Zealand butter has arrived this week and the last shipment from there is expected about the 28th of the month.

	Thu.	Fri.	Sat.	Mon.	Tu.	Wed.
Extra	47½	48	..	47½	47½	47½
Prime 1sts	44	45½	..	45½	46	46½
Firsts	..	..	..	..	..	..

CHEESE.

Trading has been light and the market generally dull; however, there has been a more varied demand. With a weak market on all grades Full Cream Jack has gone as low as 25c.

California Flats, fancy, lb. 23½c
do, Firsts 20½c
Oregon Triplets 26c
California Y. A. fancy 30c
Oregon Y. A. fancy 30½c
Full Cream Jack 25c

EGGS.

The break on the Eastern market has hurt the market here and prices were all tumbling at the week's close. Heavy shipments have arrived here from Seattle. These are the first shipments from that place for some time. Two thousand cases from Australia also arrived during the week.

	Thu.	Fri.	Sat.	Mon.	Tu.	Wed.
Extra	78½	81½	..	82	78½	71½
Ex. Pullet	64½	70½	..	70½	67	65
Undersized	62½	65½	..	66½	66½	62½
Extra firsts	78	79½	..	81	76½	70½

HONEY.

The honey market is weaker than ever and prices are all nominal with no trading.

Water White (extracted) ..... 11@13
White ..... 13@15c
Amber Alfalfa ..... 10@12c
Light Amber (comb) ..... 25@30c

POTATOES, ONIONS, ETC.

Vegetables are coming in well but some of this produce is showing the effects of frost. Tomato prices are up with a scarcity of that vegetable and a good demand. Heavy shipments of potatoes from all sections have arrived during the week and the market is very dull. Consequently potatoes are not moving. There is no movement for onions either.

Turnips $1.00
Beans, green ..... 10@15c
Carrots, per sack ..... $1.00@1.25
Lettuce, local, doz. ..... 25@30c
Tomatoes, Alameda, large box ..... $1.50@2.00
Tomatoes, Alameda, large box ..... 75c@1.50
Summer Squash, box 35-40 lbs. ..... $1.25@1.75
Potatoes, New River, cwt. ..... $1.15@1.60
do, Garnets ..... 2½@3c
Onions, yellow, sack ..... 50@60c
do, Red ..... Nominal
Green Onions, box, 25 lbs. $1.50
Celery, crate ..... $3.00@3.25
Cauliflower, doz. ..... 60@65c
Chestnuts, lb. 18c

BEANS.

The market is quiet as is usual at the holiday time. No one wants to carry stocks on hand over the inventory time at the first of the year. Consequently the market has declined some.

Red Kidneys ..... $9.00@9.50
Bayos ..... $10.00@10.25
Blackeyes ..... $5.75@6.00
Cranberries ..... $6.00@6.25
Red Mexican ..... $5.75@6.50
Pinks ..... $5.50@5.75
Large Whites ..... $4.25@4.50
Small Whites ..... $4.25@4.40
Limas, S. F. prices ..... $6.00@6.25
Garbanzoes ..... $4.90@6.50

DRIED FRUITS.

The market is very weak, there being no demand. Some improvement in the market is expected after the first of the year. There have been no changes in prices.

Apricots.

Extra fancy Moorpark, lb. 30c
Fancy Moorpark, lb 23c

Growers Quality.

Growers' quality—Fancy, lb. 26½c
do, lb. 24½c
do, Choice lb. 22½c
do, Slabs, lb. 20c
do, Standards, lb. 18c

Raisins—The following prices have been established as the opening prices of the California Associated Raisin Company for the 1920 crop of raisins.

Muscat, Sun Maid, seeded, pkg, 36-16s, 20½c
do, Fancy ..36-16s, 20½c; 48-12s, 15¾c
Bulk, seeded, Baker's Sun Maid, 25-lb. 19½c
do, Fancy Sun Maid, 25-lb. boxes 20c
do, 4-crown, recleaned, lb. 23½c
Loose, 1-crown, recleaned, lb. 19½c
Layers, 3-crown, flat pack, 5-lb. box ..$1.30
do, 3-crown, flat pack, 5-lb. box ..$1.30
Clusters, 4-crown, flat pack, 20-lb. box $4.70
do, 4-crown, flat pack, 5-lb. box ..$1.40
Sun Maid, 100-lb. boxes $20.50
Thompson Seedless, Sun Maid, recleaned, lb. 20c
do, Sun Maid, bakers, lb. 21c
Sultanas, Sun Maid, recleaned, lb. 19¾c
do, Sweat-box, layers, lb. 18½c

..Figs—Following prices have been established as the opening prices for the 1920 crop of dried figs.

White Adriatic, 12-10 oz. $1.25; fancy, $1.30
do, 12-8 oz. ..... $2.00; fancy, $2.05
do, 50-6 oz. ..... $3.10; fancy, $3.20
do, 70-4 oz. ..... $3.30; fancy, $3.40
Adriatic, bulk, Standard, 50-lb. boxes, lb. 9c
do, bulk, fancy, 50-lb. boxes, lb. 13c
Black Mission, Standard, 50-lb. boxes, lb. 7c
do, Fancy, 50-lb. boxes, lb. 12c

Prices f. o. b. Fresno.

(Peach Growers, Inc., prices f. o. b. Fresno.)

Peaches.—Following prices have been established as the opening prices of the California Peach Growers for the crop of dried peaches.

Yellows, Standard, lb 15½c
do, Fancy, lb. 17½c
do, Extra fancy, lb. 18½c
do, Slabs, lb. 15¼c
Muirs, Standard, lb. 15¾c
do, Fancy, lb. 18¼c
do, Extra fancy, lb. 19½c

The above prices are bulk basis.

Shipment: September, October, November. Seller's option. The above prices are guaranteed against Association decline until January 1, 1921.

Prunes—Following prices have been established as the opening prices of the California Prune and Apricot Growers, Inc., for the 1920 (Calif. Prune and Apricot Assn., f. o. b. California.)

Sunsweet Brand, 20-30s, flat, lb. 25c
do, 30-40s, bulk, lb. 16c
do, 40-50s, bluk, lb. 15c
do, 50-60s, bulk, lb. 12c
do, 60-70s, bulk, lb. 11c
do, 70-80s, bulk, lb. 10c
do, 80-90s, bulk, lb. 9c
do, 90-100s, bulk, lb. 8½c

First half September shipment, ½c premium; last half September shipment, ¼c premium. The above prices apply only to contracts already issued.

Pears.

Standard 10c
Choice 12½c
Extra Choice 14c
Fancy ..... 16@17c

SPECIAL CITRUS REPORT.

Los Angeles, December 15, 1920.

The market on California navel oranges is dull and lifeless. The reason given for the downward progress of prices is attributed to slackened demand. Concessions in price do not bring the usual result of quickening demand according to shippers. Some improvement is looked for, however, on account of the demand, which the holidays always accentuate. F. o. b. quotations are on a basis of $3.50 to $3.75 per box on both Central and Southern California navels.

The market on alifornia lemons remains dull and lifeless. F. o. b. quotations are unchanged—$2.50 to $3 per box. California lemon growers, through the Citrus League, are asking the railroads to grant them an emergency freight rate of $1 a hundred pounds. The rate is asked to enable growers to meet the competition of Italian growers. There are 36,000 boxes of foreign lemons on hand and available for sale within the next thirty days.

LOS ANGELES

Los Angeles, December 14, 1920.

BUTTER.

With a further slight increase in the production and a marked improvement in the receipts, the market again went off 1c the last week in sympathy with a further decline in San Francisco. Demand for extras, however, continues good, but sales of low grades very draggy. Chicago and New York, however, advanced 1c on extras. Low grades unchanged. Receipts for the week 438,500 pounds. We quote:

California, fresh extras 51c
do, prime first 49c
do, first 48c

EGGS.

There is little new to note in this market from a week ago. Receipts were somewhat better, but with a very good street demand, resulting from the approach of Christmas, prices held up very well, and this in the face of a decline of 2c in Chicago on first and a weak New York market. Receipts by rail for the week 810 cases.

Fresh ranch, extras 76c
do, case count 73c
do, pullets 70c

These prices are 8c higher on extras, 12c higher on case count, and 11c higher on pullets than this time last year.

POULTRY.

With the approach of Christmas the market has picked up. While the offerings of broilers and friers were very good the past week they sold fairly well and brought steady prices. Hens continue dull. Roasters selling fairly. Turkeys in good demand and firm. Ducks selling very well. Geese moving better and in fair demand and higher. We quote from growers:

Broilers, 1 to 1¼ lbs. 38c
do, 1¼ to 1¾ lbs. 47c
Friers, 2 to 3 lbs. 40c
Hens 32c
Roosters (soft bone), 3 lbs. and up 32c
Ducks ..... 28@32c
Turkeys ..... 43@45c
Geese 28c

FRUITS.

With oranges coming in more freely and selling low the demand for apples has fallen off. Offerings continue very good and sales slow, with Bellefleurs and Newtowns lower. We quote from growers:

Bellfleurs, 3¾@4 tiers ..... $1.25@1.40
do, Newtown Pippins, 3½@4 tiers ..... $1.50@1.75
do, C grades ..... $1.00@1.25
do, Banana, lb. ..... 7@9c
do, Jonathan, lb. ..... 5½@6½c
do, Delicious, lb. ..... 6@9c
do, Black Twigs, lb. ..... 4@6c
do, Winesaps, lb. ..... 5@5½c

VEGETABLES.

The market was quiet the past wek and potatoes and onions are lower again and very slow sale. Receipts were not heavy, yet at the same time in excess of the demand. Peas also lower in the absence of shippers buying. Lettuce and cauliflower unchanged but slow sale. Cabbage dull and lower. Green peppers higher. Carrots lower. Tomatoes steady and in fair demand. Sweet potatoes dull but unchanged. Celery very dull and local very cheap. We quote from growers:

Potatoes, local, cwt. ..... $1.30@1.40
do, Northern, cwt. ..... $1.50@1.75
do, Idaho Russett, cwt. ..... $1.50@1.60
Sweet Potatoes, lb. ..... 3@3½c
Cauliflower, local crate ..... 25@40c
Celery, pony crate ..... $1.50@2.00
do, Northern, crate ..... $3.50@4.00
Onions, Stockton, white, cwt. ..... $1.25@1.35
do, yellow, cwt. ..... 90c@1.00
do, Australian Brown, cwt. ..... $1.00@1.10
do, local, crate ..... 40@50c
Lettuce, crate ..... 40@50c
Rhubarb, per 30-lb. box ..... $1.15@1.25
Peas, lb. ..... 10@12c
Carrots, bunches ..... 30@35c
Summer Squash, local, lug ..... $1.00@1.25
String Beans, green, lb. ..... 12@14c
do, wax, lb. ..... 12@14c
do, Kentucky, lb. ..... 16@17c
Cucumbers, lug ..... $3.00@3.50
Tomatoes, home-grown, No. 1 lug $1.00@1.25
do, No. 2 ..... 35@40c
Bell Peppers, lb. ..... 6@7c
do, Chile, lb. ..... 6@7c

BEANS.

There was some little doing in limas, pinks and blackeyes the past week. There were no car lots moving, however, though the feeling was better and a more active demand is looked for after the first of the year. Limas are one-half cent lower, others unchanged.

Limas, per cwt. $5.50
Large white, per cwt. ..... $4.50@5.00
Small white, per cwt. ..... $3.00@3.25
Pink, cwt. ..... $5.35@5.50
Blackeyes, cwt. ..... $5.30@5.35

HAY.

A slow and weak market was had the past week. Receipts were only fair, yet ample for the demand. Buyers still holding back and taking hold cautiously, and only such lots as had to be had for immediate use, as they are still looking for lower prices and only the light offerings enabled receivers to maintain steady prices. We quote f. o. b. Los Angeles:

Barley hay, ton ..... $20.000@23.00
Oat hay, ton ..... $24.00@26.00
Alfalfa, Northern, ton ..... $24.00@25.00
do, local, ton ..... $27.00@30.00
Straw, ton ..... $8.00@9.00

WALNUTS.

The season is fast drawing to a close. The Association reports shipments of only ten cars the past week. Demand fair and Association prices remain steady as follows:

No. 1 ..... 22½c
No. 3 ..... 18½c

Special Livestock Market Report

San Francisco, December 15, 1920.

CATTLE—The demand for beef was unusually active during the week, and as a result we find buyers willing to pay an advance to secure the few scattering lots available near the killing centers.

Steers, No. 1, 1000-1200 lbs. ..... 9½@10½c
do, 2nd quality ..... 8½@9c
do, thin ..... 6@6½c
Cows and Heifers, No. 1 ..... 7½@8c
do, 2nd quality ..... 6@7c
do, thin ..... 3@4c
Bulls and Stags, good ..... 4½@5½c
do, fair ..... 3½@4c
Calves, lightweight ..... 9½@10c
do, medium ..... 8@9c
do, heavy ..... 7@8c

HOGS—While receipts show no noteworthy increase, prices have been marked down another one-half cent during the week. This downward movement seems to be general throughout the country.

Hard, fat, grain-fed, 100-150 lbs. 10½c
do, 150-225 lbs. 11½c
do, 225-300 lbs. 11c
do, 300-400 lbs. 10c

SHEEP AND LAMBS—Mutton sheep are in request, but offerings show a corresponding falling off as a result of feed conditions throughout the entire coast. The price situation is one of strength

Lambs, milk ..... 9½@10½c
do, yearling ..... 8@8½c
Sheep, wethers ..... 7½@8c
do, ewes ..... 4@5c

Los Angeles, December 14, 1920.

CATTLE—There was no change in this market the past week. Cows and light steers as plentiful as ever and slow sale and weak. Choice heavy steers still scarce and wanted at quotations.

Per cwt. f. o. b. Los Angeles.

Steers, prime to choice, 1050-1000 lbs. ..... $10.00@10.50
do, good to prime steers, 900-1000 lbs. ..... $8.00@8.50
Prime cows and reifers ..... $7.50@8.00
Good cows and heifers ..... $6.50@7.00
Canners ..... $3.25@3.50

HOGS—A fair and steady market was had the past week. Plenty was had, however, at quotations. Fresh meat men main buyers. Curers still holding back and taking but few as Eastern markets are lower than ours and local packers find it hard to compete with Eastern cured meats.

Heavy, averag'g 275@350 lbs. $9.00@10.00
do, 225@275 lbs. ..... $10.00@11.00
Light ..... $11.00@11.50

Rough docked 20 lbs. piggy sows 40 lbs. and stags 40 per cent.

SHEEP—Plenty continues to be had from Nevada. Lambs and yearlings still meeting with a fair demand. Ewes and wethers as dull as ever.

Prime wethers ..... $6.00@7.00
Yearlings ..... $6.00@7.00
Prime ewes ..... $5.00@6.00
Lambs ..... $10.00@11.00

Fancy budded 25½c

Buyers from independent growers reduced their price for orchard run to 10c a pound. Demand falling off and a much lighter call is looked for after Christmas.

CALIFORNIA FARM BUREAU MARKETING ASS'N.

REPORT OF SALES.

Tulare, Dec. 7 ,1920.—6, 216, $11.95, Wilber; 80, 212, $11.95, Jos. D. Biddle; 84, 190, $11.95, Virden Packing Co.; 78, 216, $11.90, Joe D. Biddle; 84, 199, $11.75, Virden Packing Co.; 90, 172, $11.30, Joe D. Biddle; 19, 276, $8.70, Joe D. Biddle; 4, 165, $8.70, Joe D. Biddle; 1, 440, $8.70, Wilber. Four cars sold, 41 consignors.

Visalia, Dec. 8, 1920.—8, 178, $11.80, Joe D. Biddle; 70, 201, $11.80, Joe D. Biddle; 88, 196, $11.35, E. B. Miller; 76, 229, $11.25, Virden Packing Co.; 11, 300, $10.75, Joe D. Biddle; 57, 149, $10.75, Joe D. Biddle; 14, 152, $10.75, Joe D. Biddle; 2, 160, $10.75, Joe D. Biddle; 4, 200, $8.75, Joe D. Biddle; 13, 283, $8.75, Joe D. Biddle. Four cars, 26 consignors.

Hanford, Dec. 9, 1920.—57, 225, $11.00; Virden Packing Co.; 64, 205, $10.80, E. B. Miller; 88, 190, $10.85, Bertrum Bros.; 59, 216, $10.70, Virden Packing Co.; 26, 110, $10.05, Joe D. Biddle; 6, 131, $10.25, Joe D. Biddle; 108, 156, $10.00, Joe D. Biddle; 7, 331, $10.00, Virden Packing Co.; 20, 337, $9.65, M. L. Pattison; 6, 525, $8.80, M. L. Pattison. Five cars sold, 39 consignors.

Corcoran, Dec. 10, 1920.—90, 197, $10.75, Virden Packing Co.; 90, 204, $10.75, Joe D. Biddle; 18, 234, $9.85, Joe D. Biddle; 2, 305, $9.35, Joe D. Biddle; 13, 148, $8.85, Joe D. Biddle; 18, 316, $7.85, Joe D. Biddle. Three cars sold, 17 consignors.

McFarland, Dec. 11, 1920.—83, 207, $11.10, Joe D. Biddle; 80, 189, $11.05, Joe D. Biddle; 80, 177, $11.00; Joe D. Biddle; 72, 217, $11.00, Joe D. Biddle; 89, 191, $10.90, Joe D. Biddle; 72, 217, $11.00, Joe D. Biddle; 89, 191, $10.90, Joe D. Biddle; 84, 207, $10.85, E. B. Miller, 92, 151, $10.85, Joe D. Biddle; 45, 212, $10.80, Joe D. Biddle 24, 329, $8.75, Joe D. Biddle; 8, 115, $8.35, E. Easton; 27, 312, $7.75, Joe D. Biddle.

Eight cars sold, 40 consignors.

MARKET COMMENT.

The British Apple Market.

The American Agricultural Trade Commission at London reports the following range of prices for apples on British Markets for the week ending November 30. At London, Oregon Newtowns, $4.03; Washington Jonathans, $3.50 to $3.85; Rome Beauty, $2.98 to $3.33; California Newtowns, $3.50; Winter Nelis pears, $5.25 to $6.13. The Commissioner states that the wiring of boxes, recently advicated, has been justified by reports recived from British railroads. These reports show that since American exporters have been wiring their boxes there has been a great drop in the claims for losses through breakage. For a long time it has been the custom to strap apple boxes going to Japan and China, for it insures a much better delivery, as the loss at times from broken and robbed packages amounts to a large percentage of the profits.

Wool Market Remains Unchanged.

The December Market Report of the U. S. Department of Agriculture states that the general wool situation remains practically unchanged. Growers feel that pooling has been a material help to them, as they are confident that if wool had been held in the hands of individuals it would have been sold at prices considerably under the low level. Another feather in co-operation's cap.

ATTENTION OF CATTLE INSPECTORS.

Renewal of Licenses.

The Office of Cattle Protection has mailed notices to all Brand Recorders advising that the annual renewel fee of $1.50 is now due and payable. In order to retain the rights to the continued use of a brand for the year 1921, this fee must be paid when due. To continue to use a brand that has been cancelled is unlawful.

All slaughterer's licenses must be renewed on or before January 1, 1921. A blank application and bond has been mailed to all licensed slaughteres with instructions to fill out the application and bond and forward same to the Office of Cattle Protection, together with the necessary fee. These instructions must be promptly complied with.

All licenses issued for 1920 or for any portion of that year, expire on December 31, 1920, and must be renewed. All bonds must be renewed to cover the year 1921. If a Company Surety Bond is used, notify the company to furnish a bond for 1921; if a Personal Surety Bond, have their sureties sign same before a Notary Public. No slaughterer is exempt from these regulations. Inspectors are requested to so advise all slaughterers in their district.

To operate without having first obtained a license is illegal and any person violating the law will be prosecuted.—J. B. N., State Dept. of Agriculture.

Classified Advertisements.

Rate, 4c. per word. Cash must accompany all orders.

COUNTRY LANDS.

PLACER COUNTY FOOTHILL Fruit Farm.—25 acres, 4 miles from Auburn—12 acres olive and deciduous orchard, 8 acres practically cleared. Running stream, fair improvements. Only $6,000; $2,000 down. Placer County Orchards and fruit land are still low-priced. Send for booklet and list of farms. Placer County Land Co., Auburn, Calif.

320 ACRES—Mostly improved to fig, peach and almond orchards; fenced into several departments hog tight; fine set of buildings near paved highway, town and railway. Price, including the farming machinery, $250.00 an acre on liberal terms. For particulars, address Harry Miner, Madera, Calif.

MEXICAN LANDS—400 acres in American colony near Hermosillo and Southern Pacific Railway. Rich river bottom land; will grow anything; two crops each year. Investigate this opportunity to start big farming at small cost. Owner, 329 Ochsner Bldg., Sacramento, Cal.

$20.00 TO $25.00 PER ACRE.—Fine level irrigable fruit and alfalfa lands, abundant water, fertile soil, ideal climate, close to railroad. Write Chamber of Commerce, Willcox, Ariz.

FOR SALE—85 acres near Vacaville on State Highway. $17,500.00. House and barn, 20 acres orchard. R. S. Lurvey, Vacaville.

FOR SALE—160 acres in Amador Co., 2½ miles county seat. $8,000; improvements. $10,000, terms. W. E. Speer, Manteca, Calif.

MISCELLANEOUS.

BERRYDALE GARDENS, Berries and Roses. "DeRoo's Mary Lewis," new everbearing Red Raspberry. The finest, largest and best flavored berry grown. Can ship 500 miles in perfect condition. Plants strong and need no support. Plants ready for delivery now. Price per 12, $3.00; 100, $20.00; 1,000, $150.00. Sample plant, 30c parcel post. Write for catalogue, sent on receipt of 5 cents in stamps. Salesmen wanted. Berrydale Gardens, Dept. C, 1715 Webster St., San Francisco, Calif.

WANTED TEN THOUSAND GOOD DAIRY Cattle to consume our surplus alfalfa hay. Dairy opportunities unexcelled on the Newlands Irrigation Project. Never failing water supply. Adequate storage. Mild climate. Good dairy market. Great variety of crops. Our alfalfa hay unexcelled in feeding value. Supplements not essential. Orders handled. Leasing or feeding contracts available. Address Alfalfa Project Alfalfa Association, Fallon, Nevada.

SALESMEN WANTED—In California, Oregon and Washington, to sell the most recently introduced Blackberries, Raspberries and Strawberries and other kinds of Berries and Roses. Our salesmen are making good up to $600 per month. We have a large and select stock and can fill orders as fast as you can send them in. Write us at once. Berrydale Gardens, Dept. 2, 1715 Webster St., San Francisco, Cal.

FOR SALE—Orders taken for limited number cuttings from choice varieties, table and shipping grapes, including Hunesa, Ohanez, Panarite, Black Manooka, Meraville de Malaga and others. Prices on application. Address C. H. Norris, Fowler, Calif.

HELP WANTED—A young man who knows how to handle a team of horses, milk two cows and help the owner. Farm 100 acres in Napa county. State experience, references and monthly salary desired. Address Box 2320, Pacific Rural Press, San Francisco, Cal.

BERRY PLANTS — Strawberries, Loganberries, Currants, Gooseberries, Blackberries, and Raspberries for immediate delivery. All stock first-class and strictly true to name. Write for prices. M. J. Moniz, Berry Specialist, Sebastopol, California.

APPLES FROM GROWER—Bulk pack: Bellflowers, No. 1 grade, $1.30 per box; No. 2, $1.00; Newtown Pippins, Langford Seedlings, Missouri Pippins, $1.75; No. 2 grade, $1.25 per box. Edward A. Hall, Rt. 1, Box 39, Watsonville, Cal.

REMANUFACTURED PIPE

All sizes standard pipe and wrought iron screw casing. All kinds of fittings. Guaranteed good as new. Write for prices. Weissbaum Pipe Works, 160 Eleventh street, San Francisco.

NEW GAS ENGINE FOR SALE — Have several engines from 6 H. P. to 16 H. P. equipped with oil burners. Attachment for sale at cost. Installing motors and cannot use. Address Box 2300, Pacific Rural Press.

SEED PEAS FOR SALE—New crop seed of "Blue Bantam," the earliest and best of all sugar peas, 15c per pound. Sevin, Vincent Co., Seedgrowers, 512 Washington St., San Francisco.

MARIOUT BARLEY for sale—Recleaned seed, plump grain, grown on fall irrigated land. True to type, free from weed seeds. H. O. Jenkins, Davis, Calif.

ALL SIZES OF PIPE and screw casing, both new and second-hand, dipped and undipped Guaranteed. Prices right. Shecter Pipe Works, 304 Howard St., San Francisco.

WANTED — 60 or 75 H. P. Gas Tractor. Caterpillar type. E. W. Crow, Newman.

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"I use GIANT It gets them out cleaner"

Professional blasters know explosives. They have tried all the different makes. Many of them say "Giant gets the stumps out cleaner." John Zurr of Santa Rosa, Cal., writes:

"From the beginning of the time I have been using powder for stump blasting and other agricultural work, I have found the powder made by The Giant Powder Co. to be the most satisfactory. Each certain percentage of Giant Powder is exactly what it is represented to be."

Tell your dealer you want the genuine Giant Farm Powders—Giant Stumping or Eureka Stumping. The Giant trademark on every box is your sure protection against imitations.

It will pay you to write today for our book, "Better Farming with Giant Farm Powders." It tells scores of money-saving ways of doing farm jobs—land clearing, ditching, tree planting, etc.

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Pulverized Soil Sweetener.
PACIFIC PORTLAND CEMENT CO.
Consolidated
San Francisco

$1200—ONE HOLT "30" ENGINE, just overhauled; in good condition, with 5 disk moline plow. Cost, new, $465; outfit for $1200. J. M. Nelson, San Jose, Cal.

WANTED—Steady winter work for a new "Holt 45" tractor; have nine bottom Davis plows with extension rims for soft ground. Box 2310, Pacific Rural Press.

STRAWBERRIES — Wm. Belt, best among fifteen varieties tested. Two dollars per hundred, fifteen per thousand. Gervais Nursery, Terra Bella, Calif.

ONE H. M. SMITH hog-breeding crate. Never used. Price $67.00 f. o. b. Merced. Address 1010 Claus Spreckels Bldg., San Francisco, Cal.

THORNLESS MAMMOTH BLACKBERRY "Cory" for choice plants. Order from grower. Chas. E. Mortenson, Rt. A, Box 253, Lodi, Cal.

CROLEY'S BALANCED HOG FEED—The cheapest feed to fatten hogs. Write Geo. H Croley, Townsend St., San Francisco, Calif.

LEAF TOBACCO—Prepaid, 3 lbs. chewing or smoking, $1.25; 5 lbs. mild, $1.30. Guaranteed. Aden Francis, Dept. D, Dresden, Tenn.

CHERRY TREES—Rooted wild stock, plant now; graft on any varieties; fruit fourth year. S. D. Herbert, Farmington, Calif.

FOR SALE—Ranere Raspberry plants, $1.80 per dozen. Address Otto Burmeister, Box 642, Rt. 1, Mountain View, Cal.

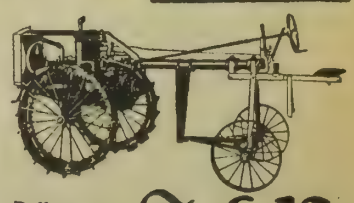
TREES, PLANTS, ALFALFA SEED, Etc.—Full stock, best varieties now . Write, J. L. Lawson, San Jose, Calif.

CALIFORNIA WONDER CORN for seed. Write now. James McKee, Riverside, Calif.

FOR SALE—Mariout Seed Barley. Watkins Bros., P. O. Box 152, Davis, Cal.

FOR SALE—$600 "18" Holt Caterpillar, good condition. Pehrson Bros., Turlock.

Allis-Chalmers Farm Tractors



The 6-12

Pulls two 12-inch plows, a two-row cultivator with 26½ inch clearance, mower, rake, binder or any standard four-horse implement. Delivers 12 H. P. at the belt—a one man tractor with any implement.

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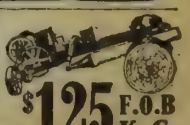
WITTE LEVER CONTROLLED Log Saw $125 F.O.B K. C.



Engine, Saw, Etc., all complete. From Pittsburgh add $6.80. Ask for Terms. Folder FREE.
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For the Good of the Greatest Number

Two distinct aims, each of them conceived in the interest of the public we serve, have animated this Company in all its activities since the beginning.

One is to produce products of uniformly fine quality; the other is to manufacture and distribute these products in sufficient volume to keep their cost low.

The passing years have seen the things Goodyear builds move steadily onward in excellence, and in the abiding public regard that such excellence always compels.

Today the millions who use these products enjoy the economy not only of intrinsic goodness, but of relatively low price made possible by immense and growing sale.

In no other article we manufacture has this process of advancing worth and receding cost been more evident than in Goodyear Cord Tires for passenger cars.

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Goodyear Cord Tires deliver today a kind and extent of performance that for reliability and final economy is unapproached in any earlier type of tire.

Because Goodyear Tires and the sincere conservation service behind them afford uncommon satisfaction, more people ride on Goodyear Tires than on any other kind.

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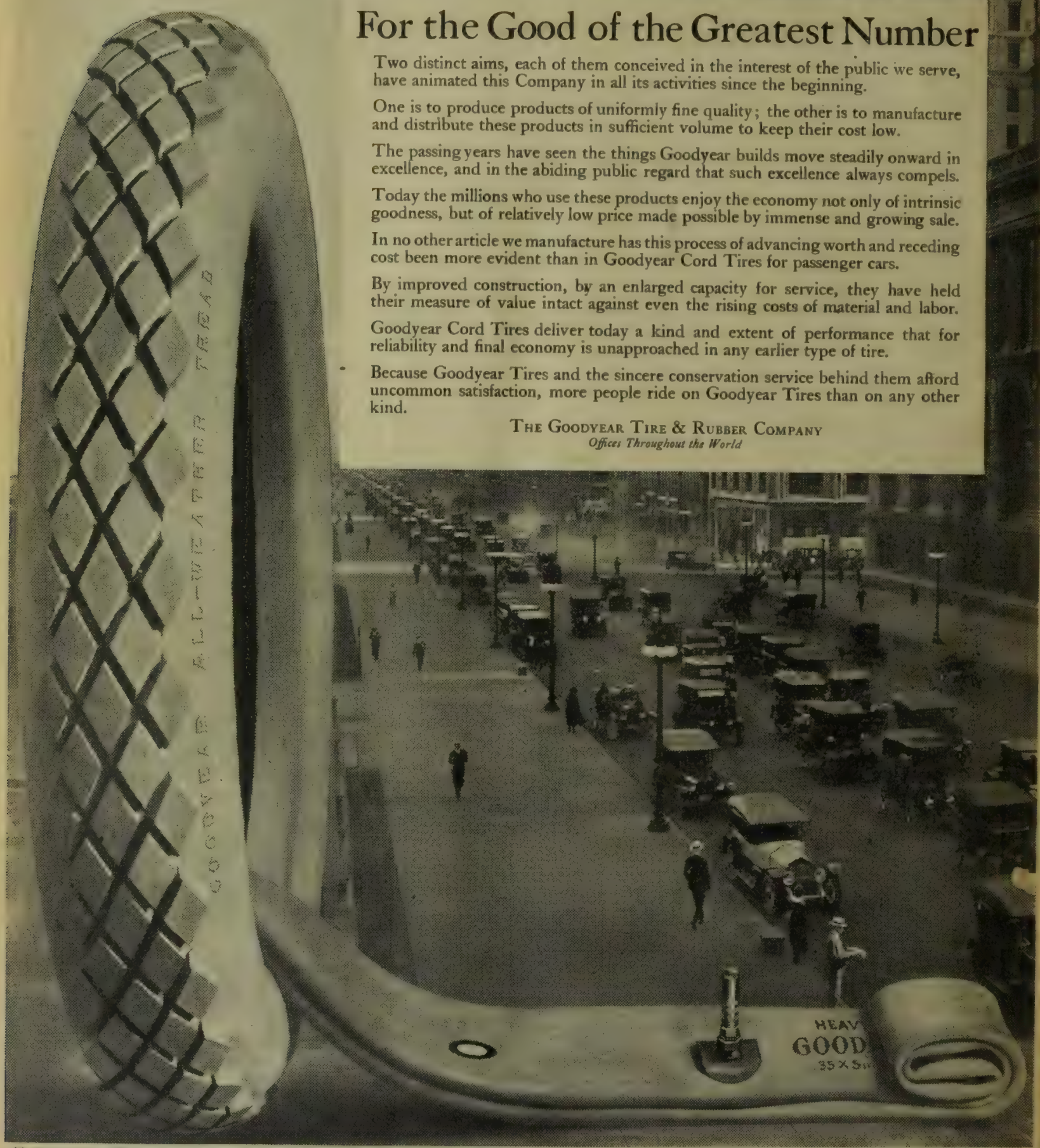

Michigan Avenue, Chicago, where, as on other famed thoroughfares the world over, "more people ride on Goodyear Tires than on any other kind"

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GOODYEAR
CORD TIRES

VOL. C—No. 26 Fiftieth Year

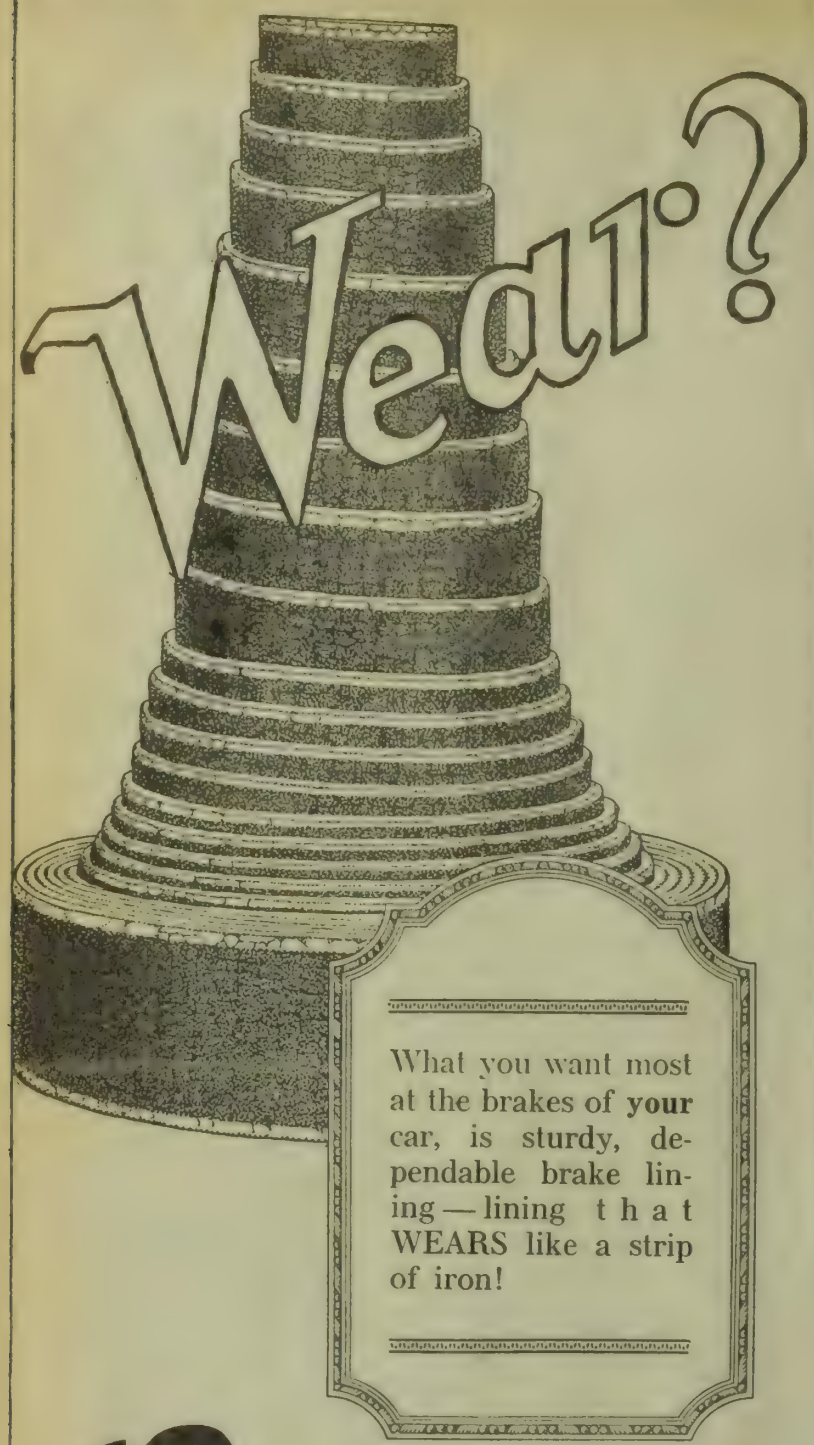
THE PACIFIC RURAL PRESS

SAN FRANCISCO DECEMBER 25, 1920 LOS ANGELES

CALIFORNIA STATE LIBRARY

California State Lib 1-1-22

THE CAULIFLOWER is the King of the cabbage family and California is the throne of him. Of course, a king in human affairs does not reign by virtue of the size of him, but rather by his "quality," and it is the same way with the cauliflower in the cabbage family. But when the king of the cabbage family chooses a throne it goes largely on size, for California grows not only the largest cauliflowers but the most of them, and when the largest cauliflower palace is shown, as the picture shows it, it is of course in California—for though the cauliflower likes the whole Pacific Coast very well, and though California has to divide honors with proper lands in proper places in other states of the Pacific Coast line for excellence in cauliflowers, and even yield superiority to some of them in the special line of cauliflower seed, for commercial production of cauliflowers and for trade-supremacy therein, California has no rival. The cauliflowers reaching beyond sight in the picture are suggestive of leadership and of apparently limitless capacity for production.



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Silver Edge Raybestos

Raybestos brake lining is built to WEAR. When you buy brake lining ask for silver-edged Raybestos—it's guaranteed to WEAR one year. This is the sort of service you have a right to expect: the sort of service that saves time, money and trouble.

FOR FORD CARS: Use Raybestos (without wire) for the transmission, $2.25 per box. Raybestos Rolled Steel Cam Brakes, $2.50. Royal External Emergency Brakes fit drums now on your car, $6.50 at your dealers.

THE RAYBESTOS COMPANY

Factories: Bridgport, Conn.; Peterborough, Canada.
Branches: Detroit, 979 Woodward Ave. San Francisco, 1403 Chronicle Bldg.
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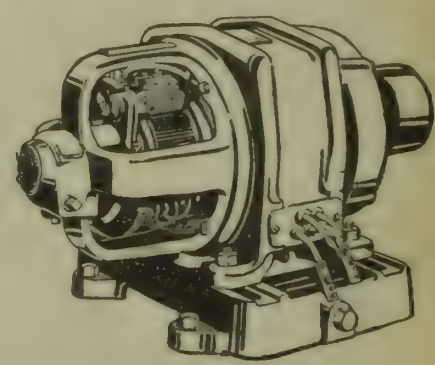
Bringing in the New Help

ELECTRICITY hooked up to G-E motors will do many things to make farm life more pleasant and profitable.

To provide water for all uses—as handy helpers at the silo, wood pile or cider press—to clean up tasks in the dairy, barn, workshop and field—G-E motors are time, labor and money savers.

In the farm home G-E motors take the deadly grind out of wash day—put an end to endless sweeping and in many other ways add to happiness and comfort. If you are near a power line—you need G-E motors.

Call your local G-E Motor Dealer or write to the nearest G-E Sales Office.



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OilPulls are Built to Last

The supreme endeavor of the makers of the Rumely OilPull tractor has always been, and always will be, to build into each machine such perfection that even under the roughest use and abuse of farm work it will establish a record of dependability, economy and long life that can be equalled only by other OilPulls.

That's why there are hundreds of nine, ten and eleven year old OilPulls still on the job.

Send for further information

ADVANCE-RUMELY THRESHER CO., Inc.
17-19 Main St. San Francisco, Cal.

RUMELY OilPull TRACTOR

FOUR THOUSAND AND MARIOUT SEED BARLEY

Limited surplus of high class seed of these two heavy-producing varieties, grown directly from University Farm Stock.

SAMPLES ON REQUEST

F. P. Wray, Davis, Calif.

General Horticultural and Agricultural Review

HORTICULTURAL JOTTINGS.

According to the last census there are about 4,500 nurseries in the United States, representing an investment of more than $52,000,000.

Southern California citrus shipments from December 7 to 12, inclusive, were oranges 656 cars, lemons 111 cars.

Jno. S. Enright of San Jose has purchased the 63-acre ranch of Albert Cottle on the Snell road. The ranch is planted to apricots and prunes.

According to data prepared by I. H. Parker, in the office of County Recorder of Placer county, Japanese have recently secured control of more than 1,000 additional acres of land in Placer county.

California Peach Growers' Association is preparing to spend $125,000 in a special advertising campaign to cover the spring months. The drive will be particularly directed at territory east of the Mississippi.

J. J. Baum, a successful orchardist of Los Gatos, has propagated a walnut he believes to be a winner. It is a splendid bearer and the fruit is of uniform size and the tree is a vigorous grower.

The nut shelling plant of the California Almond Growers' Association at Sacramento is practically completed. It is the only plant of its kind in the world, representing an expenditure of $200,000.

Pruning in the Santa Clara Valley is now under full headway. The long system of pruning is being extensively practiced on apricots and prunes. Very heavy pruning is being done in the orchards that were badly affected with brown rot last season.

F. W. Read, of the standardization service of the Department of Agriculture, has inspected 3,600 cars at shipping points. At this rate 10,000 cars will have been inspected in the first twelve months. Twenty men are employed looking over fruit shipments from Oroville to San Diego.

The Board of Directors of the California Peach Growers have changed the name of the organization to the California Peach and Fig Growers. The capital stock had previously been raised from $1,000,000, or 25,000 shares at $40 per share, to $3,000,000, or 75,000 shares at $40.

L. R. Cody, horticultural commissioner of Santa Clara county, recently condemned 45,000 strawberry plants coming from the weevil infested district of Oregon, against which there is a quarantine. This makes a total of 85,000 plants from that district condemned by Cody.

The Directors of the California Peach and Fig Growers have authorized their horticulturist, I. J. Condit, to prepare a program and arrange for a Fig Institute, similar to those held in Fresno during the past four seasons. The tentative date for the meeting has been set for January 7 and 8, and the place of meeting is Fresno.

The purchase by H. Jones & Co. of the jam and fruit preserving plant of A. W. Palfreyman for a consideration of $250,000, has been made known by a document being placed on record in Alameda county. The plant in question is in Fruitvale, and the making of jams, jellies and fruit by-products is contemplated.

Mrs. S. Turpin of Oakdale has the distinction of decorating the commercial fruit stands of that city on Christmas and New Year's with luscious raspberries. This has been her custom for the past three years. Her berry patch is protected and well cared for, hence this unusual production at an unusual season of the year.

The orchardists of Lake county knowing the superior quality of Bartlett pear that may be raised in that section have faith in the future of that fruit, which is shown by the increased acreage now being planted. During 1920 60,000 Bartlett trees were planted, and Horticultural Commissioner F. G. Stokes expects a further increase in 1921.

The California Peach and Fig Growers' Association are making substantial headway in Sutter county. Eighteen 1921 contracts made with the peach growers of the county have been filed at the office of the Rcorder by District Manager J. E. Smurr. It is expected that fully fifty peach growers of Sutter county will sign contracts with the association.

The directors of the California Pear Growers' Association held a meeting at Walnut Grove, on the Sacramento river last week, authorized President Frank T. Swett to appoint a standing committee to look into the matter of pear spraying that would eliminate any further controversy or trouble with the Boston authorities in connection with the coating of dried spray found on shipments last summer, causing a loss of $30,000 worth of pears, that were dumped in the Boston harbor.

Losses from freezing of Northwestern apples were extremely heavy last winter. During December and January, 1919-20, claims of $3,000,000 were presented to railroads by apple shippers of Washington, Oregon and Idaho. A heating system suitable for installation in ventilator and refrigerator cars has been designed by investigators of the U. S. Bureau of Markets and has been approved by various railroads as a standard for the equipment of refrigerator cars. While apples begin to freeze around 28 degrees, below 26 is required to start ice formation in the fruit.

AGRICULTURAL NOTES.

National Lecturer and Organizer W. C. Landson of the National Farmers' Educational and Co-operative Union, will visit California late this month.

The farm value of the 1919 hay crop figured on a December 1 basis, was placed at $1,839,967,000. The acreage in that year totaled 56,348,000.

F. W. Waite, horticultural commissioner of Imperial county, reports that spinach and lettuce are now moving in practically train load lots from Imperial Valley.

Commissioner Waite of Imperial county is making a special effort to exterminate all obnoxious weeds in Imperial county. Eradication of Johnson grass is one of the objects of his work.

Libby, McNeil & Libby are planting 4,000 acres to asparagus on land owned by the company on the Old Sargent Canal ranch on Tyler Island in the delta of the San Joaquin river near Stockton.

Geo. F. Maddocks, vice-president of the California Bean Growers' Association, says that at a meeting of the directors of the association it was announced that the California bean market is likely to revive in a short time.

The Stanislaus Farm Bureau is to have a secretary-manager after January 1. This was decided at a recent meeting of the board of directors. The hiring of a man for the job, which will pay from $1,800 to $3,000, is to be in the hands of the committee; the committee will also decide on the man and his duties.

Congressman Blanton of Texas has introduced a bill to place a one-year ban on imports of a number of agricultural products. The measure would stop importation of corn, wheat and wheat flour, oil cake, cattle, sheep, hogs, hides, beef, veal, mutton, lamb, wool, mohair, rye, barley, flax peanuts and oats.

The Board of Directors of the Turlock Irrigation district have sold the special issue, $2,570,000, to a syndicate of bay city capitalists. This sum is to provide for the building of the Don Pedro project. The bonds were sold at par.

The land values in Tulare county have increased within the space of six years by the astonishing sum of $56,000,000. Many farmers with from 100 to 500 acres in Tulare county have become independently wealthy during this period. It is generally admitted that electric service on the farms played a leading part in this increased valuation.

During the past season the Bahama Islands shipped 150,000 crates of tomatoes to the United States, each crate containing six 4-quart baskets. These tomatoes are firm and stand up well under shipment. They are ready for market in mid-winter, at a time when the principal supply is of hothouse stock and early shipments from Florida.

The new pedigreed strain of common barley No. 4000, which is the product of ten years of selection of the University Farm, is now claiming the wide attention of barley growers in California. In a five-year accurately controled field test at Davis, it has never failed to outyield common barley over which it has maintained an average increase of four sacks per acre.

The Emperor grape which has grown into such popularity in the past few years, was first planted in the Minnewawa vineyard in San Joaquin valley. The original vines came from Asia Minor. The Emperor is one of the best shippers of the grape family, and that the growing of Emperor will become a much larger industry throughout the San Joaquin Valley, is predicted by those who are well posted in the fruit industry.

After extensive experiments as to the varieties of wheat best adapted to Glen county, Geo. W. Hendry, Agronomist at the University Farm at Davis, has issued this statement: Little Club, White Australian and Buryip wheat are the most suitable varieties to grow in Glen county. The latter is found to be the most satisfactory one to grow when planted the first of the year. For early fall planting, Club and White Australian are the best seed. The Club is popular because it shatters less.

Burt oats has been selected from an array of 100 different varieties at the University of California Farm at Davis, as the most promising for soil conditions prevailing in the delta region and has been sent to a large company at Stockton for experimental plantings according to the recent announcement. The Burt oats has a gray seed, on unusually stiff straw, makes a rapid, vigorous winter growth and ripens early. It matures earlier than the other varieties. In 1920 it is said, it yielded 74 bushels per acre at the University Farm, as compared with 60.7 for red and 46 for black oats.

The California Department of Agriculture reports that they have received advices that the cotton pink bollworm is knocking at our very doors. It has invaded Dona Ana county, New exico. The Department emphasizes the fact that it is imperative that the strictest watch be kept on this most destructive pest. The latest discovery of the pink bollworm in a new locality shows more forcibly than ever the need for a Federal regulation providing for the cleaning of all cars that have hauled cotton before same are sent into California or Arizona.

Schmeiser Land Levelers

Simple --- Efficient --- Economical

The big success of the Schmeiser Land Leveler is due mainly to the three qualities of simplicity, efficiency and economy.

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It is especially efficient, due to the fact that it dumps the load and levels the surface in one operation, pulverizing the soil and settling the fill each time it unloads.

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EDITORIAL

A CHRISTMAS LESSON.

THE WORLD seems to be approaching Christmas festivities this year by wading through a morass of problems and not by floating upon a crystal flood of good will to all mankind, which has been its traditional route to the harbor of content and thanksgiving. These questions have probably arisen in many minds: Is the approach to earthly and heavenly blessedness to be secured by draining the swamp of human frailty, thereby destroying the myriad evils which thrive therein, and then building a causeway of faith and good works over which all men can six-cylinder themselves to their appointed place beside the Great White Throne? Or is it a more promising recourse to invoke religio-moral engineering, dam all the outlets of confession, raise the tide of idealism so high that all consciousness of evil shall be submerged and lost to view, and then ferry mankind to its eternal home in floating palaces—with all passports vised at the point of departure rather than in the port of arrival? It is probably indisputable that the latter plan has been involved in the Christmas philosophy and practice of the recent, if not of the remote, past and the doctrine that "while the lamp holds out to burn" has been modernized so that not the "vilest sinner" but the moral invalid "may return." As we reflect upon what seems to us the current attitude of the public mind toward the Christmas celebration, we wonder whether the conditions upon which mankind can alone receive its greatest blessings from the birth at Bethlehem are not being submerged in the tide of human idealism. Do we remember that repentance is a prerequisite of honest belief and that both are fundamental in the rendering of Glory to God and Good Will to Men? Are there not reasons to apprehend that hope is arising that a great flood of idealized good will to men may be the cure for human selfishness, inhumanity and other forms of evil, rather than the product of resolute abandonment of them, as honest, sincere good will must really be? Is not the deepest Christmas significance embodied in these words, which were written hundreds of years before the birth of Christ and in anticipation of it: "Cease to do evil; learn to do well?"

CHRISTMAS AND THE PUBLIC WELFARE.

One of the sloughs through which an approach to Christmas must be negotiated this year is the obscuration of the obligation of organized workers to subserve the public welfare. Just at the time that the public makes its chief demand upon local transportation, a strike is announced by the deckhands and others operating the ferry steamers plying between San Francisco and its over-sea suburbs, who declare that if their demands for a wage increase of $30 per month are not agreed to, they will tie the boats up to the docks at a certain day and hour and the public can walk or swim to and from its Christmas shopping and other festivities. Whether these boatmen are getting all they earn of what the public pays for riding or not, we do not know. If they do not they ought to get it ,but what sense or decency is there in their visiting distress and hardship upon the public, which is now paying 80 per cent more than formerly to be served, and without whose patronage there would be no employment and no compensation at all for this class of boatmen? There may be reason for the readjustment of the wage-scale of these men, but why should the public be punished for that? There probably should be a tribunal provided to determine that and it should be so legally constituted and endowed that its decisions should be final. No man should be given employment in connection with a public utility who does not agree not to "strike"—which, in the case of a public utility, means to combine with others to inflict public suffering and to use that suffering as a club to serve their own purposes. A man usually has to put forth some effort to get a place in public utility service, for the jobs are usually counted good and desirable, and he should remember that when he starts out to serve his own desires and to inflict inconvenience, loss and hardship upon his fellowmen who have placed him in a position of trust. It seems particularly inconsiderate and intolerable to precipitate a strike just at a time when the public is making its greatest demand upon transportation, and considers it most important to its comfort to have it, and it seems especially ungrateful to do it just when the individuals comprising the public are thinking less of what good they can do themselves than of the good which they may do to others—which is the call which Christmas should make upon every man who cherishes "good will to men." As we are compelled to write this before the fatal day and hour arrive, we can but express the hope that they will not arrive at all and that the public service will continue with the best efforts of those who are entrusted with it, and that the assurance which the managers of the ferries give that their service will not be interrupted and that other men will do the work if those whom we are accustomed to see in these important places persist in their threat to make the public suffer. It will surely be a craven public which does not insist upon its rights to be served devotedly and uninterruptedly, and if the public has not provided that this shall be done with justice to the men who accept its service, it should make such provision without delay. The proper recourse of such men is not to public persecution.

EITHER CHRISTMAS OR THE FOURTH OF JULY.

It is pertinent to remember that the farmer is usually hard hit by a strike in the transportation service, whether it falls at one time of the year or another. A few years ago it was the trick of the railway train men to call a strike just when there were the greatest number of fruit trains moving and losses of fine fruits on sidings along the overland railways brought great distress to some of the pioneer fruit growers whose memories are held in high esteem. We doubt, however, if even such great losses distress the farmer so much as does a strike at Christmas, which prevents his children in the cities from bringing cheer to him in the old home in the country, or forbids him to spend the day with them in the city and makes it impossible for him to bring to them the pride of the turkey flock, which has been specially fed up for weeks to put to shame all the store turkeys of the metropolis! The fact is that in his production and in his recreation also, the farmer abhors a strike which sets at naught all his economic and social calculations, and the farmers as a whole are resolutely opposed to the arbitrariness and injustice of the strike method of adjusting differences and disputes. Those who uphold strikes claim that they are the only way by which organized labor can secure its rights, while those who oppose strikes believe that no wrong can be cured by recourse to a greater wrong. It is a contribution to the future settlement of the issue for strikes or against them for the public to know the prevailing conviction of farmers on the question. At the meeting in Boston last month, the National Grange, the oldest of the larger agricultural organizations of the country adopted this resolution:

"Reaffirming the position heretofore taken in favor of collective bargaining, the National Grange does hereby express its disapproval of any system which denies to any individual the right to work in any place where his industry is needed at any time and at any wage which is satisfactory to him, or to quit his employment whenever and for whatever reason may be to him controling, subject only to such contract obligation as he may willingly enter into and as may be enforceable in an American Court of Justice."

This declaration pertains directly to the coercive element in a strike which aims to take away a member's right to work or quit as he chooses or to prevent non-members from taking jobs made vacant by the enforcement of a strike. It has particular reference to the relations between private employers and their employees and the efforts by which the latter endeavor to punish the former for proceeding with their own business in their own ways. It is a fundamental conception of individual rights on both sides. It is our conviction that, as the rights of the public transcend the rights of any individual in the matter of employing and rendering service, those connected therewith who endeavor to attain their desires by the strike method are guilty of the greater offense and the Christmas spirit dwells not in them. "But he, willing to justify himself, said unto Jesus: And who is my neighbor?"

A CHRISTMAS GIFT TO CO-OPERATION.

Just before Congress adjourned for the holidays, a great gift was made to co-operation in this way:

The Capper-Hersman bill, exempting farmers' co-operative marketing associations from the provisions of the Sherman anti-trust law, was passed by the Senate. The bill now goes to conference for consideration of the Senate amendment providing that the Federal Trade Commission, instead of the Secretary of Agriculture, shall pass on complaints against any co-operative association. Associations formed under the measure must operate for the mutual benefit of the members. No member is permitted to have more than one vote, regardless of the amount of stock or membership capital, and dividends are limited to 8 per cent of the capital.

So far as we can judge at the moment, it seems to us that the provision for the reference of issues against farmers' co-operations, which is indicated above , is a good and reasonable one. When farmer's organizations take to selling products they become traders and should be classed with them, subject, of course, to the particular endowments as producers also, which the law confers upon them. To make the Secretary of Agriculture, who functions only in production and the protection of it, the referee on trade questions does not seem logical, and, as the common saying is, would not get anywhere in meeting the mercantile contention that farmers' selling organizations have no trading quality or standing. Let these organizations go, we say, into the very center of trading philosophy and practice, and win their way therein. Of course, as this new element enters into the transactions of the Federal Trade Commisiosn, it will be necessary to constitute that commission with an expert and adequate representation of members with the points of view and purposes of the producing-traders and thus agriculture, instead of being corraled by itself in a producing enclosure, where it is bound to be misunderstood and misrepresented by rival interests, will run out on the highway of the country's commerce and be able to do a little running over, if it should be necessary, in its own behalf. And this is true, it seems to us, about many other things agricultural. Educationally, politically and financially, it has been too much the idea that farmers should be herded by themselves and quickly roped if they tried to break away. The American farmers' place is just where other men are in all lines of citizenship and in all branches of social and industrial activity. Shall the farmers' co-opeartive selling organizations be tributary to the Federal Trade Commission? Of course—to a Federal Trade Commisiosn properly comprised and constituted!

FILLING THE FARMER'S STOCKING.

Of course the main purpose which farmers must have in view in bucking the center of influence and governmental control must be the contribution which he can make to public welfare and the prevalence of righteousness in the thoughts and actions of men. It is largely up to the farmers to project the light of the clear-thinking and clear-seeing of the vast, creative, open-spaces, in which God ordains their habitation, upon the greed and muddle generated in the congested areas in which the devil has

his chief muntion-factories and propaganda-joints. But it becomes us to stress this point. It is accepted Christmas ethics not to proclaim what one gives, but what one gets—thus manifesting gratitude for the generosity of others. It is in this spirit that we point with joy to the public benefactions which are now coming the farmers' way; forgetting, of course, that farmers have been long laying concrete highways for their smooth approach. All the year the farmers have been writing letters to Santa Claus describing the things they desire to receive, and it is our parental privilege to have caught a glimpse into the old saint's loading-sled and to see that his trucks will soon be spinning along laden with just such things. As we are writing this, the wires bring from the national capital this genalization:

No one in Congress has questioned the undeniable fact that the agricultural industry from coast to coast and from cranberries to cotton is in a bad way, nor has a voice been lifted in Congress in objection to granting legislative relief asked by the farmers. Doubt has been expressed whether relief can be effected through legislation, and whether it will be possible for other than natural law to remedy things, but Congress is willing to try the experiment of legislation and give the farmers almost anything they ask.

And, in accordance with this attitude, Congress has not only started strongly toward lifting the shadow of the Sherman law from agricultural cooperations, as we have indicated in the preceding paragraph, but have pushed along emergency legislation with such unanimity that vetoes even if encountered (which we have no reason to anticipate) can avail nothing. Such members are the revival of the War Finance Corporation, which will enable Europe to buy our surplus food-products: a temporary protective tariff which will work at once and endure for a year, to prevent other parts of the world from unloading their surpluses upon our markets; a governmental credit establishment which will prevent the farmers from sacrificing what they have and enable them to go forward for more production; the rehabilitation of the rural credit institutions which rival establishments succeeded in smothering in the courts. These enactments seem to be taking precedence of all other legislation at Washington, not only because situations have arisen to require them, but because farmers, by acting together through their representative organizations, have revealed these situations to the understanding and conscience of the nation. Surely the foxy old grandfather will endorse the declaration of the believing little tot who is riding on his instep that "letters to Santa Claus" will fill his stocking with the things he longs for.

CALIFORNIA WEATHER RECORD

The following rainfall and temperature record is furnished the Pacific Rural Press by the United States Department of Agriculture Weather Bureau at San Francisco for the week ending December 20, 1920.

Station—	Rainfall Past Week	Rainfall Seasonal To Date	Rainfall Normal To Date	Temperature Highest	Temperature Lowest
Eureka	.28	18.73	14.23	68	36
Red Bluff	1.22	12.49	8.40	60	32
Sacramento	1.01	8.00	5.72	52	38
San Francisco	2.44	9.87	6.52	58	46
San Jose	.77	6.12	4.88	60	34
Fresno	.12	2.80	2.89	64	37
San Luis Obispo	1.24	6.22	4.80	70	34
Los Angeles	.58	2.89	3.87	74	48
San Diego	.32	.88	2.32	72	47
Winnemucca	.12	3.88	2.54	48	10
Reno	.04	1.51	3.17	46	18
Tonopah	.02	.76	3.40	42	20

Snow on Ground December 20, 1920.

Yosemite—12.0 inches, lightly packed on ground; 6.0 inches during week.
Glacier—32 in. on ground, packed; 16 in. during week.
Emigrant—36 in. on ground, partly packed; 11 in. during week.
Summit—76 in., loosely packed; 19 in. during week.
Huntington—37 in. on ground, lightly packed; 19 in. during week.
Cascada—9 in. on ground, lightly packed; 9 in. during week.
McCloud—17 in., well packed.
Sierraville—7 in. on ground. Nothing fell during week.
Inskip—51 in., lightly packed; 28 in. during week.

QUERIES AND REPLIES

By the Editor.

Inquirers Must Give Full Name and Address
Answered Questions also on other pages.

The Chance in Flax.

To the Editor: What about the profitable end of the flaxseed industry in California? I have some of the best of Glenn county soil. In what month should flax be sown, and will it mature without irrigation, the same as oats or barley? How much of a yield can I expect, and are the young plants easily injured by frost? If it needs irrigation, how must it be irrigated? Can I flood it, if I do not let the water on more than four or five hours? Can flax be grown on alkali land?—E. A. R., Willows.

Flax growing has been a disappointment in California for half a century. Now and then some profit has been made from it, but it has never reached continuous profit nor production. When there has been a tariff on, local oil-makers have tried to promote home production, but when the tariff is off, it is impossible to grow flaxseed in competition with imported seed and sometimes linseed oil from the East can be sold in our markets for less than our oil mills can make it, even from cheap seed. Flaxseed is winter-grown by rainfall, like wheat and barley, and handled with the same machinery. It is hardy against ordinary valley frosts. It does not take to alkali. We should let it alone unless we had a contract for the crop at a good price. There is only one chance in flax, for the crop, after maturity begins, cannot be fed to stock. The average seed-yield is about twelve bushels per acre.

Growing Cyclamens.

To the Editor: How about growing cyclamens from seed? How deep should the seed be planted? How much time will elapse between the date of planting and the appearance of the seedlings? When should the seedlings be transplanted? At what age will the plant bloom, counting from date of planting seed? We are particularly interested in the second question, as the seed we have is old and we will wish to secure other seeds if the seed we have will not germinate.—M. L. C., Watsonville.

We do not know how long cyclamen seed will remain viable. It is usual to prescribe sowing soon after gathering, and that is during the rainy season. It is slow in starting, as the first effort from the seed is to produce a little corn from which leaves put out, and this may take two or three months. When the seedling has two leaves it may be planted out in rich, fibrous loam from the pot or box in which the seed is usually germinated in a mixture of leaf mold and sand. The plant is usually over a year old before the blooms appear. Cyclamens should never get too hot nor too cold nor too dry—even when the corms are dormant. Cyclamens cannot be counted very easy plants to grow unless your soil conditions and situation suit them, and then they may grow themselves in the California coast region.

Grapes in Sawdust.

Since answering the question concerning the packing of grapes in sawdust we have received a statement from the U. S. Bureau of Markets to the effect that their experiments have shown that spruce sawdust can be used instead of redwood sawdust and that sawdust of fir and other conifers which have a turpentiny savor may perhaps also be used, as the odor departs after the exposure of the fruit to the air for a few hours. As these white-wooded trees grow and their lumber is sawn nearer to the grape-shipping districts than the redwoods are and in greater volume, the availability of their sawdusts may be of considerable importance.

Olives for Hogs and Chickens

To the Editor: Do olives have any material value as feed for hogs and chickens?—H. W. L., Oroville.

Ripe olives have high nutritive value for both hogs and chickens. They should, however, be fed in connection with other feeds—with due regard to the physiological effects of their high oil content and with regard also to the fact that their chief content ministers to fattening. Reasonable quantities, in connection with alfalfa hay or other dry feed rich in protein, are theoretically indicated, but constant watchfulness for effects upon the system is required.

Bamboos and Red Ants.

To the Editor: I have cut five thousand bamboo stakes to use them for grape rooting. My neighbor told me that this will bring the "red ants" to your rooting. Do you know of any mixture that I could dip them in before I put them in the ground?—A. J. A., Turlock.

We never observed that bamboo (or have you simply "reeds"—Arundo donax) had any particular attraction for ants of any kind. Whichever you have we doubt if they will resist decay long enough either to hold up vines or attract many ants. You can perhaps make them last longer and be offensive to the ants by letting them stand upright for several hours in a cask or tank half-full of bluestone solution, such as is used for dipping seed wheat to kill smut.

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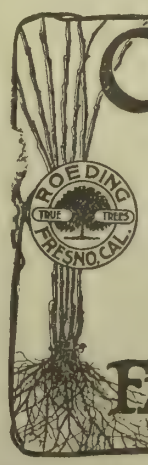

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New Methods Introduced in Tulare Orange Groves

Written for Pacific Rural Press by D. J. Whitney.

It is said that Tulare county has a wider range of orchard practice in its orange groves than any other citrus district of the state, which is another way of saying that the best practices had not been fully determined.

In order to determine what was needed to remedy certain evils the supervisors engaged Dr. P. A. Boncquet as county plant pathologist, and he has worked out certain definite practices in the care of orange groves that have given marked enough results in the time since they were tried out, to cause great interest in the vicinity of Lindsay. An increasing number of growers there are adopting the plans suggested.

Wherever in the state orange groves are deteriorating and fail to respond to heavy fertilization and what seems good care these plans apparently deserve careful recognition.

Condemns Winter Cover Crop.

An important item is deep fall plowing and bare ground during the winter. Tulare growers have differed about cover crops, but any kind of plowing has been unusual; mostly cultivation for a mulch only has been practiced.

Granting that a winter cover crop will add much nitrogen and organic matter to the soil, there are disadvantages that offset these benefits for an orange grove. For a vineyard or deciduous orchard it may be very advisable.

A rank green growth keeps the ground too cold, which fact has been abundantly proved. The result is that the roots are not as active as they should be and the trees lack vigor when blossoming time comes. By observation the blossoms seem more vigorous on an orchard given clean winter cultivation than on one with a winter cover crop, and the fruit sets better.

Even during mid-winter orange leaves will operate and the roots work when given an opportunity. The warmer the soil, the better both will work, and the stronger the tree will be in the spring, so keep out grass and weeds and keep the soil loose and warm.

Now as to the soil; it will be warmer if plowed up deeply and left loose and rough than if kept as smooth and flat as it is supposed to be in summer. There is no reason for going into detail about this.

Deep, Dry, Fall Plowing.

Plow deep, because that will help break up the plow sole—so called, and let air and life among the roots. Plow dry, because the soil will crumble better than if it is quite moist. "Dry" plowing is, of course, different in an orange orchard than in a grain field, because there always should be a reasonable amount of moisture in the soil. It never ought to get anything like dry, only plow it at its driest instead of soon after an irrigation.

One of the greatest faults of the soil in many orange orchards is the thick "plow sole." Really in this case it is not due to plowing or cultivation, but to the accumulation of carbonates in the soil. The roots are choked; they can get neither air nor food in spite of heavy applications of organic and chemical fertilizers. The trees starve for nitrogen when ten times as much is applied as the crop can take away. This is literally true. Others besides Dr. Boncquet have demonstrated this fact. Orchards fertilized like an Italian vegetable garden have gradually gone nearly to ruin. The deep plowing, therefore, is an important step in breaking up this so-called plow sole, which frequently is six or seven inches thick.

Sulphuric Acid.

Right here is the matter of sulphuric acid, which has aroused a storm of criticism. The acid is NOT applied as a soil stimulant, like land plaster, or gypsum, used to be. Its direct purpose is to neutralize the carbonates that bind the soil together to make that plow sole. When they are overcome the soil particles fall apart. The writer does not say this as a matter of theory, but after an investigation of soil so treated after deep plowing that was mellow to the most ideal degree. The deep plowing breaks up the soil so the acid can get to it all and finish the job. Neither the deep plowing alone, nor the acid alone would do the work.

Gypsum, or even sulphur, might do it in time, but the acid is so active that it does the work far quicker and better. Results will come in one season that could be achieved only in two or three seasons with gypsum alone. After the results have been achieved, regular and sufficient applications of gypsum or superphosphate, which contains much gypsum, will do in place of acid.

The acid is applied very dilutely in the irrigation water at the rate of about five pounds per tree. A much smaller application can be made before plowing, and a heavier one later. The weaker dose can be applied through the pipe lines, the later one in an open ditch.

Stable Manure Versus Cover Crops.

It is found that orchards treated heavily with barnyard manure produce better and keep in better shape than those having winter cover crops. Dr. Boncquet attributes most of the benefit of the manure to keeping the soil warm in winter, just like deep plowing does. There is also some warmth evidently secured from the decomposition of the manure, and that helps greatly.

However, when winter weeds will grow as high as the trees, there is evidently no lack of plant food, and such heavy manuring as is commonly practiced is extravagant and unnecessary when the conditions desired can be secured so much more easily another way—that is, by deep plowing and by treating the soil so as to mellow it up.

The meat of the matter is not more plant food, but proper handling of the soil, getting it into the right physical condition. It has often been said that this can be obtained by putting on lots of organic matter, but when soils are found in very bad shape and the trees nearly dead, when scores of tons of manure have been applied in a few years it is evident that heavy manuring or cover crops do not bring the desired results.

If a soil has not had much manure, a good application or a summer cover crop may, of course, help it greatly. Deep plowing with a chemical to destroy the plow sole is the thing needful in nearly all cases.

Winter Irrigation.

After the deep plowing, the soil is given water when the sulphuric acid is applied. It ought to be irrigated some anyway. Years ago growers stopped irrigation early for fear that a freeze would injure trees that grew too late. Unless rains were abundant this left the ground dry all winter. Now they are beginning to find that this is a big error and that it is best to irrigate once or twice in fall or winter to keep an optimum of moisture in the soil at all times. Dr. Boncquet states that a moderately moist soil will keep warmer than one rather dry, and the roots and leaves will naturally operate better and give the tree a better start in spring. A deep, loose, mellow layer of moderately moist soil will prepare lots of available plant food during the winter. Nitrification takes place readily in such soils. A small application of nitrate of soda or ammonium sulphate in spring may do good also.

Just before spring growth starts Dr. Boncquet advises an application of superphosphate, and a second application after the fruit has begun to set. A summer cover crop may also help greatly.

Otherwise fertilization is unnecessary, save, perhaps for a little potash now and then, to those orchards where barnyard manure has been applied ad infinitum, so to speak. On other groves this treatment with a summer cover crop or a moderate application of manure provides all the fertilization required. If this is correct it will be good news to people who think that only millionaires can afford to take care of and fertilize a citrus grove. The pruning, Dr. Boncquet thinks, should take place just before growth started out in the spring.

Demonstrated in Actual Orchards.

The outline above given has not included important details about reasons for this and that, but the main features can be glimpsed. The important matter is the way it all works out.

The writer visited orchards treated according to these recommendations that were full of dead wood, which two years ago seemed fit subjects for the morgue. The soil is now in beautiful, loose condition and everybody knows that good soil conditions are the starting point for all orchard success. These trees, which showed their former terrible condition, had started fine, fresh growth at the ends of the branches and a vigorous growth inside, demonstrating that they were coming back rapidly. In addition a profitable crop of smooth fine fruit was ripening. Frequently it is said that a broken-down orange orchard cannot "come back." These were and they were paying dividends in the process.

On a hillside Valencia orchard, where the trees indicated that they were nearly down and out a couple of years ago, the leaf color was to be envied and a crop of fruit had set that can hardly be rivalled on any grove in the county. An adjoining grove showed that the trees there a couple of years ago were in better shape than those of the first grove, but the color now was poor and the fruit very scant. The owner of the latter now shows his approval of the policy followed on the first place by subsoiling, applying acid and preparing to take the other steps.

The good grove was first treated as Dr. Boncquet sugested in August, 1919, so results were prompt. It is the property of Dr. C. B. Root of Lindsay.

The fact that deep, dry, fall plowing, with the use of acid to dissolve the plow pan, and the other details that go with it, is proving a success is indicated by its rapid adoption around Lindsay, where results can be seen. There is no copyright on the system, and it can easily be tried wherever well fertilized citrus trees are on the down grade.

The Canadian potato crop is estimated at 138,527,000 bushels for 1920. It was 125,574,900 bushels from a greater acreage in 1919. The average yield per acre in 1920 was 176½ bushels of 60 pounds each.

"We want people to point out to us any criticisms, discrimination, or injustices practiced by the public utility companies of the State," says State Railroad Commissioner Irving Martin of San Francisco.

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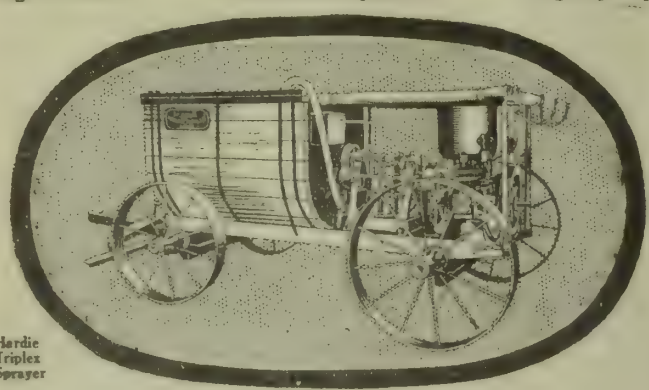

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As another example the HARDIE Ideal engine is a high duty, high quality engine which has been so carefully worked out, and refined through the years of experience as to be as near trouble proof as human ingenuity can devise.

Another thing which the experience of years has brought is weight reduction to the lowest possible amount consistent with ample strength. It has brought about the underslung frame with consequent low height so valuable in working under low trees.

You can't go wrong with a HARDIE. They are proved right. Ask any HARDIE owner. See the HARDIE dealer or write direct.

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For 20 years the foremost, exclusive manufacturers of hand and power sprayers, including the FAMOUS HARDIE ORCHARD GUN

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Farmers Get Next to the Railroad Commission

Written for Pacific Rural Press by R. E. Hodges.

A Butte county rancher was away from home a month and his home was locked; but his electric bill for that month was about the same as usual. He would like to know the company's system of reading meters.

A Santa Clara county rancher put down a deep well in 1912, requiring a 75-horsepower motor. To accommodate his neighbors in the dry year of 1913, he supplied them with water and paid the electric company $1,398.50 for current. Next year he irrigated only his own orchard and the current cost him $200, but he had to dig up $250 extra to make up the $6 per motor horsepower minimum required by the company. He paid another $250 extra the next year because he couldn't use the minimum. In 1919 he paid over three times as much for his current to irrigate the same ground. Having to pay it in this form he was thus relievd of the distress of making up a clear deficit for the minimum. He protested to the Railroad Commission, and while he got no satisfaction up to date, his current bill for 1920 was again below the minimum. This year he wanted more current and would have used the minimum, but the company could not furnish that much. Nevertheless he had to dig up to pay the full minimum charge. He wants to know if he has to pay for what he wants when he can't get it, and he would like to credit some of the excess he pays some years on the minimum charge in other years.

A Sutter county rice grower's electric rates were put by the company under one of the numerous "schedules" fixed up for various conditions and the company said that schedule was most favorable to the grower. He wasn't asleep, however. He learned that he was entitled to a better schedule, took it up with the Railroad Commission, and saved $6,000 for himself and a few neighbors on the 1920 season's electric bill.

Minimum Electricity Not Furnished.

Forty-four San Joaquin county ranchers presented to the Railroad Commission a petition stating that they were forced to rely upon a certain company for electricity to irrigate their crops and asking relief from the "inefficiencies, exactions, and oppressions of said company." They claimed that service was intermittent and inadequate from May to August before the State Power Administrator's orders went into effect. The current was of low voltage, which required increased electric consumption to pump the same water, and injured the motors by fluctuation of the loads put on them. They complained that the company increased its sale of current by supplying new subscribers without increasing the volume or voltage of its power, yet always charging the old and new subscribers the minimum rate while not furnishing the minimum amount of power.

One of these men filed an individual complaint with the Railroad Commission that electric consumers in his district were required to advance money to build electric line extensions to their ranches and that other consumers were later connected onto such lines without relieving the original consumers of the burden. The same man gave his personal experience as follows: "My power bill for 1920 was nearly double that for 1919, for irrigating the same acreage with practically the same lift of water. The bill was $266.17 in 1919. In addition to the extra charges, due largely to the low voltage furnished, the latter was the cause of burning out a starting box and motor costing $123.65 and $178.93 respectively for replacement. He believes that the substation charts, which should show 220 volts delivered to the farm lines, would average around 175 and had dropped as low as 148, resulting in increased power bills and increased cost for replacements. He complains that in the face of this rotten service, the company claims to have taken on about 29,000 new customers during the year. Their increase in power did not keep up with their increase in number of customers and he believes they should not be allowed a minimum charge for power which they did not furnish.

A Sacramento county rancher had protested a power bill and paid the part agreed upon by both parties as being right. The remainder was to be discussed later and settled amicably. But meanwhile, one day while he was away from home, his electricity was cut off; and the house, livestock, and ranch were left out of water. He vigorously took it up at district headquarters of the company and the arbitrary injury was righted as much as it could be by restoration of the service.

Federation of American Farmers.

All of these complaints and many others were presented by leading ranchers representing the Federation of American Farmers in a conference with the State Railroad Commission at San Francisco, December 14.

The Federation of American Farmers brought some of these matters recently to the attention of Governor W. D. Stephens, who courteously heard their committee and arranged the conference with the State Railroad Commission. Representatives at the conference included State Chairman J. J. McDonald of the Federation, F. C. Wilson of Sunnyvale, T. J. Henderson and J. W. Page of Campbell, Chas. Warren of Cupertino, J. N. Watts of Sacramento, who grows rice in Sutter county and prunes in Butte, F. M. Grimshaw of Sacramento, Del Keager of Stockton, J. C. Burdon of Chico, Secretary J. E. Riddell of the Federation of American Farmers, and a few others.

Confer with Railroad Commission.

The entire day was spent with extraordinary profit, both to the ranchers of the State and to the Railroad Commisison, discussing the troubles of the ranchers and the system followed by the Commission in adjusting complaints, determining rates, improving service, and encouraging hydro-electric development to decrease rates and improve service.

Field Complaint Service Needed.

More than once, Commissioner H. D. Loveland remarked that conditions were surprising, such a conference was invaluable, the Commission ought to have a man constantly in the field looking into the troubles of farm users of electricity and gas. One of the Federation committee remarked that, knowing now the attitude of the Commission, he will feel more ready to present complaints of himself and his neighbors. Another suggested that each community should have a committee to collect the complaints of ranchers and take them up with the Commission. E. O. Edgerton, president of the Commission, promptly and emphatically endorsed this proposition.

Prior Users Lose Rights.

Commissioners Edgerton and Irving Martin maintain that future users of electricity must be considered in all of the decisions of the Commission; and almost took the stand that in case of shortage, people who have been using electricity should be required to give up part of it in favor of others who may never have used it but may want it in a year of shortage. This is probably on the principle that natural resources should not be permanently owned by anyone; but it seems not to give due consideration to the fact that a rancher who once installs electricity and a pump to fit a motor and plants trees or other crops depending on the water that electricity is to pump, is entitled to electricity and water up to his average previous needs when a dry year comes. He has a prior electric right and should be protected in it. Ranchers who have investments depending on a continued supply of electricity do not see the propriety of taking away from them to help new ranchers who apply in a year of scarcity but have not helped to support the electric companies in previous years. They could use gas engines if necessary until more electricity shall be available.

All Power Rate Contracts Void.

One rancher asked the Commission if it has a right to set aside contracts for power at specified rates. L. S. Ready, head of the electric department, answered that such a contract would be illegal inasmuch as the State reserves to itself the power to regulate rates through the Commission. Practically all of such contracts contain a proviso that the rates will not hold if the Commission shall change them. This is a nigger in the firewood, for the farmer seldom notices it and the electric salesman is careful not to call his attention to it. Such a contract ought not to be offered by any company because it is apparently an attempt to defraud. But any company has a legal right to do so.

Federation to Be Notified.

Secretary Riddell pointed out to the Commission that in a great many cases which come before it and in which farmers are vitally interested, they have no chance to appear in their own behalf because they do not know of the hearings until after the decisions are made. A case in point is one in southern San Joaquin county, where ranchers must go two or three miles over a soft private road to get across a railroad to the paved highway which could be reached directly by a crossing over the railroad. They petitioned the supervisors to ask the Railroad Commission for a crossing. A hearing was held in Stockton, but nobody came to be heard for the farmers, though the hearing was repeated two or three times. The Commission notified the district attorney ahead of time and that was all they could do; but the notification went no further, and those farmers still go the long way around to get onto the highway.

Another case is found in the Delta islands depending on two steamer lines. A rate case was held in which none of the ranchers were notified to appear. Both cases are to be reopened by the Federation. The Commissioners objected that it would be impossible to notify all the interested ranchers in either case. Mr. Riddell then proposed that such notification could be made by notifying the Federation office at Stockton of every case that is to come before the Commissioners. The Federation will see that the farmers are represented wherever they are interested. The Railroad Commission acceded to this request on the ground that the Federation is a representative body, but they could not notify individuals regarding all cases. They expressed a strong desire for farming to be adequately represented at hearings in which farm interests are at stake.

A summer crop of gyp corn was grown beside a summer crop of beans by R. H. Frazer of Stanislaus county. Both fields were planted to barley the following fall, and in the spring the barley on bean land was thick, green and tall, while that following gyp was thin (not much stooled) and short.

A carload of sacked grain is unloaded in 75 minutes by eight men, as stated by Jas. Macdonald, who has built the terminal elevators on San Francisco Bay. A carload of bulk grain is unloaded in 15 minutes by two men.

Fall and Winter spraying
—(for tired trees)

The Scale Insects, the eggs of
Aphis and Red Spider (Bryobia)
These are controlled with **ZENO.**
The softening of the bark,
The cleansing from Moss and Lichen,
The general conditioning of the
Trees—are affected with **ZENO.**

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Is an internationally used
Miscible oil spray, and these are reasons why
It has proved the best by years of test.

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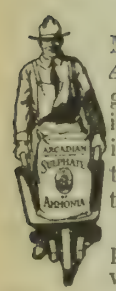
(ZENO MAY BE HAD OF YOUR LOCAL DISTRIBUTOR, FRUIT COMPANY EXCHANGE, OR BY WRITING TO US DIRECT)

Top Dressing Talk, No. 3

100% Increase in Orange Crop



Mr. R. L. Wells, Rialto, San Bernardino County, Cal., applied *Arcadian Sulphate of Ammonia* to a portion of his orange grove. The rate of application was 4 pounds per tree in two installments of 2 pounds each. The material was scattered in the basin March 1st and April 1st, each time just previous to an irrigation. This was in 1917, but due to hot winds there was no crop that year.

In 1918 the trees receiving *Arcadian Sulphate of Ammonia* produced at the rate of 648 field boxes per acre, while those without *Arcadian* yielded only 324 field boxes per acre. Estimating the value of the oranges at $1.90 a field box, we have a gross increase of $615.00 due to the *Arcadian Sulphate of Ammonia*, which cost only about $28.00 per acre.

Write Desk No. 8 for free bulletin, No. 4, "Citrus Fertilization."

Arcadian Sulphate of Ammonia Is for Sale by

CALIFORNIA: San Francisco; Hawaiian Fertilizer Co., Pacific Bone Coal & Fertilizing Co., Pacific Guano & Fertilizer Co., Western Meat Co., California Fertilizer Works, Los Angeles; Pacific Guano & Fertilizer Co., Pacific Bone Coal & Fertilizing Co., Agricultural Chemical Works, Hauser Packing Co., Hawaiian Fertilizer Co., Ltd., Southern California Fertilizer Co., OREGON: Portland, Swift & Co.

For information as to application, write Desk No. 8.

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510 First National Bank Building, Berkeley, Cal.

For Big Yields

—you have got to plant good trees. Elmer Bros. stock produces big profits for the grower. We can point you to orchards all over this state that are making surprising records year after year. It's because the trees were right to start with.

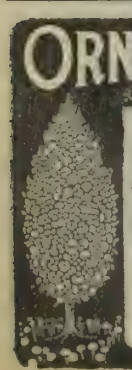
Write for Price List

Tell us the kind of trees you want and the number required. If you're in doubt as to the best variety, ask us.

Elmer Bros. Nursery

"The Nursery That Helped to make Santa Clara Valley Famous."

76 So. Market St., SAN JOSE, CALIF.



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MORGANHILL-CALIFORNIA

ZANTE
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EUREKA, FRANQUETTE
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PAYNE SEEDLING
JOHN H. WHEELER
St. Helena California

Timely Work in the Orchard

(Written for Pacific Rural Press by W. S. Killingsworth.)

Protect Household Plants from Lice.

If timely work suggestions are good for the orchardist, such suggestions should be of benefit to the wife or daughter who has the care of the flower garden and household plants, which are as susceptible to pests and diseases as tree and vine. We are often asked why house plants do not thrive under the best of attention, and what will destroy this or that pest or disease that has attacked the outdoor plants. Those questions cover a multitude of troubles; however, there is one remedy that will destroy a great many of the common insects, and it is the insect that is most damaging to house and yard plants. Where the house plant looks sick, the leaves lose color and wilt, examine the undersides, and there perhaps will be found a mass of small greenish objects lying along the sides of the midrib and larger veins of the leaves, which plainly show that they are plant lice. These tiny lice suck the vital juices from the plant and unless prompt attention is taken to destroy them the plant will eventually die. Nicotine sulphate, more commonly known as black leaf "40," used as a spray, is by far the best means of controlling plant lice. This material may be obtained from seed stores in any quantities with instructions for mixing and applying on each container. The ordinary hand atomizer may be used to excellent advantage in this work.

Phylloxera Treatment.

Owing to the determination on the part of many of the County Horticultural Commissioners to prevent the entry into their counties of rooted grape vines known to have been shipped from phylloxera infested districts, the Division of Plant Industry of the Department of Agriculture at Sacramento recommends the "Hot-water method of phylloxera disinfection," which as they state should be applied at the shipping point and a certificate to that effect should accompany the shipment, stating that the treatment had been carried out under the supervision of the County Horticultural Commissioner. However, if at the point of destination doubt remains in the mind of the Horticultural Commissioner that the process of disinfection was not a success, the rooted vines then shall be submitted to the treatment a second time which should produce no injurious effects. The hot-water treatment consists in submerging the rooted vines in water at a temperature of not less than 125 degrees F. and not more than 130 degrees F. for not less than three and not more than five minutes. Live Phylloxera and eggs are killed at 123 degrees F. for an exposure of three minutes. Rooted vines are not injured at 130 degrees F. during a submersion not to exceed five minutes.

Winter Grape Pruning.

Our experience has been that winter pruning of grape vines during December and January is advisable for many reasons. First and most important, is to regulate the fruiting of vines and i norder to do this, heavy annual pruning should be done in the dormant season. The second advantage is in the removal of the brush of canes which gives less harbor for insects, rodents and diseases. The brush can be hauled out and burned in the winter, thus leaving the vineyard clear for future work. Third, and a most important point to be taken into consideration: the vines bleed less when pruned dormant. With some varieties this is very important. Last, and not least, the condition of the ground generally makes the work more agreeable in the fall than in the spring, as often in the early spring it is disagreeable and does not improve the land by tramping it when wet and muddy.

Watch the Gopher.

If we were not so familiar with the tricks of the gopehr at this season of the year, we would not continue to insist that this most destructive orchard pest be kept under surveillance. The ground is soft and it is easy for him to travel. The chery tree is a favorite, and as all of this destructive work is done "under cover," the tree is ruined many times before the gopher is discovered at its deadly work. So don't overlook it.

Nursery Stock Inspection.

From resports we are receiving from the Division of Plant Industry, Department of Agriculture, California, we are very much of the opinion that the nursery stock that will be delivered this season will be nothing but a No. 1 stock, as a most rigid inspection is being made, both at nursery before stock is packed and at destination. Director Hecke and his corps of inspectors are placing a standard on California nursery stock never before attained. It will be the means of establishing better orchards and vineyards that will in the end give California nurserymen a reputation to be envied by those states and counties who are lax in the propagation and care of tree and vine nursery stock.

AMERICANIZATION OF CITRUS WORKERS.

(Written for Pacific Rural Press by W. T. Farrar.)

A new and practical step in Americanization which will teach thousands of illiterate foreign workers in the citrus fruit belt of the state rudiments of English and at the same time increase their efficiency, has been devised by the California Fruit Growers' Exchange.

This innovation is a complete course in simple English shaped around the words and phrases of common usage in the citrus industry. Miss Ruby Baughman, Supervisor of Immigrant Education for the City of Los Angeles, prepared the lessons. The course has been issued by George B. Hodgkin, manager of the Industrial Relation Department of the California Fruit Growers' Exchange.

"The course is designed to give foreigners employed in the groves or packing houses of the citrus industry a working knowledge of words essential to their economic efficiency.

"Based on the theory that immigrants should first be educated along the line of work in which they are engaged, a course of seventy-three lessons on 'Easy Lessons in Everyday English' has been prepared.

"Pickers in the groves and packers in the packing houses will have in their texts words and phrases which will describe the tools, processes and objects with which they are constantly at work. There is not an isolated word in the course."

The plan has been approved and recommended by Will C. Wood, State Superintendent of Education. It is expected to cause widespread comment in Americanization circles, as an ingenious and practical scheme to teach immigrants the language and increase their efficiency.

NEW SCALE OF WAGES AT FRESNO.

The Valley Fruit Growers' Association of Fresno announces the following new scale of wages: Ranch laborers and teamsters will receive $2.50 per day and board, which is a reduction of 50 cents per day; ranch laborers and teamsters per month, $60 and board; scraper men, $2.75 to $3; tractor men, $3.50 per day and board. The hourly wage scale is 50 cents per hour for Americans, 45 for Hindoos, Japs and Mexicans.

Professors, instructors, specialists, and farm advisers on the California College of Agriculture faculty at Berkeley, Davis, Riverside, and elsewhere total 223. Office help and laborers total about 156.

San Francisco has been receiving an average of 7,000 to 8,000 sacks of potatoes per day.

Section of the Coco Ranch apricot orchard showing remarkable growth of trees which were planted in March, 1920. Assistant Superintendent Frew (with cap) in the foreground.

These lima beans on the Coco property produced, under proper irrigation, 1,300 pounds to the acre. President Teague (in straw hat) in the foreground. Manager Thorpe at his right, Superintendent Goodspeed in the background.

You Can Make Big Money on Cheap Land

The time has passed when men will grow rich on high priced orchard land. Interest on the investment and high taxes will eat up most, if not all, of the profits.

It is just as unwise to buy POOR land, simply because it is cheap.

Occasionally a tract of fine quality can be obtained at a reasonable figure. Such a tract is the 1,900 acre orchard property of the California Orchard Company, located on the State Highway between Los Angeles and San Francisco, in the famous Salinas Valley.

This tract, carefully selected by soil and horticultural experts, and probably the largest and finest undeveloped orchard proposition under irrigation in California, was purchased by the Company at the remarkably low price of $126.50 per acre.

The deal was made direct with the former owners. No agent's commission was paid. Every dollar paid for stock by stockholders has gone into the treasury of the Company—no commission to anyone.

Development Already Well Advanced

The officers, Directors, and principal Stockholders of the Company are all men of long and successful experience in California farming and horticulture, which alone assures complete success of the enterprise.

The Company took possession of the property January 1, 1920. Since then development has been phenomenal.

Headquarters buildings, boarding house, bungalows for family men, have been built.

Four 16-inch wells have been drilled, each producing over 250 inches of water, (a total of over 9,000 gallons per minute); 116,000 feet (22½ miles) of concrete irrigation pipe lines have been installed, and 16,000 feet of 20-inch and 16-inch steel pipe line laid.

Over 400 acres of trees are now planted to orchard, and 500 acres additional will be planted the coming spring. A nursery with over 125,000 trees was set out, from which will be selected the trees for completing the entire plantings fifteen months hence.

Until the trees reach bearing age, lima beans, peas, and vegetables will be profitably intercropped.

Eight varieties of trees are being planted about as follows:

Apricots	250 acres	Peaches	250 acres
Almonds	250 acres	Prunes	250 acres
Walnuts	250 acres	Pears	250 acres
Apples	250 acres	Plums	100 acres

All of these varieties have proven successful in the neighborhood.

By producing a wide variety of crops, some to pack and sell fresh, some dried, others to canneries, thereby averaging good markets with occasional bad ones, heavy crops with light ones, this investment is bound to prove safer than when staking all on one variety of product.

It is possible only with a LARGE PROPERTY of this kind to obtain the services of horticultural specialists. The Company's present Superintendent is Mr. W. E. Goodspeed, an agricultural college graduate, later instructor, and, prior to joining the army, Manager of Field Department of the California Walnut Growers' Association.

Mr. Goodspeed has gathered around him an excellent staff of young and energetic workers, all specialists in their particular lines, all of which insures the most economical and efficient devolpment of the property.

The California State Commissioner of Corporations granted the Company privilege to sell 5,940 shares of stock AT PAR $100 per share. This was all sold within the past year, except 268 shares, which according to permit cannot be offered ABOVE par.

The Company now offers this remaining allotment therefore AT PAR and feels that the funds thus raised will be ample to finance its operations till its orchards come into bearing.

However, if it is later found advisable to offer additional treasury stock, the price will surely be greatly advanced, as the intrinsic value is already between $150 and $200 a share.

To those having funds available we strongly recommend California Orchard Company stock as a safe, and ultimately most highly profitable investment. You may buy as little as one share.

This offering will be grabbed up quickly. Suggest you write today for prospectus, terms of sale, and any other desired information.

California Orchard Co. (Coco Ranch) 1328 East 7th St. Los Angeles, Calif.

This pear tree on Salinas Land Company ranch one-quarter mile from Coco property shows the prolific crop of excellent fruit which trees in this locality produce. It was difficult under the light conditions when this photograph was taken to bring out the tremendously heavy crop of pears on this tree. It was simply loaded with beautiful fruit.

OFFICERS and DIRECTORS

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Farmer, Banker
President, California Lima Bean Growers Association.
Director, Bank of Italy

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Secretary
Manager, California Walnut Growers' Association

A. L. HOBSON
Farmer and Stock Man.
President, Hobson Brothers' Packing Company.

H. E. WOOD
Capitalist—New York

Seven-year-old apricot orchard located four miles north of Coco property. The 1920 crop of this orchard sold for $435 per acre. With sufficient water available, as is the case with our own land, production would have been more than twice as heavy—evidence of what can be reasonably expected under our favorable conditions.

The FARMER says=

"for stumping genuine GIANT has no equal"

From recent letters of ten farmers who have used Giant Powders for Stumping we make these extracts:

"1. Your Giant Farm Powders shoot the roots. 2. They have wide breaking power and less bad gases than others. 3. I get the same excellent results from them every time. 4. They are always uniform. 5. I used eleven tons and wouldn't have any other make. 6. I want to sell a lot of other powder that I have because Giant does the work much better. 7. Genuine Giant can't be equalled. 8. I don't have to use so much powder when I blast with Giant. 9. You know what we need for stumping. 10. I save money by using Giant Powders."

Write today for our free book, "Better Farming With Giant Farm Powders." It tells how to save money and get better results in stumping, ditching, tree-planting, etc.

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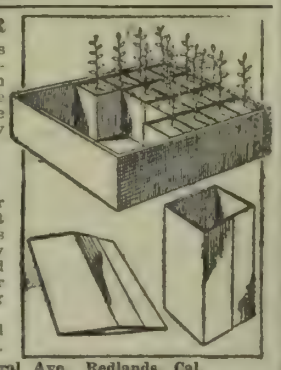
PERFORATED TREE PROTECTOR

that will keep Squirrels, Rabbits and Gophers from barking your trees and give perfect protection from hot sun, sandstorms, barking in cultivation, etc. Tell us your pest and we will tell you what kind of a wrap to use. We make a number of kinds and can save every tree for you from pests.

COLLAPSIBLE PLANTING POTS

Why not raise your early Tomatoes, cabbage, chili, and egg plant for home use or for market. Do you know that you can start Cucumbers, Cantaloupes, Melons of all kinds in these pots in flats until they have three or four leaves, then plant pot and all, have melons two or three weeks earlier for market. Just the thing for Propagating Eucalyptus and Olive cuttings.

Write for samples and prices of both Pots and Protectors. State which you are interested in.



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Plants, $3.00 per 100; $15.00 per 1,000, postpaid.
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ALBERT F. ETTER, Ettersburg, Cal.

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Standard work on fruit growing in California.
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Here and There in the Fruit Business

Auburn Fruit Exchange Meets.

The fifth annual meeting of the Auburn Fruit Exchange was held on December 14. The report of the president and general manager showed that the association had passed through a very prosperous year. J. A. Teagarden was elected president for the ensuing year; M. W. Ammon, vice-president; Thos. Shanley, A. L. Teagarden, Carl Neigel, J. A. Moran and F. W. Midgley, directors. The meeting was addressed by J. L. Nagle, general manager of the California Fruit Exchange. C. E. Downer, head of the auction company of Boston; F. W. Read, representing the Standardization Department of the Federal Bureau of Markets, and State Department of Agriculture; E. A. Gammon, chairman horticultural department of Sacramento County Farm Bureau. The managers report showed that the association had shipped 187 of the total 299 carloads of fruit shipped from Auburn. The total business of the Association for the past year amounted to $558,455.41. From this business the members will receive a refund of $25,000 to be divided among themselves.

California Avocado Association Meets.

A meeting of the directors of the California Avocado Association was held at Pasadena on December 2. Eight of the nine directors were present. The report showed that the finances of the association are in sound condition and that the membership is increasing, there now being 373 members. The problem of marketing the avocado crop occupied much of the discussion. It was decided to publish a booklet of avocado recipes to show the various ways in which the avocado may be prepared. Preliminary arrangements were made for the annual meeting and exhibit to be held on the first Friday and Saturday in May and by request of the University of California, a committee was appointed to co-operate with the University in revising and keeping its avocado correspondence course up to date.

San Joaquin Fruit Acreage Increased.

Horticultural Commissioner Harry Ladd of San Joaquin county has just completed a tabulation of the fruit acreage and other agricultural data for that county. Owing to a shortage of nursery stock, the planting this year is less than normal. The report is short 1446 acres of new planting this year, which includes all the varieties of fruits adaptable to the section. Table grapes lead in total acreage, with 16,141 acres; wine grapes, 13,583 acres. Table grape shipments totaled 5,080 carloads and the wine grape shipments totaled 4,810 carloads. These do not include 18,140 tons dehydrated at local plants.

Japan Prohibits Importation of Fruits.

The Japanese Government has established a quarantine in order to prevent the importation of apples, pears, quinces, peaches, plums, apricots and walnuts that have originated from or have landed in Europe, the United States, Canada and all other fruit-growing countries, according to the American Consul at Yokohama. It is said that the discovery of the codling moth in a shipment of apples caused the establishment of this measure, as they claim that codling moth is unknown in Japan.

Watsonville Apple Crop.

According to advices there will be a total of 2,200,000 boxes of apples shipped from the Watsonville section this season, or approximately 300,000 boxes less than was shipped last year. There are about 200,000 boxes, loose and packed, in cold storage in Watsonville, and about 400,000 boxes in other cities throughout the State, mostly in San Francisco and Los Angeles. In addition there is some stock in common storage.

Inyo County Pear Growers' Ass'n.

Land and water owners are signing up quite rapidly for their acreage in the Inyo County Pear Growers' Association. It is now believed that the required acreage will be signed up; however, there is no definite movement in the way of contracting services or incurring any obligations, that will not be done until ample acreage is actually signed up to insure success of the movement. Acreage signed so far amounts to 8,505.

Probably No Oranges from Spain.

There seems to be no intention at the present time of making orange shipments from the locality of Valencia, Spain, to American markets, says the American Consul at the port of Valencia. Before any attempt will be made to market oranges in New York, it will be necessary that certain factors be favorable, such as exchange, unfavorable market conditions in England, and a short crop in the United States.

Loomis Fruit Growers Elect Officers.

At the regular annual meeting of the Loomis Fruit Growers' Association, the following directors were elected for the 1921 season: S. C. Day, N. Hansen, L. J. Kinney, E. L. Rippey, R. M. Nixon, N Jensen, J. Ferguson. At the regular meeting of the new board the following officers were elected: President S. C. Day; Vice-President, L. J. Kinney; Secretary, R. M. Nixon; Manager, R. L. Tusbury.

Kirkman Nurseries' Large Shipment.

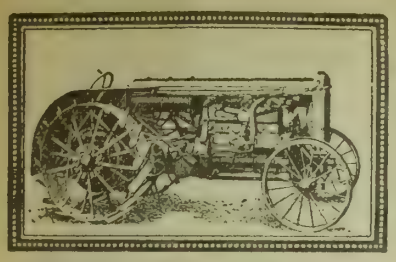
The Kirkman Nursery Company of Fresno have just made a delivery of the largest single shipment of fruit trees evere received at Merced, consisting of 140,000 peach and apricot trees. The trees were intended for the California Packing Corporation, to be set out on their 4,000-acre tract at Tuttle, near Merced.

Congress to Aid Calif. Grape Growers.

By a vote of 190 to 105, the House decided to give encouragement to California grape growers by developing, through experiments by the Agricultural Department, new use of wine grapes. Purchase of a plot of land near Fresno and Oakville, where the experimental work now is being done was authorized.

GROWERS PLAN FOR WATER ROUTE.

Charles C. Teague, of Santa Paula, president of the California Fruit Growers' Exchange and the California Walnut Growers' Association, started something in an address he made before the State Fruit Growers and Farmers Convention recently held at Fresno, when he strongly advocated the establishment of steamship lines for the purpose of transporting California products to the Atlantic seaboard. This was the beginning of what now seems will develop into a certainty, as shown at a meeting held in the office of State Market Director Daniels on Monday, December 20. Present at this conference were growers and representatives of growers' associations from all sections of California. It was shown that approximately 500,000 tons of California agricultural and horticultural products shipped annually to the Atlantic seaboard, which, under the increased freight rates, would cost approximately $21,000,000 additional to place in the Eastern markets, prior to time of increase in rates by the railroads. The object of the meeting was to form the producers into an association for the assembling of California products and for the shipment of the same to the Eastern coast by steamship, at rates far below those charged by the railroads. Several steamship lines were represented, and it was stated that the companies would be willing to install refrigerating systems in their vessels for the purpose of handling California products. Resolutions were adopted empowering Director Daniels to appoint a sub-committee of nine on permanent organization and financing of permanent association. A resolution was adopted that the attention of the committee be called to the



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A four plow tractor with 20% surplus power for ANY unusual load.

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Hubert A. Booksin, District Mgr.
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Farmers, Miners, Builders—people in every kind of business are saving money buying used or renewed pipe from us. We sell every kind of pipe. Send in a list of your requirements today and get our prices. We have saved hundreds of people 33 1-3 to 50 per cent on their pipe bills. Here's a partial list of some of the miles of pipe we have in stock for immediate delivery.

8,000 ft.	6 in.	Riveted	16 gauge
700 ft.	8 in.	"	16 "
5,000 ft.	12 in.	"	12 "
1,000 ft.	18 in.	"	12 "
800 ft.	22 in.	"	14 "
300 ft.	24 in.	"	14 "
500 ft.	36 in.	"	12 "

10,000 feet light wrought iron 8-inch pipe with cast-iron collars.

All above pipe thoroughly overhauled and inspected and ready for immediate use.

We also have large quantity standard pipe and screw casing, pressure tested and guaranteed.

Don't delay—write for our prices on your pipe requirements today.

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INSURE YOUR TREES AGAINST INFECTION.

Your orchard is a valuable investment. To make sure that every tree produces a maximum return, protect pruning cuts or other wounds from infection with PABCO PRUNING PASTE. Ask your dealer. Manufactured by the Paraffine Companies, Inc., San Francisco, Calif.

RHUBARB Wagner's GIANT

—NOW BEST TIME TO PLANT—
Growers Harvested 15 Tons per Acre First Year—So Can You

ORDER YOUR BERRY PLANTS NOW

Send for Special Rhubarb and Berry Price List. J. B. WAGNER, Rhubarb and Berry Specialist, 1550 E. Villa St., Pasadena, Calif.

We have the following stock in surplus:

1500	Tuscan Cling Peaches	6/12	inch
1750	" " "	12/18	"
1250	" " "	18/24	"
550	" " "	2/3	Ft.
150	Philips " "	6/12	inch
350	" " "	12/18	"
300	" " "	18/24	"
225	" " "	2/3	Ft.

Write for prices
UTAH NURSERY CO., Salt Lake City, Utah

PROTECT PRUNING CUTS.

Tree cuts or wounds, if left exposed, are very likely to become infected. Prevent infection by prompt application of PABCO PRUNING PASTE. Ask your dealer. Manufactured by the Paraffine Companies, Inc., San Francisco, Calif.

National Farm Bureau Federation in connection with any future activities. A resolution was also adopted asking the War Shipping Board to revise downward the valuation placed on shipping tonnage purchased in open market, so freight rates charged will enable the products to be moved with a fair return to the producers. The shipment of California products alone totaled more than $270,000,000 in value last year. Director Daniels will appoint this sub-committee in a few days.

NEVADA NEWS NOTES.

Stockmen throughout the State are busy re-recording their stock brands in accordance with the law, which requires that this be done every five years. It is required of stockmen that the actual brand be burned on leather and filed with the county recorder.

Nevada ranchers are much pleased at reports coming from San Francisco to the effect that Senator-elect Oddie has lined up with other western senators to promote effective legislation for irrigation projects in Nevada, California and Arizona.

Over 125 carloads of manure has been shipped from the Newlands Project to California points during the past two months. The price is $1.00 per ton at the farm. The freight rate is $4.40 to central California points and $5.80 to southern California stations.

E. R. Sands, in charge of the work devoted to the extermination of predatory animals, states that during the month of November, hunters and trappers secured 430 coyotes and 55 bob cats. Only 56 men were on duty this month in comparison with 94 for November, 1919.

W. A. Hardy of Fernley purchased a Corriedale ram of the University of Nevada. The ram is out of a ewe imported by the University in 1916 and by a ram imported at the same time. The sire is by the famous ram, Double-Brand, owned by C. H. Ensor of New Zealand.

It is reported that drainage operations for a portion of the Newlands Project will start shortly after the new year. Contracts have been secured and forwarded to Washington for ratification. Court action will probably be brought to clear up the legality of the organization at a very early date.

A. B. Gray, registrar of the land office at Carson City, states that about 450 families have settled upon government land during the past year. He further states that a number of firms are doing a good business in locating prospective homesteaders at a charge of $1.50 per acre. This is not necessary, for farmers may take up land without difficulty, and avoid this charge.

Very few people are aware of the fact that Nevada has two former governors who were intimately associated with the purebred cattle business. Former Governors Sparks and Oddie were both breeders of purebred Herefords. Many Nevada and California herds of today procured their foundation stock from the famous Alamo Herd owned by John Sparks.

Reports from all parts of the State indicate that the fall pasture has been the best for a number of years. The recent rains and light snows, coupled with warm weather, started the grass on the ranges and on the irrigated pastures, so that pasture has been plentiful up to December 10th, when a slight snow and heavy freeze stopped the growth in the entire northern and western ranches and ranges.

Cranebird, a thoroughbred two-year-old filly bred by L. L. Allen of Fallon and sold a short time ago for a very nominal sum, has shown Kentucky breeders that the Sagebrush State can produce winners, in fast competition, with the eastern breeders. A number of high-class thoroughbreds are bred in Washoe, Churchill and Elko counties. Only a few are actually raced—the majority are used for crossing to produce "cow horses."

UNIVERSAL BRAND
ORCHARD SPRAY

---and you can depend on it

Scale insects are very much at work in the dormant season. Are you? Their fertile eggs are full of vitality. Now is the important time for you, too, to be up and doing. Get out the spray gun to-day!

Load it with the most dependable ammunition known to successful growers—Universal Orchard Spray. There's a special "charge" for every enemy in your orchard or vineyard. Start your attack at once with

DORMANT SOLUBLE OIL (for apricot scale)
CRUDE OIL EMULSION (for almond red spiders)
MISCIBLE OIL No. 1 (for olives)
MISCIBLE OIL NO 2 (for thrips)

Every Universal Orchard Spray is a time-tested spray. Whatever your needs, you can depend on our products scrupulously prepared for their special work.

Brown apricot scale, black and white scale, coatings of moss and lichen, the Grape Mealy bug, almond red spider and aphis eggs—all fall before your spray gun loaded with Universal Orchard Spray.

Ask our expert entomologist, Paul R. Jones, how to "load." Or send for your free copy of our new bulletin on deciduous spraying.

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"GROZ-IT" BRAND
Pulverized Sheep Manure

IN BAGS OR IN BULK. NOT LIKE ORDINARY MANURE.
"Groz-It" is well aged, dry, free from weed seeds and foreign matter. Odorless. Can be applied with a drill.
A Complete Fertilizer. Cheap and efficient.
Minimum Guarantee
2.25% AMMONIA. 1.25% PHOSPHATE ACID. 3% WATER SOLUBLE POTASH
1 ton is equivalent to from 5 to 7 tons ordinary barnyard manure.
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100,000 PLANTS
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TREES and VINES
Fruit, Shade and Ornamental
Palms
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300,000 ASPARAGUS
Six leading sorts, including rust-proof Reading Giant and Washington.
Write for prices.
CROW'S NURSERIES, Gilroy, Cal.

CRESOLITE
makes
STUMPS HUMP
also willows and all brush. Money back if it don't.
LOUIS BAHRS, Loomis, Cal. Agents wanted.

DON'T NEGLECT TREE WOUNDS.

Neglected tree wounds lead to wood-rot or wood decay which is responsible for an appalling loss of valuable producing trees. Protect pruning cuts or other wounds on your trees with Pabco Pruning Paste. Ask your dealer. Manufactured by the Paraffine Companies, Inc., San Francisco, Calif.

The Contributions of Science

The greatest material benefits the world has received have come from the laboratories of the scientists. They create the means for accomplishing the seemingly impossible.

Science, after years of labor, produced the telephone. From a feeble instrument capable of carrying speech but a few feet, science continued its work until now the telephone-voice may be heard across the continent.

In February of 1881 a blizzard swept the city of Boston, tearing from the roof of the Bell telephone building a vast net-work of 2,400 wires. It was the worst wire disaster the Company had sustained.

Now through the advance of science that number of wires would be carried in a single underground cable no larger than a man's wrist.

As the fruit of the effort of science greater safety and greater savings in time, money and materials are constantly resulting.

And never before as now, the scientist is helping us solve our great problems of providing Telephone service that meets the increased demands with greater speed and greater certainty.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY
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One Policy *One System* *Universal Service*
And all directed toward Better Service

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Men of any age with no previous experience can learn auto and tractor business in few weeks. Earn Big Money as repairman, tractor expert, or go into business for yourself. We help our graduates get started. Only school in America giving advanced auto-electrical training and actual garage and repair shop practice. All year 'round tractor field work. Training includes tire repairing, machine shop, driving and repairing all makes of autos, tractors and gas engines. Earn board and room while learning. Success assured. Jobs waiting. Write NOW for FREE book of facts telling about your chances in this business. Tells about men from your home town who are successful National graduates.

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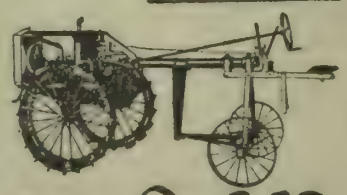

The 6-12

Pulls two 12-inch plows, a two-row cultivator with 26½ inch clearance, mower, rake, binder or any standard four-horse implement. Delivers 12 H. P. at the belt—a one man tractor with any implement.

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RELIABLE
MARIOUT
BARLEY SEED
HAS
Greatest Yield Record. Our Seed Is COMPETENTLY TESTED FOR HIGH PURITY.
H. G. STEVENSON, JR.
Winters, California

Mechanical Power on the Farm

ELECTRIC RATES AND CONDITIONS DISCUSSED.

Whether public utility companies are better represented in cases before the State Railroad Commission than are the farmers was discussed quite freely in a conference between a committee of the Federation of American Farmers and the Railroad Commission in San Francisco, December 14. The point was made that the training received by men in the engineering, finance, accounting, and other work under the Commission makes those men so competent and valuable that they are continually being attracted to private employment at much higher salaries. One man who quit a $3500 job with the Commission made $25,000 the next year. Surely the training is valuable to a young man. This is the chief reason that ambitious men work for the Commission at the salaries it can offer. Many high-class men also prefer to sacrifice salary for the sake of being in public work, as pointed out by Commissioner H. W. Brundige. The question, however, arose as to the economy of the public training such men and allowing them to leave for the sake of a higher salary. Is it not a fact that a man in training is less efficient or competent than a man already trained in the same school? If the Commission has to use untrained men and utilities grab them when they become proficient, is not the public going to suffer when cases come up in which their interests are opposed? For instance, the properties of the Southern California Edison Power Co. have just been given a physical valuation by Commission engineers. The Pacific Gas and Electric Co. properties are just about to be surveyed by engineers and accountants for the same purpose. On these valuations, rates to consumers of electricity will be based. Is the public getting a fair shake in this if untrained men do the work? The Commissioners admitted the need of paying higher salaries to their engineers and other workers, but were doubtful of the people's attitude toward increased salaries. They have, however, asked the Board of Control for a bigger budget for this purpose. Chairman J. J. McDonald of the Federation said he thought the farmers would back such a proposition in order to be adequately represented. Commissioners, however, maintained that their men in general are the equal of any in private service, that L. S. Ready, head of the electric department, has the widest experience and greatest amount of data in dealing with rates and is the best rate man in the State. Likewise, the chief engineer, Richard Sachse, has supervised more physical valuations of utility properties than any one else in the United States except engineers of the Interstate Commerce Commission. These men have an enormous experience on all kinds of public utilities and can take a broader viewpoint than engineers dealing with only certain lines. The accounting work, in keeping records of utility companies, is greatly simplified and made intelligible by requiring all utilities to file uniform statements with each item under a designated classification, as stated by Commissioner F. R. Devlin, who believes the man in charge of that department also the best in the State.

Defective Meter Law Proposed.

Defective meters came in for a share of condemnation, and Mr. McDonald announced that the Federation proposes to urge passage of a bill by the next Legislature penalizing public utility companies when defective meters shall be found. Mr. Ready said that there are about half a million electric meters and half a million gas meters in the State, and it would require an impracticable force to inspect all of them with any frequency. President E. O. Edgerton of the Commission mentioned the fact that in New York, if a consumer complains regarding a meter, it is inspected by the State. If found correct, the consumer pays cost of inspection. If incorrect, the power or gas or water company pays the cost and fixes the meter or installs a new one. Mr. McDonald called attention to our State Weights and Measures law, under which probably a great many more than half a million scales are kept in accurate condition. The inspection is not burdensome in proportion to its benefits, and frequent inspection is not necessary because scales operators never know when the inspector is to arrive. Most of them aim to keep their scales always right. Mr. Ready mentioned that under Railroad Commission rules, if a meter is found slow, the company can collect reimbursement for three months; but if it is found fast, the consumer is reimbursed for six months. However, he said that gas meters usually are slow if incorrect at all, and electric meters are seldom found more than one per cent off even after six or seven years. They are built like a watch, on jewels.

Reading Meters After Rate Raise.

C. E. Warren of Santa Clara county mentioned a neighbor who uses a 50-horsepower motor and whose meter was read the day after a 15 per cent raise in rates had taken effect. This made him pay the new rate for the previous month. The Commission deplored this condition, which catches many ranchers, but consoled him with the suggestion that he may get a corresponding advantage if his meter is read the day after a lower rate shall take effect in the future. It was poor consolation; but the Commission does not want to undertake the job of prorating the bills of all consumers all over the State in such cases, since it is evident that some data must be set for a raise to take effect and not all the meters can be read the day previous. However, it did not seem to occur to them to make a raised rate take effect from the date of the first meter reading after a certain date. Such an order would tend to make the meter readers rather diligent on that date, but would avoid injustice to the consumers.

The tendency of some meter readers to guess at the reading without taking the trouble to look at the meter, is undesirable; but can only be prevented by eternal diligence on the part of the consumer paying attention to the date of the reading and looking at the meter for himself on that date. The exact meter reading should be included on all bills, as it is not now in at least some cases. Then the consumer can check up if he learns how to read the meter.

How Rates Are Made.

How electric rates are determined was rather fully discussed. The amount of money that a company has wisely invested in operating properties, including interest on money tied up by construction work, is determined in the best way possible.

The ideal way to determine the actual amount wisely invested is to have competent engineers, accountants, and financiers appraise the value of the properties actually usefully used and to decide on how much money was wisely spent in construction. This has been done with one electric company, and is in process with others. The valuation is based, not on the present cost of reproducing the properties, but on the money actually spent. Lacking such physical valuations in previous years, records and accounts of the utility companies have had to be accepted provisionally. Since the Commission has been on the job, those accounts and records have been systematized and made uniform, intelligible, and comparable. All construction work has been regularly

checked up by reports and personal engineering inspection to see that the money actually went into the works.

Under the law, the Commission must fix rates so that a reasonable interest on investment will be returned on capital really invested after paying all reasonable costs of opertion. Then, with the total amount required to accomplish these ends for each company in mind, the Commission's work is to so apportion that amount among users as to avoid unjust inequitable burdens on any of them. In this apportionment comes a great deal of the complex provisions applying to every conceivable class of cases. It involves the establishment of numerous general schedules to apply to various classes of users. It involves the rules regarding extensions, minimum charges, "standby" or "demand" charges, etc.

An example of the rate schedules was brought out in the case of a Delta user of electricity who has been compelled to pay $90 per month standby charge on each of four 90 horsepower motors which he does not use at all during certain months of the year. He installed the motors, transformers, and lines at his own expense, but has to pay $360 per month for the privilege of being connected to the power line from which he uses no juice during the months mentioned. If he is under the reclamation schedule of rates, Mr. Ready pointed out, this charge is not justified and will be investigated.

Standby and Minimum Charges.

The idea of a "standby" charge is that it costs the electric company a great deal to have its generating plants and lines ready to serve a multitude of such plants even though the electricity is not actually transmitted for certain periods of time. If the man who insists on having electricity ready does not pay such cost, then that cost must be paid in the form of added charges on those who actually use electricity.

The minimum charge is also based on the same principle. If a man puts in a big motor and requires the company to be ready to supply it at any time, and for only a few hours per month, perhaps the company's expense in this connection, including interest on investment and depreciation of transformers, etc., must be paid out of some consumer's pockets; and those who benefit should pay. However, it was pointed out that having the minimum apply between fixed dates prevents a man from benefiting in later months from use of less than the minimum at any time.

Line Extensions.

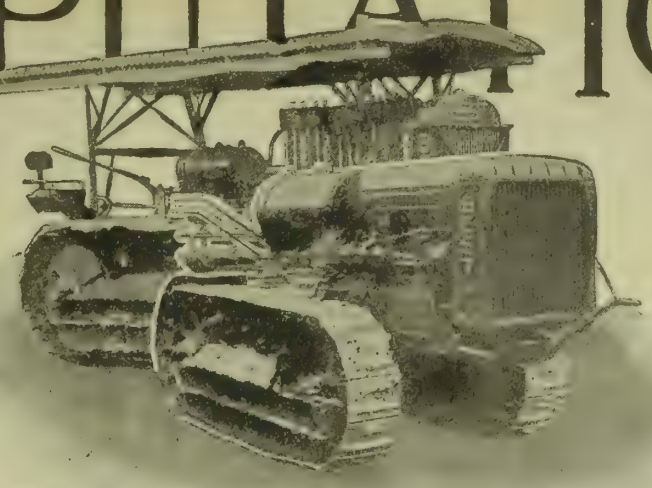
Similarly, if the Commission permitted an electric company to make a line extension any distance to anybody who wants electricity, however much or little, there would soon be a greatly increased investment in extensions and their upkeep, which would have to be paid by consumers not benefited. It has been worked out that from this standpoint an installation is justified if the revenue from it paid to the company equals a third as much per year as the line costs. This will not unduly burden other people. But if the extension costs more than three times as much as the annual revenue from it, the consumer benefited should at least advance the excess, and is generally glad to do so. It would be wrong for the Commission to refuse to allow the distant or small consumer such an extension if he is willing to pay for it.

However, one phase of this question was barely touched upon. Many farmers, including a particular case in Napa county, and another in Santa Clara county, believe that in building such extensions, the company charges an excessive amount and prevents the consumer from himself putting up such extensions. The costs charged in such cases for building extensions need rigid inspection.

The Commission pointed out that it has no power to compel a utility to build a line over private property beyond the first point of suspension (pole or building) on such property.

A complaint which will probably receive more attention is that of requiring a man to advance money for an extension and then allowing others to connect onto that extension without proportionally reimbursing him.

REPUTATION



The Best Tracklayer Sixty Tractor has built a reputation for stamina, reliable power and low up-keep. This reputation so closely guarded by the manufacturer has been due to the quality of material used, the proven design and the knowledge of tractor requirements which has been gained through years of experience in the actual building of tractors and the incorporating of modern improvements in each new model.

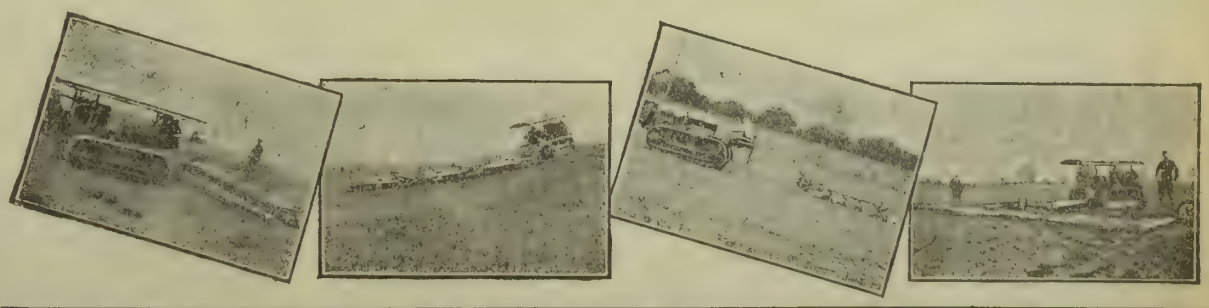
The "Sixty" was too powerful for all uses; so, upon the demand of farmer, orchardist, contractor, in fact all lines of industry where tractors are employed, the factory has perfected a model to be known as the Best Tracklayer Thirty Tractor, in which has been incorporated all of the experience of the manufacturer as to design, etc., together with all of the reliable improvements of the age. The "Thirty" is years ahead of any other tractor on the market.

Delivery date on this new model "Thirty" About February 1st, 1921. Send for circular.

C. L. BEST TRACTOR CO.

SAN LEANDRO CALIFORNIA

Best TRACKLAYER Tractors



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WRITE FOR THIS BOOK TO-DAY IT ALSO TELLS ABOUT THE WORLD FAMOUS LABOR SAVING FULLY GUARANTEED SINGLE-DOUBLE-TRIPLE POWER

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100% POWER AND SPEED

BULL DOG pulls largest, smallest, low cut, green, rotten, tap-rooted stumps or trees, either in swamp or on hillsides in minutes. Other methods take hours. Made of tough steel. Weighs less. Will last a life time. *You alone* can yank out biggest stumps quickly and cheaply. Plenty of the strongest cable, blocks, hooks and guaranteed "Take-up." Root Hook FREE with every outfit.

FREE TRIAL

FOUR PLANS OF PAYMENT

MOHR STEEL CO. 2809 26th St., San Francisco.

40 Cords a Day

Easily Sawed by One Man with new OTTAWA. Get your own fuel at less than 2c a cord, then supply big demand for fire wood at $20 a cord up. **Beat the Coal Shortage!**

OTTAWA LOG SAW

Over 4 H-P. 310 strokes a minute. Wheel-mounted. Easy to move, cheap and easy to run. Engine runs other machinery when not sawing. New clutch lever starts and stops saw while engine runs. **Cash or Easy Payments. 30 Days' Trial. 10-Year Guarantee. Send for Big FREE BOOK and Special Low Factory Price NOW. Write to**

Strictly a One-Man Outfit

Ottawa Mfg. Co. 2719 Wood St. Ottawa, Kansas.

Pat. Applied For.

Livestock and Dairy Notes

The Dairy.

Choice alfalfa hay in small lots is selling in the Chico district at $25 a ton.

The four Tulare creameries paid over $200,000 to ranchers for November's output, the prices for cream ranging from 66½ to 70½ cents.

Freeman & Edwards' famous "Vina" —her full name is Vina Pietertje Hengerveld De Kol 2d—has completed her year's work with 29,009.3 lbs. of milk and 1,151.92 lbs. of butter.

The Stanislaus County Holstein Breeders' Association purchased a lot of these attractive metal signs—"Holstein Cattle Kept on This Farm"—and have given one to every member. It took about four dozen to go around.

The Holstein Breeders of San Joaquin county will get together at a dinner in Stockton on January 2d to consider the advisability of organizing a county association. A more definite notice will be given when the plans are perfected.

Information has been received that, through the efforts of Dr. D. R. Cook and Mr. P. G. Penfield, County Dairy Inspector of Kern county, Mr. Earl Amherst was fined $25 for bringing dairy cattle into Kern county without first having them tested for tuberculosis. The owner, without regard for the warnings of officials, brought the cows from Tulare county into Kern county and sold them to a local dairyman. Mr. Amherst was not only fined, but was obliged to have the cattle tested at his own expense.

The latest report from Minnesota Holstein men is that the State Association, which has six men and women working on salary, has $23,000 in the treasury—the result of holding Holstein sales under the auspices of the State Association on the co-operative plan.

The volume of milk from the Durham Settlement cows is now larger than can be disposed of as whole milk and a considerable quantity is skimmed. The cream is sold sweet, bringing 9c over San Francisco quotation for butterfat, and the skim milk is fed to stock on the colony. Dairying at Durham is making good.

The veterinarian of the Durham State Land Settlement has just completed another tuberculin test of the more than 500 cows now in the colony. He got a 6 per cent reaction but half of the reactors were on one ranch. This entire herd will be disposed of and the premises cleared up before new stock is purchased.

The great Davidson sale of Holsteins at Philadelphia will be held the last three days of March. It is expected that the Bridgford Co., A. W. Morris & Sons and Toyon Farms will have consignments there. Col. Geo. A. Gue, who has been selling for the Stanislaus County Holstein Breeders' Association, will be the auctioneer representing the western states.

On June 30, 1920, 3370 herds, approximately three times the number of cattle at the beginning of the fiscal year, were officially accredited as free from tuberculosis. In addition, 16,599 herds have successfully passed one test. A total of 695,364 animals were examined during the year, resulting in the slaughter of 28,616 reactors.

In Justice Sparks' court at Lincoln, on December 6, Fred Pettersen, dairyman, was fined $200, the maximum fine under the dairy law, when it was shown that he had sold enough water as milk to amount to $750, using the most conservative figures compiled by Professor Miles B. Kennedy, Dairy Chemist of the California State Department of Agriculture. Mr. Pettersen was further advised by the court that a jail sentence would be imposed should he ever appear again on the same charge.—J. J. F.

Allan Rae, proprietor of Ravillu Farm, on the Paradise road, has purchased twelve head of registered Holstein females from John W. Lorenz, on the Grayson road, through the livestock agency of S. J. Strauss. These twelve head had in their lot five cows at $500 each, four at $400 each and three at $300 each. Ravillu Farm has an enthusiastic booster for purebreds in Mrs. Allan Rae, whose pride in the pedigreed black and white is unbounded. Mr. and Mrs. Rae have seen to it that all the buildings on the dairy are up-to-date. There is a monster silo and the domicile of the cows is sanitary and electric lighted.

Swine and Swinemen.

Bassett Bros. of Hanford have purchased for use in their Poland China herd an April boar out of M. P. Hancher's Hancherdale Orange and sired by Designer, the great boar for which D. C. Lonergan & Son paid $30,000.

From a class of 62 Poland China barrows the pen of three shown by Oklahoma A. & M. College, Stillwater, Okla., was awarded Championship among the Poland Chinas, and was later made Grand Champion over all breeds. This pen was popularly regarded as being the smoothest and most uniform pen of Poland China barrows ever seen at this show.

The annual meeting of the American Poland China Record Association was hed in Chicago on Wednesday, December 1st. The report of Secretary W. M. McFadden showed a year's business in pedigrees recorded, 37½ per cent greater than that of 1919 and considerably in excess of business for any previous year in the history of the Association. During the fiscal year, from November 1, 1919, to November 1, 1920, this association recorded 114,-351 pedigrees.

Dr. E. Avery Newton of Arenal Ranch, Lankershim, Cal., has sold his entire Duroc herd to C. C. Ellis, Exeter. The herd consists of some eighty head and includes Arenal Sensation, son of Chief Sensation and Sensation Pet; also the boar, Orion King of Ireland. Some time ago Dr. Newton disposed of his Poland China herd at auction and this leaves him with only the Hampshires, which he will continue to breed and build up. Mr. Ellis now has one of the largest registered Duroc breeds in California.

Top hogs sold last week at auction at the Southern Pacific stockyards, Fresno, for 11 cents. One carload averaging 199 pounds brought this figure. The hogs were quoted at 11 cents in San Francisco and $8.60 in Chicago. Two carloads were offered. In the second car, which was mixed, eleven head, averaging 193 pounds, brought $10.75; twenty head, averaging 193 pounds, brought 10 cents; four head, averaging 220, and sixteen head, averaging 115, brought $8.75, while one stag of 650 pounds brought $7.75. The sale was in chare of Frank Murphy, assistant county farm adviser.

The American Poland China Record Association report a recent shipment of 20 head of Poland China swine to Italy. These hogs were bought by Marquis Idelfonso Stanga, Crotta d'Adda, Prov. of Cremona, Italy, who with Madam Stanga came to this country lately for the purpose of studying agricultural conditions here and of buying breeding hogs. Marquis Stanga represented the Department of Agriculture of the Italian Government and came with credentials from the Italian Ambassador at Washington. The twenty head he purchased here have reached Italy safely and constitute the first importation of Poland China swine ever brought into Italy, according to Marquis Stanga.

THE HOLMES-DE WOLFE HOLSTEIN SALE.

Success is getting to be a habit with the Stanislaus County Holstein Breeders' Association. With conditions in the dairy world as they are and as they threaten to become, an average price of a trifle better than $367.50 for all the females offered entitles this sale to rank as a very successful one. Three things will mainly account for it.

Holmes and De Wolfe came through with the stock—a fine lot of splendidly bred animals of good Holstein type, tuberculin tested and sold subject to a 60-day retest. There wasn't a three-teated animal nor one off-type on the grounds, and under normal conditions several of them would have brought more money.

The Stanislaus Holstein Breeders were right on the job. The day before the sale an airplane dropped announcements of the sale all over the county. (Oh, they are a "live bunch.") Before the sale a parade of the stock was held and motion pictures were taken for future advertising. A lot of personal work had been done and a lot of comparatively new buyers had been rounded up. Indeed the feature of this sale, as well as of others held by this association, was the buying done by men whose names are new in Holstein annals.

And the auctioneers, Cols. Geo. A. Gue and Cy. N. Clark, did fine work in putting the sale over. They certainly earned their money. Col. Gue knows a Holstein when he sees one, and he knows Holstein pedigrees and history. When a good one comes in she doesn't get away until the audience knows what she is and why. Gue uses his knowledge with telling effect and is of real service to the buyer as well as to the seller.

Oh, yes! The sale was topped by Bracelet Ormsby, a two-year-old, fresh November 1st, and with two grand championships on her halter. She was consigned by Holmes and went to W. L. Dennison of Modesto for $800.

Reliance Cattle Trailer

Provides easy, convenient, safe and humane method for transporting cattle. Note the stanchion which engages head of animal—an exclusive Reliance feature. Note the generous easy-riding springs—the simple, sturdy construction throughout. Tail gate, hinged at bottom, forms ramp for easy loading and unloading. Body can be lifted off and trailer used for any other purpose to which a two-wheel trailer is adapted. Hitches on behind your car, truck or light delivery. Equipped with Timken bearings—pulls easily.

Reliance Heavy-Duty Trailers are built in various models and capacities, both two and four-wheel, for many purposes. Write for full descriptive catalogs, showing specifications, prices, etc.,

RELIANCE TRAILER & TRUCK CO., INC.
1648 HOWARD STREET, SAN FRANCISCO

Showing cow loaded on Reliance Cattle Trailer. Note stanchion, also ample room for animal.

Reliance HEAVY DUTY TRAILERS

JAVA

COCOANUT CAKE MEAL.
Made where the cocoanuts grow.
Sun-dried—not smoky or rancid.
Carried in modern ventilated steamers. Shipped in solid cakes.
Inspected and ground in San Francisco

Has your past experience in feeding cocoanut cake meal been satisfactory?

We particularly request a trial of our meal by those who in the past have been disappointed.

Your feed dealer may not have our brand in stock but can obtain a large or small lot promptly.

Trade INSULINDE Mark

Look for it on the sacks

Java Cocoanut Oil Co., Ltd.

Dept. 10
16 California St., San Francisco
Largest manufacturers cocoanut products in the world.

DIGESTER TANKAGE

Send for Sensible Folder on Feeding Hogs
WESTERN MEAT COMPANY
Animal Food Dept. 704 Townsend St., San Francisco

HOLSTEIN CONSIGNMENT SALE.

Eight breeders of registered Holstein cattle combined in holding a sale at Sacramento on December 16th. The cattle were not guaranteed free from tuberculosis and probably for this reason did not bring as high prices as they would otherwise. There were seventy-seven head sold for a total of $15,560, or an average of $202. The top of the sale was May Walker Gelsche Korndyke, consigned by the Bridgford Co. of Patterson, when Earl Graham of Compton secured her for $1250. Another cow, consigned by the same firm, Sequoia Suga Queen Hengerveld, was purchased by Wm. Dreher of Sacramento for $1025. As usual, the animals really good brought satisfactory prices.

MILKING SHORTHORNS AT SANTA ROSA.

Thos. Harrison of Santa Rosa, who breeds, milks and sells the great dual purpose cattle, the Milking Shorthorn, has had a very successful season in show-rings in California and Oregon. He capped the climax by holding a very successful sale at Portland, where he disposed of his consignment at advantageous prices.

Mr. Harrison, in very strong competition at the Pacific International, came through with 5 firsts, 4 seconds and 3 thirds, besides winning the junior and grand championship on his magnificent young bull, Count Tickford.

HEREFORD BREEDERS!

Secretary Bunting of the Pacific Coast Hereford Breeders' Association wishes to remind all consignors to the coming association sale that it is very necessary the pedigrees and other data relative to the animals contributed be sent to him at once. Today, not tomorrow.

We acknowledge a pleasant call from C. E. Robertson, who organized the Humboldt Stockmen's Association August 15, 1915, and is now acting as Cattle Inspector of his county at the request of the County and State Cattle Association. Mr. Robertson came to San Francisco to attend the annual meeting of the California Cattlemen's Association held last Saturday at the Palace Hotel.

LIVESTOCK DIRECTORY.

Rate, 4c. per word. Cash must accompany all orders.

SWINE.

Duroc-Jerseys.

DUROCS—BIG-TYPE—HIGHEST QUALITY—popular blood lines. Herd headed by Johnson's Defender, Jr., and Western Pathfinder. Bred sows and gilts and young boars for sale at moderate prices. Greenwood Farm, Witherow & Stafford, Live Oak, Cal.

BRED SOWS AND GILTS and young stock. Pathfinder and Great Wonder I Am breeding. Monthly payments, if you wish. Derryfield Farm, Capital National Bank Bldg., Sacramento.

BOYANNA BIG-TYPE DUROCS—Breeding stock; priced right for sale. Inquiries invited. Satisfaction guaranteed. J. Boyd Harrold, Dixon, Cal

BIG-TYPE DUROCS—Herd headed by California Orion King. Am offering excellent young boars at right prices. Inquiries invited. Harvey M. Berglund, Dixon, Calif.

GOOD SPRING AND FALL GILTS—Strong in Pathfinder blood, sired by Pathfinder Wonder. Hamlin Farm, Box 697, Sacramento.

WINSOR RANCH DUROCS—Young boars and some top gilts bred to WINSOR'S GIANT ORION—Morris C. Allen, Mgr., Bonita, Cal.

FOR SALE—One "Johnson Defender" boar, 20 months old; also gilts, boars, and weanlings by this boar. H. E. Boudier, Napa.

BIG-TYPE DUROCS — Gilts and boars of Great Orion Sensation breeding. Falfadale Farm, Perris, Cal.

FOR THE BEST in Durocs, write June Acres Stock Farm, Davis, Cal.

Poland-Chinas.

ELDERSLEY AND SHADY BROOK Farms big-type Poland-Chinas that make money for the Feeder, the Farmer and the Breeder. Prices reasonable. J. H. Ware, Brown's Valley, Calif.

POLAND CHINA BOARS—Big type. Two Iowa bred boars—weigh about 350 lbs. Big bargain because of size. W. J. Hanna, Reacoks Ranch, Gilroy, Cal.

TOHOQUA POLAND-CHINAS—A good tried boar and some choice young breeding stock for sale. Fergusen & McKaig, Orland, Cal.

WAUKEEN HERD POLAND-CHINAS — Home of King's Big Bone Leader. A few service boars for sale. Les McCracken, Ripon.

LAKESIDE STOCK FARM—Large, smooth and big-boned Poland-Chinas. Geo. V. Beckman & Sons, Lodi, California.

REGISTERED POLAND-CHINA SWINE — Prize-winners. Finest stock in the State. Bassett Bros., Hanford, California.

BIG-TYPE POLAND CHINAS—Stock of all ages for sale. Houck & Lewis, Winton, Calif.

POLAND-CHINAS—Strictly large type. J. F. Lehman, Lodi, Cal.

REG. BIG-TYPE POLAND-CHINAS—Service boars; weanling pigs. J. H. Cook, R. 4, Chico.

LIBERTY HERD—Service boars. January weanlings. J. W. Raymer, Soledad.

Berkshires.

ANCHORAGE FARM BERKSHIRES
Orland, Calif.
HERD BOARS—STAR LEADER, Junior and Reserve Grand Champion of the World. The Grand Champion carload of barrows, over all breeds, at the San Francisco Live Stock Show, was sired by a son of Star Leader, NATOMAS BARON DUKE, grand champion of California. For sale, bred gilts, open gilts, young boars and weanling pigs. Write for booklet, prices and list of sows.

GRAPE WILD FARMS—Berkshires—Guernseys. Big-type Berkshire Boars of serviceable age, sired by Big Leader—greatest son of Grand Leader 2nd. Panama-Pacific Grand Champion. A. B. Humphrey, Prop., Escalon.

BERKSHIRE BOARS—Real herd sires. We are offering these at sacrifice prices to move them quickly. Write for description and price. R. J. Merrill & Son, Morgan Hill, Cal.

QUALITY BERKSHIRES — Young stock, both sexes. Geo. P. Upham, Martinez.

REAL GOOD BERKSHIRES — Cholera immune. Frank B. Anderson, Sacramento, Cal.

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NO! NOT MANY Hampshire Hogs advertised. We have some weanling pigs ready to ship now and two bred gilts direct descendants by sire from General Tipton and Dan from Mose Messenger. Great stuff. Rio Honda Rancho, Rt. 1, Compton, Cal.

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HOLSTEINS

THE LEWIS COMPANY

Registered Holstein Cattle
Bulls, Heifers and Calves
of Ormsby breeding
Tuberculin tested
Lewis Building, San Jose

ASEVEDO BROS. CO.
Patterson, Cal.
Breeders of
REGISTERED HOLSTEINS
For Sale

Young bull, sired by King Abbekirk Johanna 24th, and out of a dam making 24 lbs. as a 4-year-old

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REG. HOLSTEINS, both sexes. World's record backing. Kounias Reg. Stock Farms, Modesto, Cal.

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F. H. STENZEL, SAN LORENZO—Breeder of Registered Holsteins. High test producers.

REGISTERED HOLSTEINS — Best blood lines of the breed. R. L. Holmes, Modesto, Cal.

CHOICE HOLSTEIN bulls for sale. No females. Millbrae Dairy, Millbrae, California.

GOTSHALL & MAGRUDER — Breeders of registered Holstein-Friesians. Ripon, Calif.

SIX BROTHERS DAIRY—Registered Holsteins and Duroc Jerseys. Turlock, Calif.

EL DORADO HERD OF REG. HOLSTEINS Alex. Whaley, Tulare, California.

Milking Shorthorns.

REGISTERED MILK AND BEEF SHORThorns, bulls and heifers for sale; catalogue free. Thomas Harrison, Santa Rosa Stock Farm, Santa Rosa, California.

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INNISFAIL HERD MILKING SHORThorns—Young stock for sale; both sexes. Owned by Alexander & Kellogg Leased by J. D. Rowe & Son, Davis, Cal.

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BREEDERS OF REGISTERED SHORThorns—Milk strain; choice young stock for sale. John Lynch Ranch, Box 321, Petaluma.

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FOR SALE — Ten head registered Jersey heifers, 15 mos. to 2-year-olds. All bred, two now fresh, some from Registered of Merit dams with high butter record. $200 each. Also two well-bred two-year-old bulls, fine individuals. Drive down and see them. F. W. Elleby, R. B., Box 97, Modesto, Calif. Carver Road.

SERVICE JERSEY BULL, bull calves Financial King blood, Chester White boars, prize winners. Best blood, type, production. N. H. Locke Co., Lockeford, Cal

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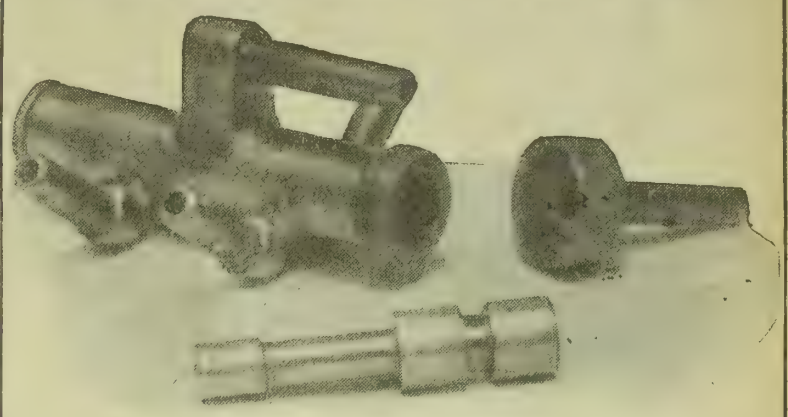

The above illustration is made from a photograph (not retouched) showing a De Laval Udder Pulsator and piston which have been used for four years in connection with the De Laval Milker at the Roseland Dairy, Caldwell, N. J.

The diameter of the piston in relation to the diameter of the cylinder in the Udder Pulsator, even after four years of wear, still passes the exacting factory tests and requirements.

When in operation, the piston travels 45 times per minute; that is, 45 times per minute each way, making 90 movements a minute, or 5400 times per hour. On the basis of four hours per day, 365 days in the year, the piston travelled the remarkable total of 31 million times in the four years—without showing any appreciable wear and without lubrication.

The Monel metal piston, the bronze cylinder and simple construction of only one moving part, without springs, weights, or complicated mechanism of any kind, make possible such unusually long service.

The action of the De Laval Milker pleases the cow. Its long service pleases the owner.

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61 BEALE STREET SAN FRANCISCO, CAL.

FOR SALE—Purebred Jersey bull, 16 mos. old. Prize winner at two fairs this fall. $250.00, if taken now. W. H. Alfred, Loleta, Humboldt Co., Calif.

25 EXCELLENT JERSEY COWS, one Reg. bull, 12 calves. A profitable herd of good breeding. Address H. E. Watson, Route D, Box 91, Modesto, Cal.

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PUREBRED JERSEYS from Register-of-Merit dams. Purvine & Son, Petaluma.

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PUREBRED GUERNSEY HEIFERS—Heifer calves and bull calves for sale at reasonable prices and on terms, if necessary. The mothers are wonderfully bred, and with high milk and butterfat yields. The sires have made Guernsey history. Also a few purebred Holstein cows, heifers and a herd sire for sale. Prices and terms on application. If you desire to start with purebreds, now is your opportunity. S. J. Strauss, P. O. Box 62, Modesto, Cal.

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SHORTHORN CATTLE, SHROPSHIRE Sheep, Berkshire Hogs, Shetland Ponies, Bronze Turkeys, White Plymouth Rocks. Stock for sale at all times. W. B. Dwyer and W. S. Guilford, Box P, Butte City, Glenn county, California.

REGISTERED BROWN SWISS, carrying best blood of the breed. M. J. Pedrotti, San Rafael, Calif.

Registered Yearling Bulls

Holsteins -- Jerseys -- Ayrshires

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CHOICE YOUNG BULLS

Ready for Service

Petaluma, Calif., Wednesday, January 12th

At One O'Clock P. M.

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REGISTERED HOLSTEINS

Creamcup Herd offers service bulls and bull calves of 34-lb. breeding. Females offered for foundation stock. Tuberculin tested.

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Two miles out North First Street.

PUREBRED JERSEY BULL

Dropped September 9, 1919

Sire—FINANCIER'S REMUS, 104,413

Dam—ROMULUS LEGACY LORENE, 294,130

Record 457 lbs. butterfat.

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HOLMES STOCK FARM

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Registered Holstein Friesians

Prize winners at all the Shows. Inspection invited and satisfaction guaranteed. Write for prices.

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CALF PROFITS

Are you getting them? Calf profits mean more to you now than ever before.

BLATCHFORD'S CALF MEAL has been known since the year 1890 as the complete milk-substitute. Costs less than half as much as milk—prevents scouring—promotes early maturity. Sold by dealers, or direct from us.

Write for New Data *See actual figures showing how to increase your calf profits.*

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Shorthorn Cattle

Won at Sacramento Both Championships

7 Firsts and 5 Second Prizes

Shropshire and Merino Sheep

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Single or in Carload Lots

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Registered Herefords

FAIRFAX and REPEATER Stock

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On Highway 16 miles south of Merced.

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BOQUHAN GUINEA STAMP, the great imported young Broadhooks bull.

GOLDEN GOODS JR., sire of LITTLE SWEETHEART, Grand Champion International Show, Chicago, 1919.

Bulls and Heifers for sale.

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TREAT YOUR OWN LIVE STOCK

PROMPT FIRST AID IS VERY IMPORTANT

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Study the *Practical Home Veterinarian.* Get our medicines of your local druggist. You can successfully treat Calf Cholera, Constipation, Abortion, Udder Troubles, Colic and dozens of other ailments common to livestock. If no dealer near you, write us direct. Veterinary advice free. Ask for free copy of the "Cattle Specialist" with full information pertaining to abortion in cows. Tells how to treat your own herd at small expense.

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OUR HERD SIRE WAS

Grand Champion Guernsey Bull at the Portland International

We are offering a Bull Calf by his Sire—this year's Grand Champion at the International Dairy Show

We also breed Duroc-Jersey Hogs

WINSOR RANCH, Bonita, California

Feed at Market Value or Cost of Raising

(Written for Pacific Rural Press by Ralph Newman.)

Now, of course, nobody, unless it be a member of some housewives' league, expects a dairyman to grow feed and turn it over to his cows at the actual cost of growing it, unless the land used in growing the feed is considered part of the dairy equipment and a large enough profit from the dairy is to be allowed to spread over the crops from this land. So from one angle the question, "Shall market value or actual cost be charged?" is pretty nearly one of tweedledee or tweedledum. In the long run we get the profit on that feed—that is, if the business is good, we do. (It gets to be second nature with a dairyman to put in that "if.")

Isn't It a Matter of Bookkeeping?

But from another angle the question is more important. There may be—there is—a choice between methods of dairy bookkeeping. And among organized dairymen, anyway, we are getting away from the old complicated system that never got us very far, and we are adopting a more direct and simple method of figuring dairy costs and profits. "The dairy" is coming to be considered a plant on the ranch for taking the raw materials and turning them into finished products—milk, breeding stock, veal and fertilizer. No land is figured in except that actually used for buildings and corrals. Dairying consists of caring for the stock and their products. Feed growing is a separate business carried on, in most cases, by a separate crew. Or where the same men do both lines of work their time is kept separately for each line. Under this system, which is the one employed on my ranch, and most others I know of where any books are kept, and which seems to me far and away the best plan, there is only one sensible thing for the dairyman to do, and that is to charge his cows with all feed at the market price of that feed, just as they are charged with the labor involved in caring for them.

This system, because of its directness and simplicity is growing in popularity. With it the ordinary dairyman can soon find out whether the dairy is really making or losing money. And an ever increasing number of dairymen are finding out. That was one reason for the upheaval of last spring. Dairymen discovered that the ranch had made money which the dairy had lost again. Many of us who had kept cost sheets saw clearly enough that we were running a ranch for profit and a dairy as an expensive pastime. And right now, knowing what our feed is worth in the open market, we are giving it one more try If, when this feed has all been consumed and the accounts have been cast up, it shall be found that the market value of the feed has not been returned by the dairy—well, a book charge more or less isn't going to make much difference with the way we are going to feel.

[We cannot see how the above lessens the actual cash on hand at the end of the year or a lifetime, as the case may be. It almost gets us back to the question asked by the New Yorker when Gail Borden first put his product on the market, "Why keep cows when condensed milk is so cheap?"—Livestock Ed.]

Selling for Less than Cost.

On my own ranch is a barn containing alfalfa hay. It was grown on the ranch. The water bill, labor bill, taxes on the land and insurance on the hay have been paid and the hay belongs to me. It represents the total income from a certain acreage of the ranch for a year. While it stays in the mow, I can realize nothing on it. I must take one of two courses to get back what I have expended on it and the profit to which I am entitled for having grown it. First, I can sell it to a neighbor at the market price. In that case the difference between what he pays me and what it cost to raise it is profit, provided he pays more for it than it cost me, and he wouldn't get it if he didn't. Or second, I can feed that hay to my cows. If I take the latter course, it seems to me I am a mighty poor business man if I do not charge the cows just as much for it as I can sell it for, and if I do not attempt to get from the cows' product enough to pay that price as a part of the cost of production. And what is true of hay is true of any other feed. I have some barley. More must be bought. Can anybody see any good reason why I should charge the cows less for one sack of barley that happened to be grown on my ranch than for the sack next to it that was grown on the ranch next to mine? For the life of me, I cannot see why I should sell feed to myself any cheaper than I would sell it to may neighbor.

Have you noticed in some of the oculists' windows a picture of a young woman who makes some lightning changes of exppression? From one angle this lady's face wears the scowl supposed to be caused by eye strain. From a slightly different angle the same face smiles at you from behind nifty eye glasses. Scowl or smile—it all depends on your viewpoint. So, I imagine, you will answer the above question, according to your viewpoint, and that, in turn, will depend on your method of keeping books.

If by "what it cost him to grow it," you mean that the dairy should be charged the actual cost of growing the feed, and that only that amount should figure in cost of producing milk from that feed, then I take issue with you most decidedly. Especially so if you are going to try to base the price of milk on its approximate cost of production.

Is It a Double Profit?

I know that some of "these here now"—political economists have said that's what it is, but they will have to show the man who feeds the cows. He will be more inclined to consider it taking a chance on getting one profit. I am offered $20 a ton for the alfalfa now on hand. With conditions as they now threaten to become, it is an open question if I can get $20 a ton for that hay when fed to the cows. And if I can't, where is there any double profit? And why should I keep cows at all if I can't get as much for hay fed to them as I can get for it without the bother of feeding it out? What is expected of me? That I shall forego all profit on a goodly portion of the ranch in order to cut the cost of producing milk to a point where I can sell it at a "price within the reach of all"—except my own family?

CALF CLUB CONTEST AND SALE.

On January 12th the Petaluma Calf Club will complete its feeding period and hold their contest and sale. Six months ago twenty boys and girls in the vicinity of Petaluma each purchased a purebred bull calf and during this period have been "growing them out" to the best of their ability.

Three prizes are to be awarded. The first prize is a purebred heifer calf; second, a scholarship at Davis, and third, a purebred pig. In addition the entire club was given a trip to the University Farm at Davis, visiting the A. W. Morris & Sons Corp. herd and others en route. The California Dairy Council will also award medals. Professors Rubel and Bryant are the awarding judges.

There are some exceptionally well bred calves in the bunch and dairymen needing stock of this kind will find it to their advantage to attend the contest and sale.

The "Miracle Cow" has been discovered. She is Salome's Carnation, a purebred Jersey, owned by William Page of Hamilton, N. D. She has shattered the high North Dakota record for butterfat production in the two-year-old heifer class. The previous record was 376.16 pounds of fat produced in one year. The new record hung up by Salome's Carnation is for 281 days, or less than nine months. In that time she has produced 401.05 pounds of fat. Salome's Carnation is not getting any more care or feed than any of the other cows in the herd.

figure it out-

are your cows cheating you- or are you cheating your cows?

Many a dairyman is apt to blame his herd for his poor profits when his own judgment is at fault. After all, a cow is equipped by Nature to yield just so much milk. Whether or not you get her full flow depends as much on *you* as on her. For example:

A cow capable of producing 40 lbs. of milk per day, if fed only enough to make 17 to 25 lbs. per day, cannot produce milk as cheaply as if fed to her full capacity. The best roughage for profitable milk production is alfalfa as your pasturage. But the dairy cow able to produce 40 lbs. of milk per day cannot possibly eat enough alfalfa to maintain the yield through her milking period. As alfalfa is the cheapest source of the necessary protein it follows that a dairy cow must be fed, in addition, a grain concentrate rich in carbohydrates—such as SUREMILK.

This is a carefully blended mixture of by-products from the cereals manufactured in our mills at Stockton. It is very high in carbohydrates—containing nearly 64%. It is very low in ash, fibre, and protein—for alfalfa as your roughage will supply these more cheaply. And as for moisture—*that* can be supplied cheaper at the watering trough.

Who knows?—perhaps, when you get to the bottom of this milk question, you will find that your cows have been doing the best they can under the circumstances. Hundreds and hundreds of dairymen have had the same dismal experience with poor or inferior feed—only to find that SUREMILK nets them more milk-money and a happier herd in the bargain.

If you really want to simmer this milk question down to the bottom, if you want to know the true food values of feeds and their milk-producing qualities, send for "Converting Feed into Money." Mail the coupon now—it's free!

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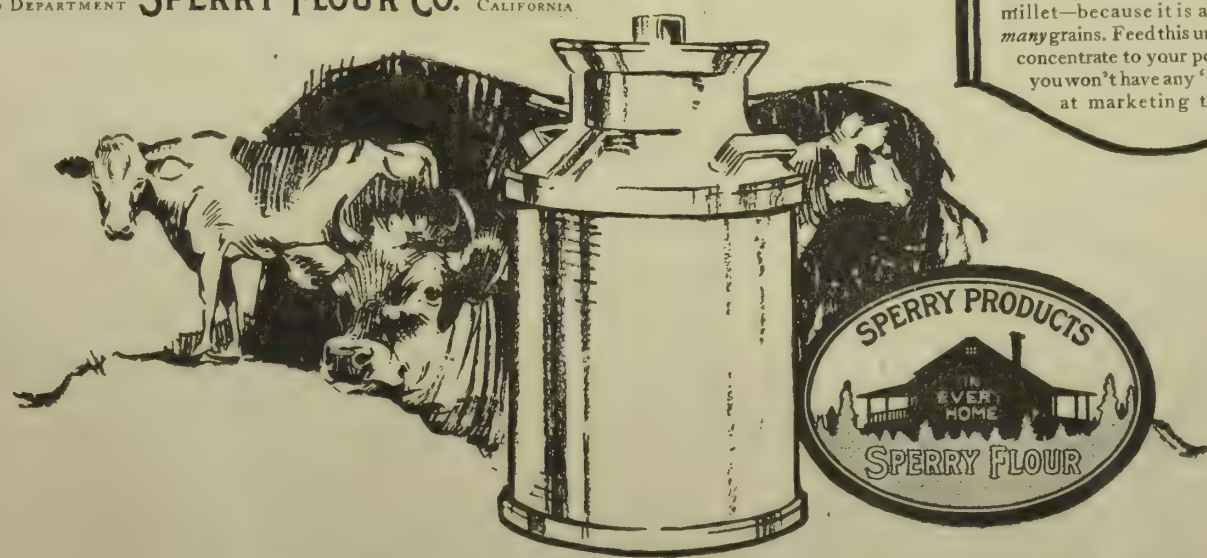
—and here's the way it works out with HOGS

While originally compounded as a grain feed for cows, SUREMILK has proved a "feed-find" to many successful hog raisers. For rapid growth of bone, muscle and tissues, young pigs demand some grain feed in their ration. And SUREMILK gives it to them. It has a greater feeding value than the best barley. It is better than any one grain such as corn, milo or millet—because it is a mixture of *many* grains. Feed this uniform grain concentrate to your porkers and you won't have any "scrubs" at marketing time.



STOCK AND POULTRY FEED DEPT.
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Please send me, without obligation, your booklet, "Converting Feed into Money"

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*Address*_____

SUREMILK

"A Sperry Product"

"There's a Sperry Feed for every stock and poultry need"

A Nationally Known Breeding Institution

The men at the head of the great Diamond Bar breeding institution are as interested in the future of the Duroc-Jersey industry as they are in the operation of their own ranch.

For this reason they guarantee every animal sold by them to be precisely as represented and stand ready to make every reasonable adjustment if dissatisfaction should occur.

The Month's Offerings

Registered spring boars and gilts by the Ace of Pathfinders, Mammoth Sensation Junior, Great Pathfinder and Royal Pathfinder. We have only a limited number of these choice Durocs. To build up a purebred herd that will bring profit and pride, order this trio at $500: A boar and two unrelated sows, all registered, and sired by the boars mentioned above.

Prize Winning Herd Boars a Specialty

This is your opportunity to put the best blood in America into your herd. Let us know your needs at once before these choice offerings are gone. An inquiry will show at what unusually reasonable prices we are offering stock.

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Special Offerings

DIAMOND BAR RANCH

SPADRA,
Los Angeles County
California

F. E. LEWIS
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R. K. WALKER,
Hog Department

Poland China Sale

JANUARY 5th, at FAIR GROUNDS, ORLAND, CALIF.

R. J. Yates, the well known breeder of big-type Poland Chinas, will offer 60 head as follows:

30 SPRING GILTS, 10 FALL GILTS, 10 TRIED SOWS and 10 YOUNG BOARS

The sires of the offering are **Long Jumbo, Glenn Chief, Yates' Big Orphan, and Young Hadley.** Boars in service: **Yates' Big Jones, Y's Reformer, Black Bob** and **Delmar.** All stock offered is in excellent condition and are guaranteed breeders.

R. J. YATES

Orland, Glenn Co., California

MAMMOTH DISPERSAL SALE

Falfadale Farm Durocs

Everything will be sold. Included in the offerings is the "Sensational Boar"

GREAT ORION SENSATION JUNIOR

He was Grand Champion at Tulare, Los Angeles and Riverside, and Reserve Grand Champion at Sacramento.

40 40 Sows and Gilts Bred to the Grand Champion
40 of his best spring pigs third week in February 40

B. H. WILKINSON, Mgr. PERRIS, CAL.

GUASTI BERKSHIRES

Weaned pigs, both sexes, from sows that farrow large litters and raise them. Priced reasonable — they are money-makers.

ITALIAN VINEYARD COMPANY

ALEX. M. WILSON, Supt. Guasti, Calif.

Livestock Queries and Replies

Tuberculin Test.—Is the tuberculin test reliable? Can the owner test his own cattle? If the owner does not sell milk, would it be possible for him to test his own cattle for the protection of himself and family?—W. T. J., Stent.

When administered by a qualified person the tuberculin test is reliable, and if the animal reacts it is certain to have the disease. The infection may be insignificant but will be found if careful autopsy is made. Yes, it would be possible for a farmer to test his own cattle if he would qualify himself to do it first as to the exact method and then by purchase of necessary instruments. It is much better, however, to notify Dr. J. P. Iverson, Chief of Division of Animal Industry, State Department of Agriculture, who will send an inspector to do the work free of charge. It may be some little time before the said inspector can get to a certain point, but he surely gets to you. By all means employ the state to do this work as it will add value to the animals passing the test if performed by a qualified person.—Livestock Ed.

Milk Won't Sour.—Cow has been giving milk 4 years and apparently in good health. For the last year her milk won't sour but spoils and is not fit to use. Is she diseased?—L. R. A., Island Mountain.

Has the cow freshened regularly? If she has not freshened recently, that is, within a year, this probably is the cause of the trouble. Otherwise the milk utensils, buckets, pans, etc., should receive an extra cleaning, being sure that all cracks, corners and places where bacteria can lodge are thoroughly cleaned out and scalded with boiling water. Brush off and dampen udder and side of cow on which milker sits, milk the first few streams on the ground or into a separate dish and give to kitty. If cloth is used for strainer be sure it is clean or better yet, use nothing but a metal strainer. Milk that won't sour is usually infected with bacteria that get ahead of the ones that sour the milk and it spoils.—Livestock Ed.

Azoturia.—Three horses were turned out to pasture in the morning. About noon one came limping back, dragging one hind foot. Also noticed a swelling across the kidneys. She was down and not able to get up. On advice, gave a dose of nitre, which was given and acted promptly, after which she was able to get up, but could only stand on 3 legs. The hind leg is still dragging. Appetite all right.—B. R., Redding.

This trouble called azoturia and is due to over-feeding grain or brain when not worked or exercised. If paralysis continues there will be a shrinkage of the muscles above the stifle. Apply some good liniment over the kidney and hip with plenty of friction frequently and give plenty of flaxseed tea. Hereafter, when horses are not worked, do not feed grain or bran, especially young, fat ones.—Dr. E. J. Creely.

Inflammation of Elbow-joint.—A mare, 12 years old, was kicked just at or immediately below the elbow joint of fore leg. Cannot bear any weight on the leg. Lies down a great deal. Very little, if any swelling—just a slight enlargement below the joint that is quite hard.—E. P. N., Yuba City.

This is a very serious injury and it will require careful nursing and absolute rest to bring about a cure. I recommend the following application immediately and repeat in 4 to 6 weeks: Rx.—Red Iodide of Mercury, ½ ounce; Pulv. Cantharides, ½ ounce; Simple Cerate, 6 ounces. Mix. Clip hair on affected surface, and rub in the above blister with considerable friction for 3 minutes; then smear on plentifully as butter on bread. Do not allow horse to bite blistered place. After 5 days wash and grease. Dr. E. J. Creely.

Fence Law.—Please give the fencing law for Mariposa county. I have grain that is enclosed with two wires. Do I have to fence it hog tight to keep out my neighbors hogs? Has a person a right to impound trespassing stock and hold them until trespass damage and feed bill is paid? —J. F., Wawona.

The fence law in California is in rather a chaotic state at present. A recent law has been declared unconstitutional. Either fence your grain "hog tight," or impound trespassing stock and recover damages under due process of law. Fencing is the cheaper and more certain. Any one on whose property stock is trespassing has a right to impound said stock, care for it properly and collect damages and feed bill.

Ground Barley and Cocoanut Meal.—Could a good ration for dairy cows be made with ground barley, cocoanut meal and alfalfa hay? I have heard that barley is too fattening and will not increase the flow of milk.—J. D., Oakdale.

The combination mentioned is a most excellent one. Barley meal alone would be too fattening, but in a combination with alfalfa hay and cocoanut meal the ration is almost ideal. We would suggest about 25 pounds of the hay daily to each cow with about 1 pound of a mixture of equal parts ground barley and cocoanut meal for each 4½ pounds of milk produced. If the alfalfa is selling for half as much as the barley we would advise cutting down the hay somewhat and increasing the concentrates as they would be cheaper.—Livestock Ed.

Registration of Grades.—I have some grade Holstein cows and a registered sire. I am breeding the heifers from this cross to another registered sire. How many crosses of this kind will I have to make before I can have the calves registered?—W. C. J., Fallon, Nev.

There is no provision made in any of the well established registration associations in this country for the acceptance of any but the progeny of sires and dams already on the books. In former years certain qualifications would entitle a horse to admission to the American Trotting Horse Registry. Also Jack stock can be registered that comes up to certain measurements. You had better buy a registered heifer or two.—Livestock Ed.

Indigestion and Worms.—Young pigs do well for a month or six weeks and then get droopy and die. Have tried different feeds and fumigated the pen, but nothing tried seems to help.—W. L. B., Tehachapi.

Allow them to eat nothing for 24 hours and then give the following: Rx. Areca nut, 2½ ounces; Kamala, 1½ ounces; Jalap, 2 ounces. Mix, divide into 120 powders and give 1 powder, followed in 1 hour with a good dose of castor oil. Also give ½ teaspoonful sodium bicarbonate (baking soda) occasionally.—Dr. E. J. Creely.

Cow Pox.—Cows have small boils on their udders. The teats also become sore and tender at times. Will you kindly diagnose the disease and prescribe a remedy.—A. B. A., Ripon.

Next time sign your name in full as it is a rule not to reply to a query unless the name of the querist is known.

The above trouble is cowpox. Apply the following medicine once daily after washing with warm Lysol water (1 teaspoonful to 1 pint). Rx.: Balsam Peru, ½ ounce, Olive Oil, 14½ ounces, Oil Chinopodium, 1 drachm, Oil of Tar, rectified, ½ ounce. Mix and apply once daily.

A Subscriber for 50 Years.

Enclosed find check for $2, which is for one year for myself and one year for my oldest boy, who lives at Elk Grove. With best wishes for our dear old Rural Press, which gets better, if possible, as the years go by.—G. R. Wales, Lassen county.

Poultry for Profit

PROMISING FUTURE FOR WESTERN POULTRYMEN.

(By J. Ray Corliss, "Petaluma Poultry King," and President of the Poultry Producers of Central California, Inc.)

The question uppermost in every poultryman's mind at the present is, Are the good times of the last three years going to continue or end in a slump like that facing the grain men, wool men, potato and onion men, and thousands of other industries? This question has been asked me many times of late, and I have spent much time coming to a decision satisfactory to myself. I have had to take into consideration conditions on this coast, in the Great Middle West, where most of America's eggs are produced, and in the far East, where our products must seek an outlet. Besides these producing sections of our own, China, Japan, Australia, New Zealand and in many other smaller producing countries conditions had to be carefully taken into account.

Mr. Poultryman, you have nothing to fear. With lower prices for grain and mill feeds, with an abundance of labor at your command willing to do an honest day's toil for a reasonable wage, your future is assured. But best of all, your great co-operative marketing associations will see that you will get for your eggs every cent to which you are entitled, whether in storage time or in the dead of winter. In short, the opportunity which confronts you is one unparalleled in the poultry industry. If you have a good flock of poultry and use reasonable intelligence in their care, your success is assured.

And let me say here that the West is only in its infancy as regards the poultry industry. We are still in our swaddling clothes. Twenty years from now there will be millions of hens where there are but thousands now.

A SUITABLE GOBLER FOR MATING.

To the Editor: Would an eleven months' old gobbler (weight 25 lbs.) be satisfactory for breeding purposes or should I use one that is older? What age is best?—E. E., Sebastopol.

A well-developed and vigorous gobbler is suitable for mating when eleven months of age. A number of Turkey raisers who intend the young only for the block each season breed only from birds—both males and females—that are about one year old when mated in the spring. But if our correspondent intends to produce young that are intended for future breeding, we believe the young gobbler mentioned by him should be mated to hens that are two years old or over.

CHICKENS PRONE TO MISCHIEF

To the Editor: What causes chickens to pull one another's feathers out and eat them. I give them all kinds of feed and plenty of green feed. Kindly advise me what kind of feed to give chickens to produce eggs.—Subscriber, Gilroy.

Fowls that are not forced to scratch in deep litter for their grain feed are inclined to get into mischief, including feather picking. At times this trouble is due to a total lack of salt in the feed. Occasionally it is developed by feeding a large quantity of raw meat; this applies particularly if the parents were also fed liberally with raw meat. We recommend supplying an attractive damp earth bath for the hens in which to wash themselves, and a scratching pen with litter about a foot or more in depth, and into which all of the grain feed should be thrown. In order to secure a maximum of eggs it is necessary to feed both a mash and grains, and the totals of these materials should yield about one part of digestible protein and five to five and one-half parts of digestible carbohydrates and fat. By this means we supply the hens with a balanced ration for egg-production, or in other words such a ration supplies the hen with all of the necessary elements with which she can supply just enough white—and no more—to cover each yolk as it passes into the egg passage where the white is formed around the yolk. Of course the hens must have crushed shells, grit, and charcoal, as well as greens. If our correspondent wishes to compound his own mash and scratch feed (mixed grains), we will endeavor to direct him how to mix them if we are supplied with a list of feeding materials that he can readily obtain and the cost or value of each.

SONOMA COUNTY EGG-LAYING CONTEST.

At the end of the sixth week, December 12, the standing of the five highest pens, composed of ten hens each, was as follows:

Owner—	No. Eggs.
V. H. Guthrie, Petaluma	238
C. C. Boysen, Petaluma	235
T. G. King, Petaluma	230
J. J. King, Petaluma	227
M. D. McLeod, Sebastopol	213

The following were high individual pens:

Hen No. Owner.	No. Eggs
200—J. J. King	36
106—M. D. McLeod	31
159—T. G. King	31
217—J. E. Iddings	31
307—S. P. Nielson	31
111—T. B. Purvine	30
79—H. H. Peck	30
258—Knox Boude	30
428—C. E. Fuller	30

BLACKEYE BEANS FOR FEED.

To the Editor: We have lots of blackeye beans and would like to know if they would be a good feed for laying hens. If they are, will you tell us how to feed and in what proportion?—J. C. F.

Blackeye beans are excellent for feeding fowls when fed with a variety of grains and mash. They contain a much greater proportion of protein than grains. Approximately they analyze the same as the average commercial mash sold in California. For this reason it is necessary to feed them in a mixture of grains, including some that are heating, such as corn and buckwheat.

The hen cares nothing about the price of eggs and it is useless to show her quotations to induce her to be more prolific. Good care and food and warm quarters are the only effective means of getting eggs out of season.—Hen coop.

Poultry Breeders' Directory

Rate, 4c. per word. Cash must accompany all orders.

BARRED PLYMOUTH ROCKS — "Nothing Better in Poultry." Wonderful layers. Choice hens and pullets for sale; also fine cockerels that will improve your flock. Now booking orders for hatching eggs. I have made a specialty of Barred Rocks for over twenty-two years. That's why our birds win at all the leading shows. Catalog free. Chas. H Vodden, Box 3, Los Gatos, Calif.

THE MISSION HATCHERY
Wishes its friends—old and new customers—A MERRY CHRISTMAS. Watch out for our advertisement next week, or ask us for our special letter on "Poultry Conditions," and see if it will help you toward a Prosperous NEW YEAR. The Popular Breeds—well bred and hatched—Reasonable Prices.
THE MISSION HATCHERY, Campbell, Calif.

CHICKS HATCHED in Petaluma Electric Incubators are of superior class. It adds "pep" to the chicks. They develop into layers in shorter time than by old methods. Modern Poultrymen are rapidly adopting our system. 400 incubators in one Hatchery. Illustrated Catalogue free. Petaluma Electric Incubator Co., Petaluma, Calif.

SUPERIOR WHITE LEGHORNS — WE BREED THEM.—Order your spring chicks now to insure desirable delivery date. We raise all chicks from our proven producers from OUR OWN YARDS and guarantee them vigorous heavy layers. A card brings full information and catalogue. Bolfing Poultry Farm, Gilroy, Calif.

TURKEYS—"Goldbank," "Copper King V" strain. Selected Giant Bronze Toms, sired by son of famous "Copper King V," first prize yearling N. B. T. Club Show, Madison Square, N. Y., January 1919. Bred to 20-lb. hens. Egg orders taken. Prices reasonable. Address: Bronze King Mountain Farm, P. O. Box 308, Calistoga, Calif.

BUFF ORPINGTONS—Sullivan's Commonwealth Strain; we originated and have bred in line for 20 years. If you want eggs and finest type of this breed, one of our males at this time. $7.50 and $10.00 each; exhibition birds. Write for prices. Book for eggs for February delivery, $3.00 and $5.00 for 15. Mr. and Mrs. W. S. Sullivan, 100 Market Road, Agnew, Santa Clara Co., Calif.

WHITE LEGHORN BABY CHICKS—We are now booking orders for spring delivery from two and three-year-old hens that have the laying qualities well established. We give extras. Send for free folder and price list. Tacker's Poultry Ranch and Hatchery, Escalon, Calif.

PEERLESS WHITE WYANDOTTES — Our 200-egg strain, bred for years for show qualities and high-egg production. Fifty cockerels, 100 pullets for sale. Trios and mated yards. Eggs for hatching. Catalogue free. J. W. Atkinson, Box 8, 130 Willard St., San Jose.

BABY CHICKS—Stop! Look! Listen! Before you place your order for Single-Comb White Leghorn Baby Chicks, write for my booklet telling you about my large, heavy-laying stock, etc., and price and terms. H. A. Schlotthauer, Exeter, Calif.

BABY CHICKS from good layers. Booking orders now for 1921 delivery: R. I. Reds, Barred Rocks, White Rocks, White Leghorns, Brown Leghorns. Safe arrival guaranteed. Write for circular. Stubbe Poultry Ranch and Hatchery, P. O. Box 67, Palo Alto, Calif.

SANTA CRUZ CHICKS—White, Brown and Buff Leghorns, Anconas, Minorcas, Barred Rocks, Reds, Buff Orpingtons, White Rocks and White Wyandottes. Write for 1921 folder with price list. B. W. Archibald, Soquel, Santa Cruz Co., Calif.

MAMMOTH BRONZE TURKEYS—"Stafford strain" from eastern stock. Extra large bone and frame and beautiful plumage. Money back guarantee. Send for circular. R. M. Dodge & Son, Stafford Farm, R. D. 2, Box 129, Bakersfield, Cal.

WHITE LEGHORN BABY CHIX from heavy-laying Hoganized Stock. Safe arrival of full count, live, strong chix guaranteed Price list and interesting literature on application. The Pioneer Hatchery, 408 Sixth St., Petaluma, Cal.

CHICKS — EGGS — Hoganized White Leghorns, Brown and Buff Leghorns, Black Minorcas, Rhode Island Reds, Barred Rocks, Anconas, Blue Andalusians. Free circular. Order early. McDonald Poultry Ranch, King Road, San Jose, Calif.

RHODE ISLAND REDS—1st Cockerel, special, Oakland Show 1918; 1st cockerel, Special 1920. Why? Because they have quality; bred for years for heavy egg production. Cockerel Pens, Hatching Eggs, Baby Chicks. Wm. Larm, 3915 39th Ave., Fruitvale, Cal.

BABY CHIX
We specialize in Rhode Island Red and Black Minorca chix from stock bred for eggs, vigor, color. Any number at popular price. Secure date early. Denton Poultry Yards, Campbell, Cal.

PRUSSIAN HILL POULTRY RANCH—Superb Barred Rock, Black Minorca and Blue Andalusian cockerels. March hatch at $5.00 each. A few extra at $7.50. Pullets at $2.00 each. Geo. I. Wright, Mokelumne Hill, Cal.

WATCH US GROW—"Quality Chicks." We are now booking orders for the season of 1921. White and brown Leghorns, R. I. Reds and Barred Rocks. Order early. E. W. Ohlen, Campbell, Cal.

S. C. WHITE LEGHORN Baby Chicks from our own Bred-to-Lay stock. Now booking for January to July delivery. Our prices are right. Model Poultry Farm, W. C. Smith, Prop., Corning, Cal.

NEWTON POULTRY FARM—White Leghorn Baby chicks from our well-known, carefully selected stock. Best strain. Big plant. Order now for spring delivery. Any number. Los Gatos, Calif., Dept. 1.

BABY CHICKS—Hatched from our utility S. C. White Leghorns, a result of many years' selection and breeding, for egg production. San Jose Poultry Yards, 15th and Margaret Streets, San Jose, Calif.

FOR SALE—Purebred Bronze young toms, $15.00; hens, $10.00. Satisfaction guaranteed. Purebred Buff Orpington cocks and cockerels, $5.00, $7.50; hens, $3.50 to $5.00. Mrs. M. L. Trewhitt, Route B, Box 47, Hanford, Cal.

BABY CHICKS—Hatched right from our selected bred-to-lay White Leghorns, Barred Rocks, R. I. Reds. Order now for February 1st delivery. Maxwell Hatchery, Madera, Cal.

GOLDCROFT BUFF ORPINGTONS, Columbian Wyandottes and White Leghorns. Heavy laying strains. Breeders and young stock. Samuel Abrams, Box 13, Los Altos.

W. L. CHICKS from heavy-laying trapnested and line-bred stock. Prices for January, $18; February, $16. Pioneer Hatchery, 429 Olive St., Santa Rosa, Cal.

"GOLDBANK" STRAIN—Giant Bronze turkey toms. Partridge Plymouth Rock chickens. Chicken and turkey eggs in season. M. M. Reiman, Planada, Cal.

BABY CHICKS—Write for our prices and description of our stock. Booking orders now. Address Sunny Stanislaus Hatchery and White Leghorn Ranch, Riverbank, Cal.

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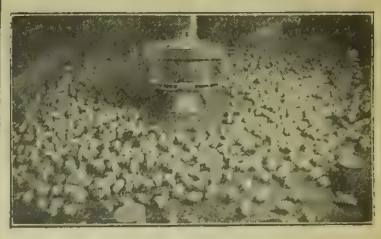

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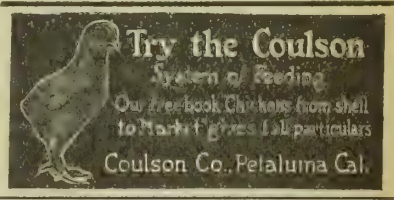

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Oh, You Tex!

By William MacLeod Raine.

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SYNOPSIS OF PRECEDING CHAPTERS: Jack Roberts, known as Tex, a young line-rider in the cattle country of the Texas Panhandle, discovers rustlers at work. He is prevented from getting a close view of the culprits because of a barrier in the form of a Winchester rifle. However, he gathers what clues he can at long range, one of the clues being a sorrel horse with a white nose and white stockings. Roberts is planning a coup on the rustlers when a Mexican boy rides up and informs him that his employer, Clint Wadley, owner of the A T O ranch, desires his presence at the ranch house. Wadley informs the line-rider that he is to be assigned to service as a trail herder, to move a band of cattle to market. During his interview with the ranch owner, Roberts meets, for the first time, his employer's daughter, Ramona, who has just returned from attending school in the East. Later, when Roberts visited the Longhorn saloon, looking for a cook for his trail outfit, he is surprised to see a sorrel pony with a white nose and white stockings. Entering the place to investigate he has an encounter with three men. He is obliged to give one of them a good licking. Shortly after the incident he is amazed to learn that his adversary is the son of Clint Wadley, cattle king. Tex Roberts at once resigns his position as trail foreman. He is then appointed one of the Texas rangers. Almost immediately news comes that Arthur Ridley, messenger for Clint Wadley has been robbed by outlaws of $6,000 collected for cattle delivered at an army post.

CHAPTER VII.

Long since the sun had hid behind the horizon edge and given place to a desert night of shimmering moonlight and far stars. From the enchanted mesa Rutherford Wadley descended to a valley draw in which were huddled a score of Mexican jacals, huts built of stakes stuck in a trench, roofed with sod and floored with mud. Beyond these was a more pretentious house. Originally it had been a log "hogan," but a large adobe addition had been constructed for a store. Inside this the dance was being held.

Light filtered through the chinks in the mud. From door and windows came the sounds of scraping fiddles and stamping feet. The sing-song voice of the caller and the occasional whoop of a cowboy punctuated the medley of noises.

A man whose girth would have put Falstaff to shame greeted Rutherford wheezily. "Fall off and 'light, Ford. She's in full swing and the bridle's off."

The man was Jumbo Wilkins, line-rider for the A T O.

Young Wadley swung to the ground. He did not trouble to answer his father's employee. It was in little ways like this that he endeared himself to those at hand, and it was just this spirit that the democratic West would not tolerate. While the rider was tying his horse to the hitchrack, Jumbo Wilkins, who was a friendly soul, made another try at conversation.

"Glad you got an invite. Old man Cobb hadn't room for everybody, so he didn't make his bid wide open."

The young man jingled up the steps. "That so? Well, I didn't get an invite, as you call it. But I'm here." He contrived to say it so offensively that Jumbo flushed with anger.

Wadley sauntered into the room and stood for a moment by the door. His trim, graceful figure and dark good looks made him at once a focus of eyes. Nonchalantly he sunned himself in the limelight, with that little touch of swagger that captures the imagination of girls. No man in the cow-country dressed like Rutherford Wadley. In the kingdom of the blind the one-eyed are kings, and to these frontier women this young fellow was a glass of fashion. There was about him, too, a certain dash, a spice of the devil more desirable in a breaker of hearts than any mere beauty.

His bold, possessive eyes ranged over the room to claim what they might desire. He had come to the dance at Tomichi Creek to make love to Tony Alviro's betrothed sweetheart Bonita.

She was in the far corner with her little court about her. If Bonita was a flirt, it must be admitted she was a charming one. No girl within a day's ride was so courted as she. Compact of fire and passion, brimming with life and health, she drew men to her as the flame the moth.

Presently the music started. Bonita, in the arms of Tony, floated past Rutherford, a miracle of supple lightness. A flash of soft eyes darted at the heir of the A T O ranch. In them was a smile adorable and provocative.

As soon as the dance was over, Wadley made his way indolently toward her. He claimed the next waltz.

She had promised it to Tony, the girl said—and the next.

"Tony can't close-herd you," laughed Rutherford. "His title ain't clear yet—won't be till the priest has said so. You'll dance the second one with me, Bonita."

"We shall see, senor," she mocked.

But the Mexican blood in the girl beat fast. In her soft, liquid eyes lurked the hunger for sex adventure. And this man was a prince of the blood—the son of Clint Wadley, the biggest cattleman in West Texas.

There were challenging stars of deviltry in Bonita's eyes when they met those of Rutherford over the shoulder of Alviro while she danced, but the color was beating warm through her dark skin. The lift of her round, brown throat to an indifferent tilt of the chin was mere pretense. The languorous passion of the South was her inheritance, and excitement mounted in her while she kept time to the melodious dance.

Alviro was master of ceremonies, and Wadley found his chance while the young Mexican was of necessity away from Bonita. Rutherford bowed to her with elaborate mockery.

"Come. Let us walk in the moonlight, sweetheart," he said.

Bonita turned to him with slow grace. The eyes of the man and the woman met and fought. In hers there was a kind of savage fierceness, in his an insolent confidence.

"No," she answered.

"Ah! You're afraid of me—afraid to trust yourself with me," he boasted.

She was an untutored child of the desert, and his words were a spur to her quick pride. She arose at once, her bosom rising and falling fast. She would never confess that—never.

The girl walked beside him with the fluent grace of youth, beautiful as a forest fawn. In ten years she would be fat and slovenly like her Mexican mother, but now she carried her slender body as a queen is supposed to but does not. Her heel sank into a little patch of mud where some one had watered a horse. Under the cottonwoods she pulled up her skirt a trifle and made a move of disgust at the soiled slipper.

"See what you've done!" Small, even teeth gleamed in a coquettish smile from the ripe lips of the little mouth. He understood that he was being invited to kneel and clean the mud-stained shoe.

"If you're looking for a doormat to wipe your feet on, I'll send for Tony," he jeered.

The father of Bonita was Anglo-Saxon. She flashed anger at his presumption.

"Don't you think it. Tony will never be a doormat to anybody. Be warned, senor, and do not try to take what is his."

Again their eyes battled. Neither of them saw a man who had come out from the house and was watching them from the end of the porch.

"I take what the gods give, my dear, and asked leave of no man," bragged Wadley.

"Or woman?"

"Ah! That is different. When the woman is Bonita, muchacha, I am her slave."

He dropped to one knee and with his handkerchief wiped the mud from the heel of her slipper. For a moment his fingers touched lightly the trim little ankle; then he rose quickly and caught her in his arms.

"Sometime—soon—it's going to be me and you, sweetheart," he whispered.

"Don't," she begged, struggling against herself and him. "If Tony sees—"

His passion was too keen-edged to take warning. He kissed her lips and throat and eyes. The eyes of the watcher never wavered. They were narrowed to shining slits of jet.

"Why do you come and—and follow me?" the girl cried softly. "It is not that you do not know Tony is jealous. This is not play with him. He loves me and will fight for me. You are mad."

"For love of you!" he laughed triumphantly.

She knew he lied. The instinct that served her for a conscience had long since told her as much. But her vanity, and perhaps something deeper, craved satisfaction. She wanted to believe he meant it. Under his ardent gaze the long lashes of the girl drooped to her dusky cheeks. It was Tony she loved, but Tony offered her only happiness and not excitement.

A moment later she gave a startled little cry and pushed herself free. Her dilated eyes were fixed on something behind the cattleman.

Rutherford, warned by her expression, whirled on his heel.

Tony Alviro, knife in hand, was close upon him. Wadley lashed out hard with his left and caught the Mexican on the point of the chin.

The blow lifted Tony from his feet and flung him at full length to the ground. He tried to rise, groaned—rolled over.

Bonita was beside him in an instant. From where she knelt, with Tony's dark head in her arms, pressed close to her bosom, she turned fiercely on Wadley.

"I hate you, dog of a gringo! You are all one big lie through and through—what they call bad egg—no good."

Already half a dozen men were charging from the house. Jumbo pinned Wadley's arms by the elbows to prevent him from drawing a revolver.

"What's the rumpus?" he demanded.

"The fellow tried to knife me in the back," explained Rutherford. "Jealous, because I took his girl."

"So?" grunted Wilkins. "Well, you'd better light a shuck out o' here. You came on yore own invite. You can go on mine."

"Why should I go? I'll sell you at Tombstone first."

"Why?" Jumbo's voice was no longer amiable and ingratiating. "Because you gave Tony a raw deal, an' he's got friends here. Have you?"

Wadley looked round and saw here and there Mexican faces filled with sullen resentment. It came to him swiftly that this was no place for his father's son to linger.

"I don't push my society on any one," he said haughtily. "If I ain't welcome, I'll go. But I serve notice right here that any one who tries to pull a knife on me will get cold lead next time."

Jumbo, with his arm tucked under that of Wadley, led the way to the house. He untied the rein of Rutherford's horse and handed it to the son of his boss.

"Vamos!" he said.

The young man pulled himself to the saddle. "You're a hell of a friend," he snarled.

"Who said anything about bein' a friend? I'm particular about when I use that word," replied Wilkins evenly, with hard eyes.

Wadley's quirt burned the flank of the cow-pony and it leaped for the road.

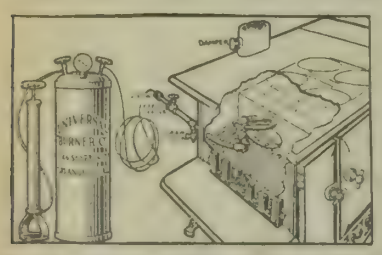
When five minutes later some one inquired for Tony he too had disappeared.

CHAPTER VIII.

Rutherford Wadley struck across country toward the rim-rock. Anger burned high in him, and like the bully he was he took it out of his good horse by roweling its sides savagely. He plunged into the curly mesquite, driving forward straight as an arrow. Behind him in the darkness followed a shadow, sinister and silent, out of sight, but within sound of the horse's footfall. It stopped when Wadley stopped; when he moved, it moved.

Midnight found young Wadley still moving straight forward, the moon on his left. Painted Rock was ten miles to the west. Except for the stage station there, and the settlement he had left, there was no other habitation for fifty miles. It was a wilderness of silence.

Yet, in that waste of empty space Rutherford "jumped up" a camper. The man was a trader, carrying honey and pecans to Fort Worth. He was awakened by the sound of a raucous curse, he testified later, and in the bright moonlight saw the young cattleman beating his horse. Evidently



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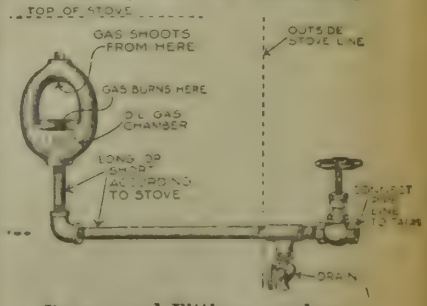

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the young animal had been startled at sight of his white-topped wagon.

An angry sentence or two passed between the men before the cattleman moved over the hill-brow. As the trader rolled up again in his sugun, there came to him faintly the sound of another horse. He was not able to explain later why this struck him as ominous, beyond the strangeness of the fact that two men, not in each other's company, should be traveling so close together in the desert. At any rate, he rose, crept forward to a clump of Spanish bayonet, and from behind it saw a young Mexican pass along the swale. He was close enough almost to have touched him, and in the rich moonlight saw the boyish face clearly.

By the time Wadley reached the rough country of the cap-rock, the young day was beginning to awaken. A quail piped its morning greeting from the brush. A gleam of blue in the dun sky flashed warning of a sun soon to rise. He had struck the rim-rock a little too far to the right, and deflected from his course to find the pocket he was seeking. For half a mile he traveled parallel to the ridge, then turned into a break in the wall. At the summit of a little rise he gave a whistle.

Presently, from above a big boulder, a head appeared cautiously.

"Hello, out there! Who is it?"

"Ford."

The rider swung to the ground stiffly and led his horse forward down a sharply descending path to a little draw. A lank, sallow man with a rifle joined him. With his back to a flat rock, a heavy-set, broad-shouldered fellow was lounging.

"'Lo, Ford. Didn't expect you tonight," he grumbled.

"Drifted over from the dance at Tomichi Creek. Beat up a young Mexican and had to get out."

"You're such a sullen brute! Why can't you let folks alone?" Pete Dinsmore wanted to know.

He was annoyed. Rutherford Wadley was not a partner in the business on hand tonight, and he would rather the man had been a hundred miles away.

"He got jealous and tried to knife me," explained the heir of the A T O sulkily.

"You durn fool! Won't you ever learn sense? Who was it this time?"

"Tony Alviro. His girl's crazy about me."

The keen, hard eyes of Dinsmore took in the smug complacency of the handsome young cad. He knew that this particular brand of fool would go its own way, but he wasted a word of advice.

"I don't guess you want any pearls o' wisdom from me, but I'll onload some gratis. You let Bonita Menendez alone or Tony will camp on yore trail till he gits you."

"Sure will," agreed Gurley, setting down his rifle. "Them Mexicans hang together, too. We need their friendship in our business. Better lay off them."

"I don't remember askin' your advice, Gurley."

"Well, I'm givin' it. See?"

Another sharp whistle cut the air. Gurley picked up the rifle again and climbed the lookout rock. Presently he returned with a dismounted horseman. The man was the one who had introduced himself to Arthur Ridley a few hours earlier as Bill Moore.

"Howdy, boys. Got the stuff all safe?" he asked cheerfully.

From behind Wadley Pete Dinsmore was making a series of facial contortions. Unfortunately the new arrival did not happen to be looking at him, and so missed the warning.

"Never saw anything work prettier," Moore said with a grin as he put down his saddle on a boulder. "Ridley hadn't ought to be let out without a nurse. He swallowed my whole yarn —gobbled down bait, sinker an' line. Where's the gold, Pete?"

"In a sack back of the big rock." Pete was disgusted with his brother Homer, alias Bill Moore. They would probably have to divide with young Wadley now, to keep his mouth shut.

Rutherford jumped at the truth. His father had told him that he was going to give Art Ridley a try-out by sending him to the fort for a payment of gold. Probably he, Rutherford, had mentioned this to one of the gang when he was drunk. They had held up the messenger, intending to freeze him out of any share of the profits. All right—he would show them whether he was a two-spot.

"Bring out the sack. Let's have a look at it," he ordered.

Gurley handed the sack to Pete Dinsmore, and the men squatted in a circle tailor-fashion.

"Smooth work, I call it," said Homer Dinsmore. He explained to Wadley why he was of this opinion. "Steve heard tell of a wagon-train goin' to Tascosa today. If Ridley slept overnight at the fort he would hear of it an' stay with the freight outfit till he had delivered the gold to yore dad. We had to get him started right away. So I pulled on him a story about hearin' the boys intended to hold him up. He hired me as a guard to help him stand off the bad men. Whilst I was keepin' watch I fixed up his six-shooter so's it wouldn't do any damage if it went off. Best blamed piece of work I ever did pull off. I'd ought to get a half of what we took off'n him instead of a third."

"A third! Who says you get a third?" asked Wadley.

"Three of us did this job, didn't we?" cut in Gurley.

"Sure. You took what belongs to me—or at least to my day," protested young Wadley. "Tried to slip one over on me. Guess again, boys. I won't stand for it."

The jade eyes of the older brother narrowed. "Meanin' just what, Ford?"

"What do you take me for, Pete? Think I'm goin' to let you rob me of my own money an' never cheep? I'll see you all in blazes first," cried Wadley wildly.

"Yes, but—just what would you do about it?"

"Do? I'll ride to town an' tell Cap Ellison. I'll bust you up in business, sure as hell's hot."

There was a moment of chill silence. Three of the four men present knew that Rutherford Wadley had just passed sentence of death upon himself. They had doubted him before, vaguely, and without any definite reason. But after this open threat the fear that he would betray them would never lift until he was where he could no longer tell tales.

"How much of this money do you think is comin' to you, Ford?" asked Pete, quietly.

"It's all mine, anyhow. You boys know that." Rutherford hesitated; then his greed dominated. He had them where they had to eat out of his hand. "Give me two-thirds, an' you fellows divide the other third for your trouble. That's fair."

"What's eatin' you?" Gurley exploded. "Think we're plumb idjits? You 'n' me will mix bullets first, you traitor!"

The Dinsmores exchanged one long, significant look. Then Pete spoke softly.

"Don't get on the prod, Steve. Ford sure has got us where the wool's short, but I reckon he aims to be reasonable. Let's say half for you, Ford, an' the other half divided among the rest of us."

Wadley had refreshed himself out of bottle several times during the night. Ordinarily he would have accepted the proposed compromise, but the sullen and obstinate side of him was uppermost.

"You've heard my terms, Pete. I stand pat."

Again a significant look passed, this time between Pete Dinsmore and Gurey.

"All right," said Homer Dinsmore shortly. "It's a raw deal you're givin' us, but I reckon you know yore own business, Wadley."

The money was emptied from the pigskin belt and divided. Rutherford repacked his two-thirds in the belt and put it on next his shirt.

"I don't know what you fellows are goin' to do, but I'm goin' to strike for town," he said. "I aim to get back in time to join one of the posses in their hunt for the outlaws."

His jest did not win any smiles. The men grimly watched him saddle and ride away. A quarter of an hour later they too were in the saddle.

(To be continued.)

(Owing to the January 1st issue of the Pacific Rural Press being the special 50th Anniversary Number, the next installment of "Oh, you Tex" will not appear until the issue of January 8th.)

CHRISTMAS CAROL.

By Phillips Brooks.

The earth has grown old with its burden of care,
But at Christmas it always is young.
The heart of the jewel burns lustrous and fair,
And its soul full of music breaks forth on the air,
When the song of the angels is sung.

It is coming, old earth, it is coming tonight.
On the snowflakes that covered thy sod.
The feet of the Christ-Child fall gentle and white,
And the voice of the Christ-Child tells out
That mankind are the children of God.

The feet of the humblest may walk in the field
Where the feet of the holiest have trod,
This, this is the marvel to mortals revealed
When the silvery trumpets of Christmas have pealed
That mankind are the children of God.

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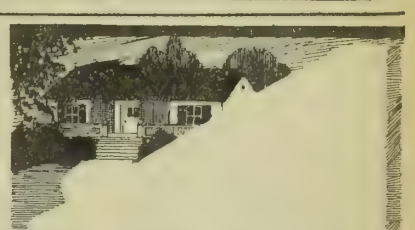

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THE MARKET REPORTS

SAN FRANCISCO

San Francisco, December 22, 1920.

WHEAT.

The market continues dull although the prevailing price has forced up, but only temporarily, it is thought. Still higher prices are thought very unlikely although there has been some buying pressure during the past week.

Wheat, spot ..... $2.60@2.90

OATS.

The oats market is weakest of all the grains and little activity is predicted; prices have fallen somewhat.

Red Feed, ctl. ..... $1.80@1.90

BARLEY.

Trading has been reduced to a minimum and indications are that buying will continue for some time on a hand-to-mouth basis. The call board is also inactive.

Feed Barley, ctl. ..... $1.35@1.50

CORN.

Corn in the local market is plentiful with good shipments from the East and a lot of the California product on the market at higher prices than the Eastern varieties, consequently most of the trading is in the Eastern corn.

Egyptian, white ..... Nominal
do, brown ..... $1.90@2.00
California yellow ..... $2.10@2.25

FEEDSTUFFS.

Prices are unchanged except for cocoanut meal cake, which has declined slightly. However, a downward tendency is noticed. Trading is subnormal and indications point to a continued inactivity.

Rolled Barley, per ton ..... $38.00@40.00
Rolled Oats ..... $55.00@56.00
Alfalfa Products ..... $31.00@33.00
Cracked Corn ..... $56.00@57.00
Bran ..... $52.00@54.00
Mill Run ..... $47.00@49.00
Poultry Scratch, ctl. $3.55
Cocoanut Meal Cake ..... $25.00@28.00

HAY.

The market is dragging and prices have declined on every grade except alfalfa. Receipts for the last week were extraordinarily light, only 871 tons arrived. Prices might have declined further if receipts had been heavier as there were absolutely no signs of activity in the market. Receipts of hay for the week previous to last were 1380 tons.

In spite of the lower prices and the declining tendency of the hay market, it is generally conceded that hay has been less affected by the general slump in all lines of produce and field products than these latter commodities. Buyers still continue to buy sparingly and they feel that still further declines will eventuate. Sellers, on the other hand, continue to adhere to their policy of letting go of very little of their product. Whether present prices are sustained will dependen probably on the amount of receipts for the next week or two. Prices quoted f. o. b. San Francisco less $1.00 a ton commission charge.

Wheat hay, new ..... $25.00@26.00
Tame oat, new ..... $20.00@23.00
Barley ..... $15.00@17.00
Wild oat, new ..... $15.00@17.00
Alfalfa ..... $20.00@30.00

RICE.

There is no market at all and rice is not moving but a better movement is expected by the first of the year. Prices are the same.

California Fancy, ctl. $5.25
do, Choice $5.00
Southern Honduras, long grain $9.25
China, No. 1, double mat $8.50
Blue Rose, fancy $7.00
Fancy Head (Philips & Co.) $10.00
California Japanese, No. 1 ..... $5.50
do, No. 2 ..... $5.25

FRESH FRUITS.

Apples are plentiful but are meeting with a very good demand and prices are steady with a firm market. Strawberries are gone. Cranberries are now in abundance on the local market because the Northern and Southern markets have broken with a consequent flooding here. Melons are scarce but are not wanted.

Apples: Oregon Banana ..... $2.50@2.75
do, Oregon Ortleys ..... $2.50@2.75
do, Wagners, 40-lb. box ..... $1.25@1.75
do, Spitzenberg, Oregon ..... $2.50@3.00
do, Jonathan ..... $2.50@3.00
do, Bellflowers, Watsonville ..... $1.50@2.00
do, Newtown Pippins ..... $2.00@2.25
Pears (52-lb. box) ..... $2.00@3.50
Casaba, crate ..... 50c@75c
Honeydew Melons, crate ..... $1.00@1.25
Cranberries, box ..... $2.50@5.50
do, bbl. ..... $21.50@22.50

FERTILIZER MATERIAL.

There is little or no trading, although the market is expected to be more active soon. Prices are the same.

Fish Meal, ton ..... $85.00@120.00
Meat Scrap, ton $100.00
Green bone, ton $20.00

BUTTER.

The market showed strength at the week's close with the new prices and considerable storage butter has been moved. The demand has been largely for fine goods and with the holiday trade, conditions point to a firm market. But little is being shipped East.

	Thu.	Fri.	Sat.	Mon.	Tu.	Wed.
Extra	46	46½	..	47½	48	47½
Prime 1sts	45½	44½	..	45½	46	46
Firsts	..	44	..	44	44	44

POULTRY.

Either Christmas buying has not yet started or there is too large a quantity of turkeys on the market. The market is easy and well supplied in other grades of poultry also. Two cars of Eastern poultry on the track cannot be unloaded until next week on account of the overstocked condition of the market here.

Broilers, small, alive, per lb. ..... 50@52c
do, large ..... 45@50c
Hens, mixed color ..... 33@35c
do, Leghorns ..... 32@35c
Roosters, young ..... 33@35c
do, old 23c
Friers ..... 38@40c
Friers ..... 40@42c
Squabs ..... 70@80c
Geese ..... 33@35c
Ducks ..... 35@37c
do, old ..... 35@38c
Belgian Hare, live ..... 20@25c
do, dressed ..... 24@30c
Jack Rabbits ..... Nominal
Turkeys, young, large, lb. ..... 45@48c
do, old, lb. ..... 45@47c
do, dressed, lb. ..... $52.00@55.00

CHEESE.

Little change is noticeable in the cheese market except that there is more trading in California fancy flats. Some are of the opinion that local prices are too high compared with other Coast markets, causing a dullness in California types of cheese.

California Flats, fancy, lb. 25c
do, Firsts 23½c
Oregon Triplets 26c
California Y. A. fancy 29½c
Oregon Y. A. fancy 30½c
Full Cream Jack 25c

EGGS.

While shipments of the surplus on hand are going East, several hundred cases arrived from Seattle durning the week. Indications are that prices will decline sharply after Christmas.

	Thu.	Fri.	Sat.	Mon.	Tu.	Wed.
Extra	66	64½	..	69	66	66½
Ex. Pullet	59	59½	..	63	62½	62½
Undersized	56½	57½	..	59½	60½	60½
Extra firsts	64	62½	..	68	65½	64½

HONEY.

There is a lot of Island honey here at from 8 to 9 cents. All extract grades are still dragging although the market picked up slightly with Christmas buying. The acute scarcity of comb honey continues.

Water White (extracted) ..... 14@15c
White ..... 12@13c
Amber Alfalfa ..... 11@13c
Light Amber (comb) ..... 25@30c

POTATOES, ONIONS, ETC.

Arrivals of vegetables from the river districts and from the south are heavy and are moving fairly well. Celery is the big thing this week, but the market is very well supplied with it, and the price has declined. There are very few tomatoes on the market. Winter rhubarb has made its appearance. The market is easy in potatoes and receipts are heavy with prices unchanged. There is no change in onions.

Egg Plant ..... 10@12½c
Turnips ..... 75c@$1.00
Beans, green ..... 10@15c
Carrots, per sack ..... 75c@$1.00
Lettuce, local, crates ..... $1.50@2.00
Tomatoes, crates ..... $1.75@2.25
Potatoes, New River, cwt. ..... $1.15@1.60
do, Garnets ..... 2½@3c
Onions, yellow, sack ..... 50@60c
do, Red ..... Nominal
Green Onions, box, 25 lbs. $1.50
Celery, crate ..... $1.00@2.50
Cauliflower, doz. ..... 60@65c
Chestnuts, lb. 18c
Winter Rhubarb, box ..... $2.00@2.50

BEANS.

The market is very quiet and declining. Further quiet is expected for a week or two. Prices on several grades are lower.

Red Kidneys ..... $9.00@9.50
Bayos ..... $10.00@10.25
Blackeyes ..... $5.65@5.80
Cranberries ..... $6.00@6.25
Red Mexican ..... $5.50@5.75
Pinks ..... $5.40@5.60
Large Whites ..... $4.10@4.25
Small Whites ..... $4.20@4.35
Limas, S. F. prices ..... $5.90@6.10
Garbanzoes ..... $4.90@6.50

CITRUS MARKET REPORT.

Los Angeles, December 22, 1920.

The citrus market has touched a new low level—to use the vernacular of the street it is "rotten." The week has been a memorable one in price adjustment for citrus fruit shippers and speculators. The spot cash market has declined to $2.50 per box for Southern California navels, f. o. b. cars, and few takers. This figure means about one and one-half cents per pound to growers. There remains, in Tulare county, 200 cars of navels that will be shipped at once, as the fruit has been picked to escape any unusual cold weather. This fruit out of the way, there will be no competition for Southern California navels after the first of the year. What the competition from Florida will amount to within the next 90 days is not known with any certainty. Southern California packers have closed down for the usual holiday lay-off to give the markets time to steady up.

The lemon market is completely "shot to pieces." F. o. b. quotations are on a basis of $2 to $2.50 per box. The present cost of picking, packing and freight totals about $3.25 per box. The average price of foreign lemons for the past nine months has been $2.10 per box for all grades and sizes. With the Italian exchange rate on money at a ratio of 5 to 1 it can readily be seen what the California lemon shippers are up against

LOS ANGELES

Los Angeles, December 21, 1920.

BUTTER.

There is no change in this market from a week ago. Receipts were not so good as the week before, yet equal to the demand. San Francisco holding at 47½c for extras throughout caused the trade to hold back and go slow. While there was no investment buying, there was a good consumptive demand for all extra creamery arriving and the tone of the market firm in sympathy with an advance of 3c on extras in Chicago and 1c on extras in New York. Receipts for the week, 272,000 pounds. We quote:

California extra creamery 51c
do, prime first 49c
do, first 48c

EGGS.

There has been a sharp break in this market since our last. A steady increase in the production and a feeling that after the temporary Christmas demand is satisfied, lower prices must prvail, buyers held back and took only what was needed to do them from day to day. Extras and case count went off 7c and pullets 5c, in sympathy with a break in San Francisco of 8¾c. Receipts by rail for the week only 680 cases, but the arrivals by truck were much larger. We quote:

Fresh ranch, extras 68c
do, case count 66c
do, pullets 64c

These prices are only 5c higher on extras and case count, and 6c on pullets than a year ago.

POULTRY.

Receipts were heavy the past week of all kinds of poultry, sent in to meet Christmas demand. While last week's prices were fully sustained, the first half of our review week, the market the past few days has been lower all round, as the Christmas trade had been pretty well supplied the first half of the week. With Christmas over lower prices are looked for and prices below are what dealers expect to pay after this week. We quote from growers:

Broilers, 1 to 1¼ lbs. 38c
do, 1¼ to 1¾ lbs. 45c
Friers, 2 to 3 lbs. 40c
Hens ..... 28@31c
Roosters (soft bone), 3 lbs. and up 31c
Ducks ..... 25@30c
Turkeys ..... 40@43c
Geese 25c

FRUITS.

The market the past week was quiet. With oranges coming in more freely and quality better and prices lower, there was less call for apples. But while the demand was only moderate, what moving was at steady prices.

Bellfleurs, 3¾@4 tiers ..... $1.25@1.40
do, Newtown Pippins, 3½@4 tiers ..... $1.50@1.75
do, C grades ..... $1.00@1.25
do, Banana, lb. ..... 7@9c
do, Jonathan, lb. ..... 5½@6½c
do, Delicious, lb. ..... 6@9c
do, Black Twigs, lb. ..... 4@6c
do, Winesaps, lb. ..... 5@5½c

VEGETABLES.

There was a little better tone to this market the past week. At the same time sales were light. Green stuff was higher as usual this time of year and prices higher. String beans and peas both brought more money and were in fair demand. Potatoes came in less freely and sold in a fair way and brought a little more money. The onion market continues dull, and while a little lower, yellow and brown unchanged. Lettuce dull but unchanged. Cauliflower steady but demand light. Shippers doing little. Sweet potatoes steady, but sales slow. Cabbage very dull and cheap. Celery slow sale and weak. Tomatoes steady and in fair demand and the same may be said of green peppers. We quote from growers:

Potatoes, local, cwt. ..... $1.50@1.60
do, Northern, cwt. ..... $1.75@2.00
do, Idaho Russett, cwt. ..... $1.60@1.75
Sweet Potatoes, lb. ..... 3@3½c
Cauliflower, local crate ..... 25@40c
Celery, pony crate ..... $1.50@2.00
do, Northern, crate ..... $3.50@4.00
Onions, Stockton, white, cwt. ..... $1.00@1.25
do, yellow, cwt. ..... 90c@1.00
do, Australian Brown, cwt. ..... $1.00@1.10
do, local, crate ..... 40@50c
Lettuce, crate ..... 40@50c
Rhubarb, per 30-lb. box ..... $1.15@1.25
Peas, lb. ..... 12@14c
Carrots, bunches ..... 30@35c
String Beans, green, lb. ..... 15@17c
do, wax, lb. ..... 15@17c
do, Kentucky, lb. ..... 18@20c
Cucumbers, lug ..... $3.00@3.50
Tomatoes, home-grown, No. 1 lug $1.00@1.25
do, No. 2 ..... 35@40c
Bell Peppers, lb. ..... 6@7c
do, Chile, lb. ..... 6@7c

BEANS.

The market the past week was very dull. There was no eastern or export demand for anything. Limas were lowered one-half cent again during the week, but otherwise prices remain unchanged. There is a feeling that after the first of the year some movement will be had. We quote from growers:

Limas, per cwt. $5.00
Large white, per cwt. ..... $4.50@5.00
Small white, per cwt. ..... $3.00@3.25
Pink, cwt. ..... $5.35@5.50
Blackeyes, cwt. ..... $5.30@5.35

HAY.

There was a little more doing in this market the past week. Still, the demand was light and only for such lots as needed for immediate use. Buyers had allowed their stock to run low, and in consequence had to stock up a little. Prices, however, remain unchanged, under somewhat better receipts. We quote f. o. b. Los Angeles:

Barley hay, ton ..... $20.000@23.00
Oat hay, ton ..... $24.00@26.00
Alfalfa, Northern, ton ..... $24.00@25.00
do, local, ton ..... $27.00@30.00
Straw, ton ..... $8.00@9.00

WALNUTS.

A steady market and fair demand is still being had for walnuts. Shipments by the Association continue to run about 10 cars a week. Prices unchanged. The Association figures remain:

No. 1 ..... 22½c
No. 2 ..... 16½c
Fancy budded 25½c

Buyers from independent growers are paying 10c a pound for orchard run and are less anxious for supplies than a while back.

WEEKLY BUTTER AVERAGES.

Cents per pound for Extras.

Week Ending	San Francisco 1919	San Francisco 1920	Los Angeles 1919	Los Angeles 1920
Jan. 2	66.19	62.89	63.16	65.00
" 9	61.00	63.70	64.00	65.00
" 16	61.70	62.58	64.16	66.00
" 23	55.83	55.50	62.16	61.00
" 30	44.91	62.50	48.00	66.00
Feb. 6	43.58	54.75	47.33	68.60
" 13	46.80	60.75	47.60	64.00
" 20	51.58	60.86	53.16	64.00
" 27	53.90	59.40	56.00	64.00
March 6	56.16	58.66	59.00	62.00
" 13	55.58	57.50	58.00	59.00
" 20	54.41	59.50	56.00	59.00
" 27	56.41	58.58	58.00	62.00
April 3	54.23	56.00	58.50	56.00
" 10	57.16	55.41	56.00	55.00
" 17	52.41	55.76	54.00	56.00
" 24	52.41	55.00	54.00	55.00
May 1	52.41	54.00	54.00	55.00
" 8	52.91	52.90	54.00	55.00
" 22	57.91	52.83	59.00	54.00
" 29	57.91	51.41	59.00	54.00
June 5	54.12	50.90	57.00	54.00
" 12	53.58	51.25	57.00	54.00
" 19	53.16	53.66	57.00	55.50
" 26	52.83	55.75	55.00	57.00
July 3	52.37	56.91	55.00	57.00
" 10	52.13	57.70	54.00	58.00
" 17	52.71	56.80	56.00	58.00
" 24	54.24	55.91	57.00	58.00
" 31	55.08	56.58	57.00	....
August 7	55.50	56.10	59.00	58.00
" 14	52.33	57.08	57.00	58.00
" 21	52.66	57.50	56.00	59.00
" 28	52.66	59.70	58.00	61.00
Sept. 4	56.20	63.90	59.00	63.00
" 11	58.70	65.87	61.00	65.00
" 18	59.70	65.62	62.00	67.00
" 25	60.58	64.20	66.00	67.00
October 2	62.70	62.90	67.00	65.00
" 9	63.41	63.38	67.00	65.00
" 16	62.90	61.75	65.00	63.00
" 23	62.00	56.20	65.00	59.00
" 30	62.25	54.70	64.00	54.00
Nov. 6	62.66	52.21	64.00	53.00
" 13	64.50	52.80	66.00	55.00
" 20	63.83	54.25	68.00	56.00
" 27	63.83	54.00	67.00	56.00
Dec. 4	76.30	50.37	67.00	53.00
" 11	63.91	49.16	67.00	52.00
" 18	64.60	47.60	67.00	51.00
" 25	65.66	47.10	68.00	51.00

WEEKLY EGG AVERAGES.

Cents per dozen for Extras.

Week Ending	San Francisco 1919	San Francisco 1920	Los Angeles 1919	Los Angeles 1920
Jan. 2	75.60	62.50	69.50	60.00
" 9	69.94	61.20	66.66	58.00
" 16	58.70	62.66	62.41	58.00
" 23	52.58	57.66	54.66	55.00
" 30	48.75	58.00	52.33	55.00
Feb. 6	42.00	48.16	43.00	47.00
" 13	40.90	45.41	37.80	45.00
" 20	36.41	44.10	39.33	43.00
" 27	37.40	45.60	33.60	42.00
March 6	37.58	41.33	37.00	38.00
" 13	37.16	37.41	37.00	38.00
" 20	38.41	39.66	39.33	41.00
" 27	40.41	41.91	42.00	40.00
April 3	42.41	40.83	45.00	39.00
" 10	42.91	40.83	45.00	40.00
" 17	45.10	39.41	48.00	40.00
" 24	45.00	39.33	48.00	39.00
May 1	45.00	42.91	44.00	42.00
" 8	46.50	42.00	42.00	44.00
" 15	47.91	42.91	50.00	44.00
" 22	49.16	43.50	51.00	44.00
" 29	47.58	41.33	49.00	43.00
June 5	45.50	41.30	46.00	42.00

Special Livestock Market Report

San Francisco, December 22, 1920.

CATTLE—The demand for beef cattle is still active, and buyers are willing to pay an advance price to get good stock.

Steers, No. 1, 1000-1200 lbs. ..... 9½@10½c
do, 2nd quality ..... 8½@9c
do, thin ..... 6@6½c
Cows and Heifers, No. 1 ..... 7½@8c
do, 2nd quality ..... 6@7c
do, thin ..... 3@4c
Bulls and Stags, good ..... 4½@5½c
do, fair ..... 3½@4c
Calves, lightweight ..... 9½@10c
do, medium ..... 8@9c
do, heavy ..... 7@8c

HOGS—There has been but slight increase in receipt of hogs; however prices have been marked down another cut per pound during the week.

Hard, fat, grain-fed, 100-150 lbs. 9½c
do, 150-225 lbs. 10½c
do, 225-300 lbs. 10c
do, 300-400 lbs. 9c

SHEEP AND LAMBS—Mutton sheep are in demand, but offerings still show a corresponding falling off; however, the price situation is one of strength.

Lambs, milk ..... 9½@10½c
do, yearling ..... 8@8½c
Sheep, wethers ..... 7½@8c
do, ewes ..... 4@5c

Los Angeles, December 21, 1920.

CATTLE—As usual, just preceding Christmas the cattle market quieted down the past week. There was some little demand for both steers and cows, but there was no life to the market. Prices remain unchanged from a week ago.

Steers, prime to choice, 1050-1000 lbs. ..... $10.00@10.50
do, good to prime steers 900-1000 lbs. ..... $8.00@8.50
Prime cows and reifers ..... $7.50@8.00
Good cows and heifers ..... $6.50@7.00
Canners ..... $3.25@3.50

HOGS—While the receipts of California hogs the past week were only fair, a number of hogs were brought in from the Central West and at lower cost to packers than California hogs and the market in consequence was slow and weak.

Heavy, averag'g 275@350 lbs. $9.00@10.00
do, 225@275 lbs. ..... $10.00@11.00
Light ..... $11.00@11.50

Rough docked 20 lbs. piggy sows 40 lbs. and stags 40 per cent.

SHEEP—A very good market was had the past week for both yearlings and lambs, and prices ruled higher.

Prime wethers ..... $6.50@7.50
Yearlings ..... $7.00@8.00
Prime ewes ..... $6.00@7.00
Lambs ..... $11.50@12.50

"	12	47.60	42.08	47.00	43.00
"	19	45.91	43.66	47.00	45.00
"	26	49.60	42.75	50.00	47.00
July	3	43.97	45.91	51.00	48.00
"	10	47.60	47.70	51.00	50.00
"	10	47.66	51.00	51.00	51.00
"	24	49.33	54.58	51.00	52.00
"	31	53.16	56.25	52.00	52.00
August	7	55.50	54.50	56.00	52.00
"	14	55.00	54.50	56.00	54.00
"	21	51.80	53.66	52.50	56.00
"	28	53.91	56.10	52.00	58.50
Sept.	4	56.70	62.60	53.00	61.00
"	11	61.50	64.50	61.00	61.00
"	18	61.83	67.00	58.00	67.00
"	25	62.75	67.60	68.00	67.00
October	2	68.70	71.70	68.00	70.00
"	9	69.91	77.20	69.00	75.00
"	16	67.70	83.50	71.00	78.00
"	23	72.25	79.60	73.00	78.00
"	30	70.08	74.20	73.00	75.00
Nov.	6	81.25	77.50	75.00	79.00
"	13	80.20	82.70	76.00	85.00
"	20	76.86	87.62	75.00	88.00
Nov.	27	76.66	82.00	75.00	76.00
Dec.	4	80.90	77.12	77.00	75.00
"	11	79.16	80.80	77.00	78.00
"	18	71.16	78.40	68.00	76.00
"	25	68.91	66.40	65.00	68.00

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NEVADA ALFALFA GROWERS ORGANIZING.

(Written for Pacific Rural Press.)

The first step in organization of a Nevada State Alfalfa Growers' Association was taken in Fernley, Nevada, December 20, at the meeting of the Fernley unit of the Lyon County Farm Bureau. Twenty-four members signed an agreement to organize a local non-profit, non-stock co-operative marketing association, embodying the principles which have been found in California experience to be necessary for permanent efficient organization. California experiences with unsuccessful and successful co-operative marketing associations was outlined to the meeting by a representative of the Pacific Rural Press, at the invitation of County Agricultural Agent Joe Wilson. After considerable questioning and discussions the twenty-four alfalfa growers walked forward and signed up. The agreement provides for a committee to work out all details of an organization, to include (1) a binding agreement for all signers to deliver all of their market alfalfa to the association, to be sold collectively, and a $3 per ton forfeit by any who sell otherwise. (2) Each signer pays 50 cents per acre membership fee and agrees to allow the association to deduct $1.50 per ton to carry on the marketing activities. (3) Each agreed to furnish periodical reports to the Association regarding the tonnage of hay still held for sale. (4) It was agreed that in electing officials each member would have one vote. Officials are to have full control of the marketing; but if they refer any question regarding current marketing to the members for decision, voting shall be one vote per ton yet to be marketed during the season. Committeemen named by President Wm. Gutch of the local Farm Bureau are W. G. Rawles, W. A. Hardy and F. W. McCulloch.

Other meetings are scheduled for Smith Valley, Mason Valley, Fallon and Reno, to form similar organizations, each of which is to elect one member as a director on a State organization.

When the Nevada federation of local organizations shall have been formed, it will undoubtedly work closely with the California association, using the same market and crop information and regulating flow to markets according to demand. Success to you, Nevada!

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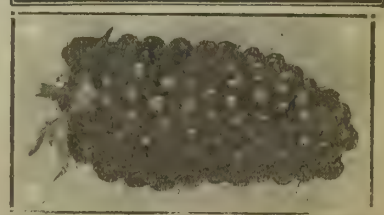

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